European Commission

OA9: Support to the engagement of European Citizens in the transition to the European Green Deal

Citizen Voices for the EU Climate Transition: EU and national roadmaps

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Research and Innovation

OA9: Support to the engagement of European Citizens in the transition to the European Green Deal

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EUROPEAN COMMISSION

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Directorate-General for Research and Innovation
Horizon 2020 – Cross-cutting activities

2023

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FOREWORD

The present report is structured into eight sections. After a general theme-setting section (1), sections two and three present the results and the priorities identified by citizens and the stakeholders on the topics of ‘sustainable food systems’, ‘smart and efficient mobility’, and ‘energy-efficient buildings’, three of the main areas targeted by the European Green Deal (EGD), at EU Member State level. Section four presents interesting ideas stemming from the two rounds of consultations. Section five includes the national roadmaps, and section six is an overview of an EU-wide roadmap towards implementing the EGD by 2030. Finally, section seven contains some pointers regarding other parallel European Union (EU) initiatives that will enable or enhance the EGD. Section eight contains the general conclusions on the project.

While following a common structure, the different sections have been adapted to reflect best the different qualities and focus of the discussion on the themes. These differences should be considered as an expression of the debate's context. Nonetheless, the overall approach to the roadmap was designed to ensure consistency in how the citizens' opinions and the stakeholders' contributions are presented across all the topics and to allow for a certain degree of comparability of the results.

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EXECUTIVE SUMMARY

Sustainable food systems

EGD objectives that were mentioned as priorities by citizens and/or stakeholders

The EU citizens proposed over single 2000 ideas (clustered into 489 main ideas) relating to sustainable food systems, with expert stakeholders mainly agreeing with the ideas put forward by the citizens. The quality, depth and focus of discussions on sustainable food systems varied greatly from country to country. However, despite national idiosyncrasies, common broader ideas emerged from the discussions, which are outlined as six priorities below:

- Developing awareness and knowledge to empower the stakeholders of food systems;
- Reducing costs of food system transformation;
- Shortening food supply chains;
- Reducing waste across the food cycle;
- Raising capacities of the public sector in facilitating sustainable food system transformation;
- Empowering food producers to become active changemakers in sustainable food production.

According to the discussions in a large majority of EU countries, **developing awareness and knowledge to empower citizens regarding food systems** is a crucial part of a sustainable food system transformation. From education on maintaining healthy and sustainable diets, workshops on household food waste management and cooking with seasonal products to understanding the nutritional information on food labels, the importance of knowledge as a tool for the empowerment of food system actors is demonstrated. There is an emphasis on food labels providing consumers with clear information on the nutritional and environmental impact of products and stringent monitoring of label and certificate claims on food products. Finally, education on food systems should be integrated into school curricula. The empowerment of citizens does not stop at individual action. Instead, they should also be engaged in participative policymaking to provide insights into new food policies.

Another universally discussed theme was the **reduction of the costs of food system transformation**. It was often pointed out that food system transformation comes with high costs, especially for small-scale food producers and less affluent citizens. When it comes to small-scale producers, they are often affected more by the costs of the transition to sustainable production compared to large industrial operations. Therefore, financial support must be ensured for small-scale, sustainable and seasonal production, coupled with technical support to small-scale farmers to get their products successfully on the market. When it comes to the consumption of sustainable and healthy food, consumers need to be supported to ensure equal access to healthy and sustainable food through price regulation,

as well as a voucher system for healthy and sustainable products and investments in school meals.

Shortening food supply chains was discussed as a means to make food production and distribution more local, thereby reducing carbon emissions from the food sector. Citizens gave a variety of examples of the actions that are needed to shorten food supply chains:

- Food supply chains should be made more local by enabling direct sales from food producers to consumers.
- Local food products should be made more available and visible in supermarkets.
- Food procurement schemes should promote local and sustainable food in canteens and cafeterias.

Even when produced locally, food transport will still need to take place; therefore, investments are required to make distribution networks more sustainable, for example, through investments in electric vehicles (EVs) in the food distribution sector. Shortening of food supply chains could also be achieved through decentralised food production or by promoting urban and community farming where consumers become food producers, and finally, through investing in research on new sustainable food production methods.

In all of the national discussions, there was an emphasis on **reducing waste generation across the food value chain.** Special attention needs to be paid to lowering wastewater generation in food production and processing, while in retail, the amount of single-use and unsustainable packaging must be reduced. Finally, food waste needs to be reduced in households, but equally significantly, in food-based businesses. In homes, this can be done through workshops on cooking with leftovers and education on weekly meal planning. On the other hand, food-based businesses like restaurants and catering companies can promote taking leftovers home and develop cooperation channels to donate their food. Citizens emphasised that policymakers should not make those measures completely voluntary but also work on developing a complementary regulatory framework, for example, introducing taxes on food waste for businesses through penalising businesses without food waste reduction guidelines.

Citizens and stakeholders pointed to the complexity of policy issues within the food system, requiring **raising the public sector's capacities to facilitate a sustainable food system transition**. This was discussed as a remedy to public administration often working in silos and failing to address the systemic nature of food system transformation. The importance of investments in public administration capacities was widely discussed as a method of effective coordination of food policy development and implementation. Accordingly, it was emphasised how these changes would support the implementation of more systemic food policy solutions, such as food procurement agreements oriented on local and sustainability criteria.

Finally, a point consistently brought up across discussion groups in different countries was the need to **empower food producers to become active changemakers in sustainable food production.** There was an emphasis on supporting food producers in taking up a responsibility for transitioning to sustainable production. This can be done through the development of knowledge exchange platforms and investments in their capacities through subsidies for sustainable food production research and implementation.

EGD objectives that were seldom or never mentioned by and/or not considered a priority by citizens and/or stakeholders

Most of the EGD objectives not broadly mentioned by the citizens and stakeholders are related to sustainable food production. The following topics were not directly discussed: excess nutrients, antimicrobial resistance, sustainable fish and seafood production, and fair competition rules. Still, these themes were sometimes mentioned in passing. While citizens did not reflect on ensuring sustainable fish and seafood production, they talked more broadly about enforcing existing hunting and fishing quotas.

Outside the topic of food production, there are two other EGD objectives that citizens and stakeholders did not reflect on.

- Firstly, while citizens discussed at length the need to reduce food waste (both household waste and industrial food waste), they did not discuss concret reduction targets as foreseen by the EGD.

- The citizens instead focused on more practical implementation measures targeting households (better cooking practices) and food-based businesses, such as supermarkets (near-to-expire products) and the hotel, restaurant and catering industry (improved handling of leftovers).

- Secondly, the EGD objective to improve and coordinate crisis response systems was not addressed, with citizens interpreting food security through ensuring food accessibility for vulnerable groups in society.

Ideas on the green transition put forward by the citizens and stakeholders that are not featured in the EGD

The citizens and stakeholders outlined several ideas not addressed by the EGD that can be added to its objectives.

In the theme of sustainable food production, citizens and stakeholders emphasised the need for interaction and education through the following objectives:

- Decentralising food production through alternative production methods such as community and urban farming, rooftop gardens and other solutions to democratise food production and facilitate practical understanding of food production with the citizens.

- Ensuring knowledge exchange of food producers to promote the exchange of new ideas on sustainable food production and create a community of support.

- Ensure protection of small-scale, seasonal, and local food production through various measures, including awareness raising, subsidies, and legislation.

Outside the area of sustainable food production, the citizens discussed active measures to make environmentally harmful and unhealthy food products unattractive to consumers, through reductions in access, as well as linking VAT amount to carbon emissions of products. Secondly, the discussions emphasised the importance of forming connections between farmers and consumers to develop direct and sustainable distribution channels and build awareness over sustainable food choices. Furthermore, they emphasised the need to make food businesses take an active role in food waste reduction through food

donation schemes and the taxation of food waste. Finally, holistic and participatory education on food system transformation was highlighted as a way to increase citizen engagement in food system policy.

Sustainable and smart mobility

EGD objectives that were mentioned as priorities by citizens and/ or stakeholders

The biggest priorities consistently identified by citizens and stakeholders included the following:

- **Improving public transport and cycling conditions.** Ideas on enhancing public transport usually covered service frequency, geographical coverage, reliability, fares and integration with other modes of public transport, as well as cycling and walking, and mainly focused on the local and regional levels. In addition, citizens and stakeholders wanted to see some restrictions on private vehicle use for travel within the central areas of cities.

- **Increasing taxes on polluting vehicles** and/or modes of transport. Pollution taxes on vehicles were supported in a small majority of countries.

- **Increasing low-emission vehicles (LEV)**. While most citizens and stakeholders supported the principle of low-emission vehicles, most countries also expressed **scepticism** about what they perceived to be the strong focus in this area **on Electric Vehicles** (EVs) to exclude other LEV technologies, such as hydrogen, gas and biofuels.

EGD objectives that were seldom or never mentioned by and/or not considered a priority by citizens and/or stakeholders

Citizens and stakeholders did not know much about the EGD's priorities for mobility. For example, nobody showed any awareness of the EGD's targets for the percentage of public transport fleets that should be EVs, for new charging infrastructure, or for biofuels. In addition, there was no awareness of the legislative mechanisms proposed relating to changes to the Emissions Trading Scheme, of the revised directives on biofuels, or of the Sustainable Urban Mobility Plans for cities that are Trans-European Transport Network (TEN-T) nodes, to name the most important ones[1]. Therefore, the only objective consistently focused on by both citizens and stakeholders was reducing carbon emissions from transport, which was regarded as a priority.

Ideas on the green transition put forward by the citizens and stakeholders that are not taken into account by the EGD

Citizens and stakeholders focused on local and regional public transport, spatial planning, managing local and regional transport systems, and only sparingly on vehicle technologies

[1] The Trans-European Transport Network (TEN-T) comprises the most important connections in the European regions, including railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals.

but the EU has limited competencies in this area. There was much discussion of urban and regional transport in the Urban Mobility Framework.

The citizens' and stakeholders' focus on improving local and regional public transport, limiting car traffic in central areas, and also on spatial planning imply that demand for transport should be managed, as well as vehicle technology changed, if emissions from transport are to be reduced.

Citizens in most member states discussed an indirect way of reducing the need for mobility, which in turn would indirectly contribute to the EGD goals. The 'great experiment' of **tele-working** during the COVID-19 pandemic was cited by a large majority of the citizens consulted as an additional solution to make the EU reach its carbon emission reduction goals.

Energy-efficient buildings

EGD objectives that were mentioned as priorities by citizens and/ or stakeholders

From discussions between the citizens and national stakeholders of the 27 Member States, several common themes arose across all the discussions. The following outlines the topics most discussions related to.

- The affordability of renovation in general and the affordability for those on low to middle incomes in particular.
- A lack of trust in government and a need for longer-term political commitments. For example, a new government should not abolish an existing incentive scheme that citizens had signed up to.
- A lack of trust in those delivering energy-efficiency technologies and services.
- The shortage of (skilled) labour within the energy-efficient buildings sector.
- The need for qualified experts to carry out energy-efficiency renovation.
- The need for more education and public awareness campaigns.
- The need to create an incentive for property owners to perform energy-efficiency upgrades and the need to ensure that the costs will not be passed onto the tenant.
- The barriers related to the co-ownership of apartment buildings.
- How public buildings should be leading the way.

In general, citizens and national stakeholders were aware of the EGD, but the focus of the conversations was on the barriers to achieving the EGD's goals. As a result, the national and EU roadmaps largely focused on actions relating to how to overcome these barriers. There **were very few actions that citizens were willing to do without any intervention from the government or policy.**

The most discussed topic concerned the **affordability of renovation**. A clear majority felt that renovation was not affordable, and many felt that the government should provide citizens with 100% subsidies for the adoption of energy efficiency measures. However, alternative views mentioned unintended consequences to the market and the economy if 100% subsidies were implemented. Instead, they could be implemented gradually to avoid any negative market impact. Others felt that whoever owns a building has responsibility for its energy efficiency - a personal obligation that should not be avoided. The majority, however, agreed that there should be 100% subsidies for those on low incomes. It was mentioned that the income threshold was too high and should be re-examined as many low- and middle-income building owners are struggling to pay their bills due to the energy crisis and would not have the financial capacity to renovate their buildings. Several discussions also centred around the difficulty in applying for the subsidy and that access to the process should be improved.

Another topic often discussed was that of trust. This is related to a **lack of trust in the government**, where one government would provide an incentive scheme to advance the EGD objectives that could later be abolished under a new political regime. It is also related to a lack of trust in the technology or the service provider delivering solutions for energy-efficient buildings. For example, citizens wanted assurance on whether the investment would deliver the savings and benefits promised and whether the work would be of high quality. A majority also mentioned the **lack of skills concerning energy-efficient buildings and a shortage of labour to carry out the work**. Some discussions highlighted the need for an EU-certified expert label. While some Member State discussions felt this should not be at an EU level but at a national level, the majority agreed that some certified expert label was required.

Many of the discussions centred around **education and awareness-raising campaigns for energy efficiency.** There was a recurring suggestion that education should start in schools and be included in the curriculum to ensure that the next generation is learning about energy efficiency in buildings. Public awareness campaigns using radio, television and social media were also discussed. These campaigns should highlight both the need to improve the efficiency of the building stock and the benefits of doing so, beyond environmental and cost savings and relating to improved health and well-being for the occupant as a result of a more comfortable home with better indoor air quality.

Another recurring discussion was the **split incentive between the property owner and the tenant**. A split incentive is where the benefits do not primarily accrue to the person who pays for the transaction. In rental properties where property owners meet the cost of improvements, the tenants would reap most of the benefits. This was discussed in several ways across each Member State discussion. It was mentioned that tenants who wish to become more energy efficient could not do so because they do not own the property and do not have permission to make structural changes. These tenants are limited to behavioural changes. In addition, if the property owner must pay for the renovations, but the tenant is the beneficiary of those improvements, there is no incentive for the owner to do so. Some suggestions to address this related to mandating property owners to meet a minimum criterion for energy efficiency. However, there were downsides to this suggestion. These downsides included 'renoviction' - where the tenant is evicted during the renovation period and may not have anywhere to go. They may have to pay a higher rent when they move back into the property. It was also suggested that it is unfair if the property owner is mandated to improve the property's energy efficiency when they genuinely do not have the financial means to do so.

One suggestion during the discussions addressing the split incentive was a 'green lease'. This concept already exists in some Member States and the US. It works such that both the

tenants and property owners are educated regarding the benefits of having a more energy-efficient buildings, including health benefits and a reduced energy bill for the tenants; hence, tenants are willing to pay an increased rent and owners are committed to renovating their properties. However, there was also a reference to the rebound effect[2], where the expected impact is not achieved due to poor behaviour of the occupants, particularly if they are not educated on how to use their energy-efficient home. For example, if a home is renovated through improved insulation, but the occupant does not turn down the thermostat, they will have a warmer home. Still, their energy consumption will not be reduced. This will lead to an inability to repay a green loan or offset an increased rent. As such, a 'green lease' would possibly require some measurement and verification system if it was to be successful. This, however, could be linked with other suggestions from the discussions relating to utilising digital technologies and improving the smart readiness of buildings.

Another issue discussed by many related to the **co-ownership of apartment buildings and the need for most owners to agree on arenovation** before it can be carried out. This was seen as unfair to those who wished to participate in the green transition. In the same way, if made mandatory, it was considered unfair to those who could not afford to finance the renovation.

Most discussions suggested **that public buildings should lead the way towards increased renovation rates**. Governments in Europe should invest in renovating their public buildings fully and provide 100% finance to achieve the objectives of the EGD. These buildings could then be used as training grounds for energy and construction professionals to upskill their existing staff and achieve certifications as energy experts. The public buildings could also be used for apprenticeship programmes and to create connections with academic and trade organisations. Finally, they could raise awareness by disseminating the positive impact of the energy efficiency measures from reduced energy bills, reduced carbon emissions and improved health and well-being for the occupants. This framework could then be used to roll out an increased and skilled labour force to deliver energy-efficiency renovation to the private building stock, with increased trust, awareness and reliability in the solutions provided. It would also increase the renovation of the public building stock towards the 3% per year EGD objective. The framework itself could be co-created with citizens and businesses to ensure success. It was mentioned, however, that in many cases the public authorities do not have the financial means to renovate their buildings, or they lack will within their institutions which also tend to be slow-moving and conservative.

Finally, another solution concerning financing for private buildings, addressing the issue of affordability, could be **the creation of a public, not-for-profit Energy Service Company (ESCO) model**. This model would utilise public funds to renovate private building stock. The finances would be recovered from the savings achieved in the buildings over a long-term period, for example, 30 years, similar to a mortgage loan. This would also require a robust measurement and verification system to identify the savings to be paid back and ensure fairness to all.

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[2] The rebound effect in energy efficiency refers to the phenomenon whereby increased energy efficiency leads to an increase in energy consumption, rather than a decrease. This can occur when the savings from increased energy efficiency are partially or fully offset by increased energy use, resulting in a net increase in energy consumption. It's important to note that the rebound effect is not always present, and the magnitude of the effect can vary depending on the specific situation. Nevertheless, the rebound effect highlights the importance of considering the broader social, economic, and behavioral factors that influence energy use when designing and evaluating energy-saving policies and technologies.

While the expert has proposed the abovementioned suggestions, they result from discussions between citizens and national stakeholders concerning what citizens would be willing to accept to drive the green transition.

EGD policies and objectives are rarely mentioned and not considered a priority by either the citizens or the national stakeholders

The following topics were not discussed widely:

- Renewable energy or how to increase renewable energy in buildings
- How to create a tax system for energy products aligned to the green transition
- The renovation rate of the existing and/or public building stock
- Energy poverty
- Mobilising industry for a clean and circular economy.

In general, the discussions focused heavily on renovation measures. There was little discussion of renewable energy or increasing renewable energy in buildings. Where this was mentioned, it was typically concerning the need for long-term commitments around renewable energy policies from governments or increasing the adoption of solar photovoltaics.

The EGD objective to create a tax system for energy products aligned to the green transition was not mentioned in any discussions[3]. There were also only a few discussions regarding property taxes and VAT rates for green products.

The renovation rate itself was not discussed, suggesting there is no awareness of the current rate at which Member Statesare renovating buildings and the lack of progress to meet thetarget of 3% across the public building stock. If this was highlighted more to the general public, it could increase awareness around energy-efficient buildings. This information is difficult to find, particularly for public buildings, which suggests there should also be EU-driven mechanisms to monitor and report the situation more closely.

Inequality was mentioned in the context of all citizens receiving the same subsidy regardless of the size (large or small) or location (urban versus rural) of the house; however, the issue of energy poverty itself was rarely mentioned directly.

There were citizens from a few Member States that mentioned the issue of a clean and circular economy. However, in general, this topic was not discussed widely.

Finally, funding for renovation seemed to focus on incentive schemes. There was not a lot of discussion around green loans or other means of funding or financing to achieve the EGD objectives.

[3] For more information about taxation of energy products please cf. European Commission, Energy taxation: The impact of taxation on energy prices for EU industry and households. Available at https://energy.ec.europa.eu/topics/markets-and-consumers/energy-taxation_en (Accessed: 27 February 2023).

Ideas on the green transition put forward by the citizens and stakeholders that are not taken into account by the EGD

Discussions between the citizens and national stakeholders could all be related to one or more of the EGD objectives.

1. Introduction

1.1. Aims of the project

This document is the final deliverable of a European Commission project called 'Other Action 9. "Support to the engagement of European Citizens in the transition to the European Green Deal (EGD)"', which ran between September 2021 and December 2022. The project aimed to actively engage citizens across all EU countries in the run-up to a just climate transition in three of the priorities identified by the EGD: 'sustainable food systems', 'sustainable and smart mobility' and 'energy-efficient buildings'. The project was led by the European Commission – Directorate-General for Research and Innovation (DG RTD) and the European Research Executive Agency (REA).

While experts have drafted the Roadmaps (cf. the next section, 'the team behind the project'), the actions to elaborate the Roadmap stem from the opinion of citizens, civil society, research and education communities, and national authorities engaged in a series of digital events across the EU. During these events, participants analysed the EGD objectives and the necessary transitions over the next years from different perspectives; estimated the impact of relevant EU initiatives and policies; and identified the critical elements required to ensure a Just Transition in different geographical and social contexts with the goal of creating a solid engagement of the citizens across the EU.

In addition, this document contains critical elements identified by citizens and stakeholders to ensure a Just Transition across the whole of the EU in the areas of sustainable food systems, sustainable and smart mobility, and building systems efficiency.

1.2. The team behind this roadmap

This document has been drafted by three thematic experts identified by the European Commission, one per topic (sustainable food systems, sustainable and smart mobility and energy-efficient buildings):

- Jacqueline Broerse is the author of the chapters on sustainable food systems (with the support of Jessica Coetzer (MSc) and Luka Gudek (MA), researchers at the Athena Institute, Vrije Universiteit Amsterdam). Jacqueline Broerse is a professor of Innovation and Communication in health and life sciences and director of the Athena Institute, Vrije Universiteit Amsterdam, The Netherlands. Her research aims at understanding how research and innovation can better contribute to solving societal challenges equitably and responsibly and is focused on: methodology development for public engagement and multi-stakeholder involvement in research and innovation and on analysis and governance of health and food system innovation processes (in Europe and low- and middle-income countries). She coordinated two large EU-funded projects, including the FIT4FOOD2030 project on improving R&I to contribute to more sustainable, resilient, responsible, competitive and inclusive European food systems (2017-2021). Since 2022, she has coordinated the large EU-funded project FOODCLIC, which aims to create more sustainable urban food environments to empower citizens to access healthy, sustainably produced food.

- Tom Rye is the author of the chapters on sustainable and smart mobility. Tom Rye is Professor of Transport Policy at Molde University College, Norway, and a Senior

Researcher in the Mobility Group at the Urban Planning Institute of Slovenia. Previously, he worked in transport academia and practice and headed research centres in the UK and Sweden. Tom has contributed to writing the first EU Sustainable Urban Mobility Plan Guidelines and produced two new practitioner briefings that complement EU SUMP Guidelines. He has carried out research and consultancy projects over many years for the UK and Scottish governments, local governments, Swedish funding councils, the European Commission, the World Bank and private sector clients. His research interests include comparative transport policy evaluation, transport governance, sustainable urban mobility planning, and parking management.

- Ruth Kerrigan is the author of the chapters on energy-efficient buildings. Dr. Kerrigan holds a PhD in Structural Engineering from Trinity College Dublin, focusing on optimising and controlling buildings in high wind and earthquake regions. For Trinity College Dublin, she has researched modern construction methods, flexible structures, energy-efficient buildings and control systems engineering. In 2011, Dr. Kerrigan joined Integrated Environmental Solutions Ltd. Through her involvement in many diverse research projects over the last 12 years, Dr. Kerrigan has gained extensive knowledge in decarbonising the built environment, from building design and renovation to urban planning, energy management and resource networks.

The expert team is supported by the project contractor[4]:

- Elisabeth Victoria Lasky ensured consistency and managed quality across the 27 citizen meetings reports, the 81 stakeholder reports (3 per Member State), the 81 national roadmaps and this final report. She also drafted the methodology for the collection of feedback during the citizens and stakeholder meetings. Elisabeth holds an MPhil in European Union from UNED Madrid with a thesis on citizen participation and has more than 12 years of experience working as a content manager and consultant for the European Commission. She was assisted by Dr. Francesca Corazza as well as by a team of Project Officers and Managers.

1.3. How this roadmap came into being

For this final roadmap, the three thematic experts summarised and analysed the results of a consultation and deliberation exercises that took place between the months of November 2021 and October 2022:

First step: citizen consultations

During the first part of the project, which ran from November 2021 to March 2022, a representative sample of citizens[5] from each EU Member State was selected to discuss how to achieve the green transition in a fair way. The deliberations involved 867 participants and 77 facilitators. Altogether well over a thousand ideas were produced across the three topics of sustainable food systems, sustainable and smart mobility, and building systems efficiency.

The results of the deliberations pointed to the fact that national discourse is still defined by the history of the countries as well as individual habits, needs and patterns. For example,

[4] VO Europe (https://www.vo-europe.eu), an award-winning Brussels-based communication agency specialising in events and project management for European and international institutions.
[5] About 30-33 participants per Member State, chosen taking into consideration each country's age, geographical, socio-economic, urban/rural and income distribution.

the discussion on food sustainability was very advanced in Nordic countries, focusing on transitioning to a plant-based diet. In contrast, Eastern Europe's panels showed that the countries are still recovering from years of scandals regarding food safety, with sustainability as a lesser and further goal to achieve.

Despite this, it was possible to observe the emergence of a transnational discourse centred around the importance of the ecological transition. Knowledge about the three topics discussed varied, but overall was high to very high for sustainable food systems and high for sustainable and smart mobility (while less so for energy-efficient buildings). The degree of acceptance of changes was also relatively high, with the notable exception of those in the topic of energy-efficient buildings.

The most frequently recurring themes included the need for publicly financing the transition, the desire for solid regulation, independent control, and EU guidance. Issues of funding and the Just Transition were discussed extensively and in close association with each other.

Contrary to initial assumptions, most participants agreed on the need to act for climate adaptation and on EU's role to lead it (sometimes the desire for the EU to override national institutions was not in line with the EU's remit, but citizens are not always aware of the EU's competencies). This is despite a strong emphasis in the methodology on finding participants representing a true-to-life cross-section of national society, which was alleged to be more climate- and Euro-sceptic.

The results of the surveys (70% of participants replied) show that participants were highly engaged with the deliberation, that they believe the results achieved will be of use to the legislator and expressed an overwhelming desire (98%) for such deliberative processes to continue, for this and other topics, at EU level.

A high-level event with three citizens selected from the national panels (representing three different gender, age and geographical groups) took place in April 2022. The aim of the event was for the three selected participants to present the main citizens' views and recommendations to Frans Timmermans, Executive Vice-President of the European Commission in charge of the EGD, feeding them into the Conference on the Future of Europe (CoFoE). The event, organised in collaboration with DG CLIMA, took place in Brussels and was streamed online[6].

As the panels took place before the Russian invasion of Ukraine, a request for additional information was sent to all participating citizens in the beginning of May 2022, asking them to look back at their answers and to reflect on whether the invasion would have changed their opinion. Most citizens (62%) did not consider that the war had changed the result of their deliberation, and most stayed convinced of their deliberation (73%) – if at all, several pointed to the fact that the Russian invasion should rather accelerate the green transition. This vision must be seen against the background of the current energy security crisis and the EU's REPowerEU plans to diversify from Russian fossil fuel imports and replace them, in the short-term, by other sources of fossil fuels.

[6] More information available at https://research-and-innovation.ec.europa.eu/events/upcoming-events/shaping-climate-transition-citizens-take-floor-2022-04-29_en (Accessed on 27 November 2022).

1.3.2. Second step: stakeholder consultations

The aims of these national events, which took place between August and October 2022 with the participation of representatives from national authorities, research and education communities and civil society were:

- to get together;
- to analyse EGD-related objectives, policies and challenges in their country;
- to identify critical elements required to ensure a Just Transition in their country considering the priority actions set by their citizens during the stakeholder meetings;
- to draft a national roadmap with the critical elements required to ensure a Just Transition in their country[7].

Guided by the thematic experts who are responsible for drafting this document, as well as by participatory methods professionals, representatives:

- Analysed the EGD in the fields of sustainable food systems, sustainable and smart mobility, and energy-efficient buildings;
- Analysed the impact of EU initiatives and policies in their country and Europe in the fields of sustainable food systems, sustainable and smart mobility, and building systems efficiency and established whether they meet the EGD objectives and if not, where do they fall short and how should they be corrected;
- Used the input from the citizen engagement events that took place in their country to identify the critical elements required to ensure a Just Transition in their country in the fields of sustainable food systems, sustainable and smart mobility, and energy-efficient buildings.

Particular attention was paid to citizens' self-identified challenges/difficulties/trade-offs to produce a roadmap of policy actions for a Just Transition that is likely to receive European citizens' support.

[7] For the actual distribution of participants per stakeholder event/country, please refer to the corresponding national roadmap in section 5.

2. Brief overview of the European Green Deal goals

The European Green Deal (EGD), announced in December 2019, is a set of policy initiatives by the European Commission with the overarching aim of making the European Union (EU) climate neutral in 2050. The plan is to review each existing law on its climate merits, and introduce new legislation covering a comprehensive and interconnected set of areas including, among others, circular economy, building renovation, biodiversity, nature restoration, farming and innovation.

The plan is articulated across eight work streams and priority actions. The following is a simplified presentation of the main actions per area:

- **Achieving climate neutrality**: the EGD aims for climate neutrality by the year 2050 and a reduction by at least 55% of its net greenhouse gas emissions by 2030, compared to 1990 levels

- **Sustainable and smart mobility**: cf. below.

- **Mobilising industry for a clean and circular economy**: key points of this policy area include boosting the modern aspects of industries and influencing the exploration and creation of ‘climate neutral’ circular economy-friendly goods markets.

- **Clean, affordable and secure energy**: the plan focuses on four elements:

  - promoting energy-efficient building methods cf. below;

  - increasing the share of clean, affordable and secure energy;

  - increasing the use of clean hydrogen;

  - making the industry use more renewable fuels.

- **Farm to Fork**: cf. below.

- **Zero pollution**: the 'Zero Pollution Action Plan' intends to achieve no pollution from ‘all sources’, cleaning the air, water and soil by 2050.

- **Preserving and restoring ecosystems and biodiversity**: this priority includes, among others, the management of forests and maritime areas, environment protection and addressing the issue of losses of species and ecosystems are all aspects of this target area.

- **Building and renovating in an energy and resource efficient way**: this priority focuses on the design and construction of new or retrofitting of existing buildings to reduce their emissions and increase their efficiency with renewable energy technologies.

The European Green Deal. Source: EC.

Other measures taken by the EGD involve **mainstreaming sustainability in all EU policies**, to finance sustainable investments and ensure a Just Transition. Several instruments will provide Member States with the necessary funding to achieve the EGD. The transition will be funded mainly through National Recovery and Resilience plans, InvestEU Funds, the Common Agricultural Policy, Maritime Fisheries Funds, Horizon Europe and the Emission-Trading System (ETS). As part of the Sustainable Europe Investment Plan, a Just Transition Fund has also been established to leave no one behind.

The present report focuses on three of the key areas of the EGD, i.e. sustainable food systems, sustainable and smart mobility, and energy-efficient buildings. Addressing the most urgent questions related to these topics, which represent an important part of the daily life of all EU citizens, will ensure that the EGD is implemented in a way that reflects the lived experience of real people, their ideas, and their culture.

2.1 Sustainable food systems

Our current production, distribution and consumption of food faces increasing challenges in terms of health, economics, and the environment.

The 'From Farm to Fork' strategy pursues the issue of food sustainability and the support allocated to the producers, i.e. farmers and fishers. Specific target areas include reducing

the use of chemical pesticides, increasing the availability of healthy food options and helping consumers understand the health ratings of products and sustainable packaging.

The specific objectives of the 'From Farm to Fork' strategy include the following[8]:

- Sustainable food production:
  - reduce the overall use and risk of chemical pesticides by 50% by 2030;
  - reduce the use of more hazardous pesticides by 50% by 2030;
  - reduce nutrient losses by at least 50% by 2030;
  - reduce the use of fertilisers by at least 20% by 2030;
  - reduce overall EU sales of antimicrobials for farmed animals and in aquaculture by 50% by 2030;
  - at least 25% of the EU's agricultural land under organic farming by 2030;
  - significant increase in organic aquaculture;
  - accelerate the roll-out of fast broadband internet in rural areas to achieve the objective of 100% access by 2025.
- Sustainable food processing and distribution.
- Sustainable food consumption.
- Food loss and waste prevention:
  - halve per capita food waste at retail and consumer levels by 2030.

[8] More information available on the website https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en (Accessed on 27 November 2022).

Diagram of the F2F strategy. Source: EC.

2.2 Sustainable and smart mobility

The transport sector amounts to nearly a quarter of the EU's greenhouse gas emissions. The European Commission has adopted a specific strategy for sustainable and smart mobility to achieve climate neutrality and provide users with more affordable, accessible, and healthier alternatives to the current transport systems, with most planned policies and measures focusing on promoting low-carbon fuels or electric cars, as well as encouraging a modal shift to public transport. To address this challenge, the EGD has set the following main goals:

2.2.1 Zero-emission transport

- 90% reduction in overall transport emissions by 2050 compared to 1990 levels.
- Revision of the legislation on CO_2 emission performance standards for cars and vans to introduce more stringent air-pollutant emission standards.
- Zero-emission ocean-going vessels and large zero-emission aircraft will become market ready by 2030 and 2035, respectively.
- Regulated access of the most polluting ships to EU ports.

2.2.2 Transport mode

- Implementation of multimodal Trans-European Transport Network (TENT-T) equipped for sustainable and smart mobility.
- Support to multimodal freight operations including rail and waterborne transport, with 75% of inland freight carried today by road to shift to rail and inland waterways.
- New sustainable mobility services to reduce congestion and pollution, especially in urban areas, including smart systems for traffic management enabled by digitalisation.

- By 2030, seamless passenger transport will be facilitated by integrated electronic ticketing and freight transport will be paperless.

- Automated mobility will be deployed on large scale.

2.2.3 Energy/fuels

- Deployment of about 1 million public recharging and hydrogen refuelling stations by 2025 especially where gaps exist, for long-distance travels and in less densely populated areas.

- Revision of the Alternative Infrastructure Directive and the TEN-T Regulation to boost the uptake of sustainable alternative fuels and accelerate the deployment of low-emission vehicles and vessels.

- By 2030, increase the share of renewable energy in transport to around 24%.

- Revision of the Energy Taxation Directive to remove fossil-fuels subsidies and current tax exemption for maritime and aviation fuels.

2.3 Energy-efficient buildings

To significantly reduce the greenhouse emissions and energy poverty in the building sector, while creating local jobs and improving health, the EGD will promote the enforcement of legislation related to the energy performance of buildings and the revision of the Construction Products Regulation to ensure that the design of new and renovated buildings complies with the needs of the circular economy. The Renovation Wave initiative has helped stimulate new investments in public and private buildings to deliver on climate objectives and support local actors. Other initiatives will include financing schemes and an open platform bringing together the stakeholders involved in the construction sector as well as the local authorities to maximise the potential of renovation.

The EGD has set the following goals for the built environment:

2.3.1 Increasing renewable energy in buildings

- At least a 49% share of energy from renewable sources in the buildings sector in the Union’s final consumption of energy in 2030.

- Increase to 38-42% the share of renewables and waste heat by 2030.

- Increase the use of renewable energy in heating and cooling by 1.1 percentage point every year for the periods 2021 to 2025 and 2026 to 2030, starting from the share of renewable energy in the heating and cooling sector in 2020.

- Raise the use of renewable energy in district heating and cooling by 2.1 percentage points every year for the period 2021 to 2025 and for the period 2026 to 2030, starting from the share of energy from renewable sources and from waste heat and cold in district heating and cooling in 2020.

- 35 million building units renovated by 2030.

2.3.2 Improving energy efficiency in buildings

- By 2030, reduce buildings' greenhouse gas emissions by 60% compared to 2015 levels.
- By 2030, reduce buildings' final energy consumption by 14% compared to 2015 levels.
- Annual rate of replacement of heating equipment to reach around 4% in both the residential and services sector.
- Double the annual energy renovation rate of residential and non-residential buildings by 2030 and foster deep energy renovations.
- In the residential sector, the share of electricity in heating demand should grow to 40% by 2030 and to 50-70% by 2050; in the services sector, these shares are expected to be around 65% by 2030 and 80% by 2050.
- Tax system for energy products aligned to the green transition

2.3.3 Provide funding for renovation of buildings

- Renovate at least 3% of the total floor area of public buildings annually
- At least 3% of the total floor area of heated and/or cooled building owned by public bodies is renovated each year to at least be transformed into nearly zero energy buildings

2.3.4 Create world-leading companies

2.3.5 Raise global ambition to tackle climate change

  - All new buildings should be zero-emission buildings, and all existing buildings should be transformed into zero-emission buildings by 2050

2.3.6 Sustainable food systems

2.3.7 Improve health and well-being

2.3.8 Ensure a Just Transition that is fair, competitive and green

2.3.9 Address inequality and energy poverty

2.3.10 Mobilising industry for a clean and circular economy.

3. Main priorities identified by the citizens during the consultations

3.1 Sustainable food systems

3.1.1 Introduction and general overview

On the topic of food sustainability, 489 ideas were generated by EU citizens in the 27 Member States concerning the proposed 'Farm to Fork' strategy of the EGD. Since citizens' first interaction with the food system is as consumers, it is unsurprising that most of their ideas were related to sustainable food consumption. Sustainable food production was also highlighted frequently in the ideas presented. Ideas regarding processing, distribution and retail, and food loss and waste were addressed less frequently but still considered very important.

The quality, depth and focus of discussions varied greatly from country to country. In some countries such as Sweden, Denmark and France, where the public discourse on sustainability is well advanced, it included debates on issues such as animal welfare and the transition to a vegetarian diet. In other countries such as Bulgaria, Croatia and Cyprus, the discussions emphasised the differences in food product quality across the EU Member States.

Despite national idiosyncrasies, common broader ideas emerged from the discussions outlined below.

3.1.2 Developing awareness and knowledge to empower the stakeholders of food systems

According to a large majority of citizens in the national citizen dialogues, diverse food system stakeholders need more skills and topical knowledge to take an active role in the food system transformation activities. From education on maintaining healthy and sustainable diets (21 countries), workshops on household food waste management (12 countries) and cooking with seasonal products (six countries) to understanding the nutritional information on food labels (six countries), the importance of knowledge as a tool of empowerment for food system actors was clearly stated. There was an emphasis on food labels providing consumers with clear information on the nutritional and environmental impact of products and stringent monitoring of label and certificate claims on food products. Finally, citizens of half of the EU Member States stated that food system education should be integrated into school curricula (13 countries).

The empowerment of citizens should not be limited to individual action. Instead, participants involved in the dialogues believe that citizens should also be engaged in participative policymaking (six countries) (e.g., through focus groups, citizen consultations, etc.) to provide insights into new food policies. Furthermore, small food producers and business owners should also be empowered through knowledge exchange, skills training on new production methods (10 countries) and legislation supporting their work through cooperatives (seven countries), e.g. to enable them to apply for subsidies or better negotiate with supermarket chains.

3.1.3 Reducing costs of food system transformation

Many citizens pointed out that food system transformation comes with high costs, especially for small-scale food producers and less affluent citizens. They stated that smallholder producers are often affected more by the transition to sustainable production costs than large industrial operations, e.g., in obtaining certificates or accessing funding for the transformation of food production processes. Therefore, a priority highlighted by the citizens was securing financial support for small-scale, sustainable, and seasonal production (19 countries), coupled with technical support for small-scale farmers to get their products successfully on the market (eight countries), such as municipal support for distribution, grants applications and accountancy.

When it comes to the consumption of sustainable and healthy food, consumers need to be supported to ensure equal access to healthy and sustainable food. According to the citizens, this could be done through price regulation and a voucher system for healthy and sustainable products. According to them, the school sector needs to be provided with subsidies and infrastructural investments to provide meals made with organic, seasonal, and local food products (seven countries).

3.1.4 Shortening food supply chains

Shortening food supply chains was suggested by citizens as a means to make food production and distribution more local, thereby reducing carbon emissions of the food sector. Citizens gave a variety of examples of the actions that are needed to shorten food supply chains. Firstly, food supply chains should be made more local by enabling direct product sales from food producers to consumers (10 countries), e.g. through farmers' markets, mobile applications, food producers' web stores, and other online platforms, distribution lines become shorter, and this will also contribute to building trust relationships between producers and consumers. Secondly, local food products should be made more available and visible in supermarkets (seven countries), e.g. by clearly labelling products and dedicating shelves to local food products. Thirdly, food procurement schemes should promote local and sustainable food in canteens and cafeterias (six countries), e.g., schools, kindergartens, private companies and public institutions. Even when produced locally, food transport will still need to occur. Therefore, investments are needed to make distribution networks more sustainable, for example, through investments in EVs in the food distribution sector (six countries) (e.g. grants for vans and cars delivering food products to stores or directly to customers, but also the development of distribution networks for food donations).

Shortening of food supply chains could also be achieved through decentralised food production (11 countries), for example, by promoting urban and community farming (15 countries) where consumers become food producers themselves, through subsidies for rent for plots of land, farming equipment and free classes on urban farming. It could also be boosted through investing in research on innovation in new sustainable food production methods (six countries), e.g. vertical farming, carbon sequestering farming, and cultured meat production.

3.1.5 Reducing waste across the food cycle

In all the national meetings, citizens elaborated on the need to reduce waste generation across the food chain. In food production and processing, they mentioned that special attention needs to be paid to reducing wastewater generation (eight countries), e.g., water heavily polluted with chemical by-products, while in retail, the amount of single-use and unsustainable packaging must be reduced (15 countries), through legislation, for example.

Finally, citizens believed that food waste needs to be reduced in households, but equally importantly, in food-based businesses. In households, this can be done through workshops on cooking with leftovers and education on weekly meal planning (six countries). On the other hand, citizens suggested that food-based businesses like restaurants and catering companies can promote taking leftovers home, as well as develop cooperation channels to donate their food to groups in need (5 countries), such as social stores, food banks etc.). It was underlined by citizens not to leave measures completely voluntary, but to also work on developing a complementary regulatory framework (six countries), for example introducing taxes on food waste for businesses (5 countries) through penalising businesses without food waste reduction guidelines.

3.2 Sustainable and smart mobility

3.2.1 Introduction and general overview

Twenty-seven national events (one per Member State) explored European citizens' knowledge and understanding of sustainable and smart mobility and the EGD, whether they agree with the vision set out by the EGD, the opportunities that exist and any conflicts or trade-offs that will have to be made.

The following is the 'typical' citizen view from across the Member States on policies to reduce emissions from transport.

- Travel behaviour change is needed but it is hard to achieve.
- (In all Member States) citizens identified the need to improve alternatives – local and regional public transport, cycling, car-sharing and carpooling. This included integrating conventional public transport with micro mobility and car-sharing.
- Due to the pandemic, there was considerable support – in most citizens' meetings – for more teleworking. It was suggested that this could be formalised by requiring employers to offer this option and/or introducing tax incentives for those that do allow staff to work from home part-time.
- (In most but not all Member States meetings), citizens also suggested restrictions on car access to city centres.
- (In most Member State meetings), higher taxation on polluting vehicles was also suggested.
- Citizens (in a minority of Member States) also identified the land-use system as a way of reducing travel demand, by implementing the 15-minute city (or similar), locating facilities close to where people live, and/or increasing land-use densities.
- In almost all Member States, citizens expressed some level of scepticism about the move to EVs.

The view was remarkably similar in all Member States. The variations related mainly to whether additional taxation on polluting vehicles was supported; consideration of the carbon emissions of freight transport; the understanding of the links between land use and transport (the 15-minute city, for example); and whether citizens said that they were prepared to give up car use and flying, or not. In only five countries was 'smart' mobility –

in the sense of using information technology to increase the level of integration of the mobility system – mentioned explicitly, although almost all countries wanted to see more integrated public transport services.

3.2.2 Zero-emission transport

The only countries in which citizens did not express some scepticism about EVs were Malta, Estonia and Croatia. There was scepticism in the groups in all other countries about the ecological benefits of EVs (particularly regarding battery production and disposal, but also in terms of the electricity on which they run and therefore their impact on the environment). There were also concerns about the equity implications of subsidising their purchase, and about phasing out fossil-fuelled vehicles when, it was felt, there are people living in rural areas and some poorly connected suburbs who would be unable to afford an EV but cannot get access to the things they need without a car. A minority of countries questioned why there is such great emphasis on EVs to the exclusion of other fuels, particularly hydrogen. Citizens also questioned whether the move to low-carbon transport is achievable in rural areas, at least in the medium term, since the decarbonisation of the fleet will take a long time and the alternatives to car are poor in such areas.

Overall, the need to transition to low-emission vehicles was recognised, but the apparent focus in EU policy on EVs was not well understood, given the doubts that so many citizens have about them.

Other policies that were supported to reduce greenhouse gas emissions from vehicles and from other modes were as follows:

- Higher taxes on more polluting vehicles;
- Lower taxes on low-emission vehicles;
- Higher taxes on airlines and/or airline travel;
- Road user charging per kilometre;
- Investment in hydrogen technology and fuelling infrastructure;
- Investment in electricity supply networks, in view of the additional demands that will be put on these by EVs;
- Use of biofuels, and conversion of existing vehicles to, for example, biogas operation;
- Low-emission zones (although these normally target local pollutants, not greenhouse gases).

3.2.3 Changing transport mode

In most countries there was a desire for more support, including regulatory and fiscal changes (requirements on employers and/or tax benefits), for home working and digital mobility in general, as the pandemic has highlighted how well this can function. Citizens in most countries did not think that levels of cycling would increase without investment in safe and convenient cycling infrastructure, and for this to be open to micro mobility (e.g. scooters) as well as bikes. There was also support for car-sharing (on-street car hire) and

carpooling (lift sharing) but, again, citizens felt this had to be promoted and perhaps given some fiscal advantages over private cars. Overall, citizens wanted improved alternatives to the private car. The corollary of this was that there was a readiness in most countries to see car access restricted for trips into city centres, and in a minority for there to be additional tax on car use, particularly on the most polluting cars.

In general, citizens put more emphasis on this means of reducing emissions from transport than on changing vehicle technologies. There was not a single country in which improvements to local and regional public transport (frequency, speed, network density, vehicle comfort, integration and, usually, price) were not mentioned. In 13 countries, this extended to national and international rail travel, which was often considered to be a poor alternative to air travel due to high prices, poor connections and (for international rail especially) the difficulty of getting information and buying tickets.

To complement a mode shift to public transport, the following additional policies were identified by citizens:

- Restricting access for private cars to inner urban areas – 19 countries;
- Parking management (pricing, reduced availability) – nine countries;
- Integrating public transport with shared mobility services such as bike-share – 11 countries;
- Improved carriage of bikes on trains – four countries;
- Staggered working and school opening hours, to reduce congestion – six countries.

3.2.4 Energy

The relevant information or input on this topic is covered in the section on zero-emission transport above.

3.3 Energy-efficient buildings

3.3.1 Introduction and general overview

Citizens from 27 Member States were canvassed concerning their knowledge and understanding of energy-efficient buildings and the EGD, whether they agree with the vision set out by the EGD, the opportunities that exist and any conflicts or trade-offs that will have to be made. The following summarises the discussions between the citizens on the topic of energy-efficient buildings.

3.3.2 Increasing renewable energy in buildings

The increase of renewable energy in buildings was not discussed widely amongst citizens, with a few mentions of the benefits of solar photovoltaic systems and heat pump installation. This would suggest a lack of awareness around the EGD objective to increase renewable energy in buildings by 49% by 2030, and further education and incentives on this topic are needed.

3.3.3 Improving energy efficiency in buildings

In the majority of the 27 Member States in which citizens' workshops were held peoplehad a good knowledge of the issues surrounding energy efficiency in buildings. The Member States where citizens had an excellent knowledge of the issues were Denmark, France and Finland, with East European Member States such as Bulgaria, Czech Republic, Estonia, Lithuania, Latvia and Romania having the least knowledge.

The following outlines the common observation from the citizen reports on the theme of improving energy efficiency in buildings.

- Six countries made specific mention of one-stop shops and the need for both an online and physical presence where they can find all the information they need to carry out a renovation project and the availability of an expert to get advice from.

- Citizens from five Member States with a high level of condominium and apartment ownership also mentioned that renovating an apartment within a larger block is difficult as it requires consensus from all, and policies should be in place to encourage this.

- In four citizens' workshops in the Member States participants understood the issues related to tenants not being able to carry out energy efficiency measures. However, in the majority of Member States, this was not discussed.

- In four Member States, participants in citizens' workshops stressed the need for more encouragement for community energy projects improving energy efficiency in buildings (achieve 36% energy reduction across all buildings by 2030).

- In five Member States, citizens looked for mandates for property owners to have a minimum energy efficiency rating when renting their properties.

- In four Member States, citizens also spoke about changing culture to encourage people to live in smaller spaces and stop building large one-off houses that consume large amounts of energy.

- In three Member States, citizens mentioned the issue with retrofitting older buildings due to conservation legislation.

3.3.4 Tax system for energy products aligned to the green transition

Approximately one-third of citizens' workshops in the Member States mentioned that in addition to subsidies, tax incentives such as tax breaks on renovation projects or VAT reductions for both the real estate owner and the technology provider should be in place. This would tie into another goal of the EGD, which is to create a tax system for energy products aligned with the green transition. It would also encourage the creation of new companies offering green solutions, stimulating competition and thus the development of world-leading companies from the EU.

The following outlines the common observation from the citizen reports on the theme of the tax system for energy products aligned to the green transition:

- Nine countries mentioned that in addition to subsidies, tax incentives such as tax breaks on renovation projects or VAT reductions for both the real estate owner and the technology provider should be in place.

3.3.5 Provide funding for renovation of buildings

The overwhelming majority of citizens' workshops in the Member States stated that renovation was not affordable and that the full costs of renovation should be borne for such projects. In addition, over half of the workshops mentioned that incentive schemes were difficult to understand, the administrative burden to access them was high and that accessing the information on the incentive schemes was difficult.

While governments in most Member States provide some renovation funding, many citizen reports mentioned that this is generally only provided for those in low-income households and social housing, and the 'squeezed middle' are being left behind. For example, many Member States are supporting the home renovation for those in social housing at 100% cost to the state but are asking households on middle-income wages to fund the renovation cost partially. Participants in most citizens' workshops stated that this is not practical for several reasons, including the rising energy costs and the associated limited financial means to pay for the renovation.

In addition, subsidies or incentive schemes do not account for many hidden costs, such as additional electric or plumbing work required when changing heating systems. As a result, many citizens were adamant that they will not carry out renovation projects unless there is 100% funding available and hidden costs of the whole project are considered in that funding.

There were several small instances where subsidies had been promoted and later abolished, e.g. feed-in tariff for solar panels to encourage investment in solar panels, which was later taken away before the investment was recovered. This created a lack of trust in incentive schemes and should be taken as a warning to all Member State governments. Many also said that subsidies should be paid upfront. In many cases, the subsidy is paid after the project is completed and only on inspection. Therefore, there is a risk that the subsidy will not be paid out, besides the issue of finding the resources to provide the cash flow necessary to undertake the work.

There were also several conversations concerning the fact that no one building fits all solutions. Different buildings will require different measures depending on age, and bigger buildings will be more costly to renovate. However, the subsidies tend to be the same. There is a difference between urban and rural; for example, renovating a house in a rural setting will not increase its value as much as in an urban setting. As such, the lack of willingness to renovate until these issues were addressed was present, with a feeling that the EGD's green transition is not a fair transition to all.

The following outlines the common observations from the citizen reports on the theme of providing funding for the renovation of buildings.

- An overwhelming majority (23 countries) spoke about renovation not being affordable and that funding should be provided for renovation projects. Some citizens' workshops in the Member States specifically addressed the issue that it is only the higher classes that can afford renovation, and most mentioned that it is not just the lower income but also the middle-income earners that cannot afford the renovation.

- Over half of the citizens' workshops in the Member States (14 countries) said that incentive schemes were difficult to understand, the administrative burden to access them was high and accessing the information on the incentive schemes was difficult.

3.3.6 Renovate at least 3% of the total floor area of public buildings annually

The main topic discussed regarding the renovation of buildings was that public buildings should lead the way. There is an opportunity to couple public building renovation, funded by the state, with education programmes to upskill tradespeople, educate the public and promote the benefits of energy-efficient building. At the same time, education programmes, media campaigns and communication mechanisms will also feed another EGD goal concerning raising global ambition to tackle climate change.

The following outlines the common observation from the citizen reports on the theme of renovating at least 3% of the total floor area of public buildings annually.

- 14 national citizens' workshops in the Member States mentioned that the public bodies should lead the way.

3.3.7 Create world-leading companies

There were no significant discussions around energy and construction professionals offering the relevant services to meet the EGD; however, a few common observations were made.

The following outlines the common observations from the citizen reports to the theme of creating world-leading companies

- In five citizens' workshops in the Member States, citizens said that those carrying out the renovation were not reliable, and stricter regulations are required for renovation projects.

- In a very small number of Member States (two), citizens mentioned the lack of skilled workers to achieve many EGD goals concerning energy efficiency and the uptake of renewable technologies. A small number (five Member States) mentioned there should be more funding for Research and Innovation.

3.3.8 Raise global ambition to tackle climate change

This topic was a focus of conversation for most of the citizen discussions.

The following outlines the common observations from the citizen reports on the theme of raising global ambition to tackle climate change.

- An overwhelming majority (24 countries) said that education is required. This includes education for real estate owners concerning why they need to embrace energy efficiency, education on where the subsidies are, education for technology providers and education for schools and the young.

3.3.9 Improve health and well-being

Across all citizen workshops, there was very little mention of the impact of energy-efficient buildings on the health and well-being of the occupants, suggesting there is not a common understanding that energy efficiency leads to improved health and well-being and suggesting again that further education is required.

3.3.10 Address inequality and energy poverty

There was not a lot of discussion with respect to inequality and energy poverty. A common theme observed was respect for tenants not being able to influence the energy efficiency of their building, as they do not own it. A small number of participants spoke about changing culture to encourage people to live in smaller spaces and stop building large one-off houses that consume large amounts of energy. Citizens in Member States with a high level of condominium and apartment ownership also mentioned that renovating an apartment within a larger block is difficult, as it requires consensus from all. Policies should be in place to encourage this. A very small number mentioned the issue with retrofitting older buildings due to conservation legislation but there was not a lot of awareness around this constraint.

3.3.11 Mobilising industry for a clean and circular economy

A few citizens' workshops in the Member States touched on the issue of re-use and providing incentives for the use of recycled materials in construction or renovation instead of demolition; however, it was not discussed widely.

4. Main priorities identified by the stakeholders during the consultations

4.1 Sustainable food systems

4.1.1 Introduction and general overview

In general, the stakeholders agreed on most challenges and possible actions in the transformation of food systems previously identified by citizens. However, while citizens emphasised the importance of actions based on awareness and education instruments, stakeholders tended to prioritise actions based on subsidies, incentives, and regulations. The following headings regroup the main ideas generated during the stakeholder consultations according to their type and priority. The classification loosely follows the EGD goals; it has been simplified in accordance with the results obtained.

4.1.2 Raising capacities of the public sector in facilitating sustainable food system transformation

Citizens and stakeholders pointed to the complex policy issues of food system transformation being addressed inadequately by public administration working in silos. The stakeholders widely discussed the importance of investments in the capacities of public administration to effectively coordinate food policy development and implementation (12 countries). They proposed, for example, investment in the education of officials and developing national strategies.

Accordingly, the stakeholders emphasised how these changes would support the implementation of more systemic food policy solutions, such as food procurement agreements oriented on local and sustainability criteria (eight countries).

4.1.3 Empowering food producers to become active changemakers in sustainable food production

The stakeholders pointed to the importance of supporting food producers in taking responsibility for transitioning to sustainable production. This can be done through developing knowledge exchange platforms (six countries) and investing in their capacities through subsidies for sustainable food production research and implementation (12 countries).

4.1.4 Supporting citizens to become a part of the sustainable food transformation

Finally, stakeholders emphasised several actions supporting citizens in healthy nutrition. Firstly, they discussed education and awareness-raising on sustainable diets (seven countries) as well as increasing access to local food through vouchers and other means (seven countries) and introducing taxation on unhealthy and unsustainable food (eight countries).

4.2 Sustainable and smart mobility

4.2.1 Introduction and general overview

National stakeholders from 27 Member States were interviewed to understand the policies that exist in each one of their countries concerning the delivery of the EGD, how they felt

their Member State was contributing to the EGD goals, and what actions they would suggest to help meet those goals. The national stakeholders were also presented with some of the information from the citizen discussions to help guide the conversation and get their viewpoints on how to address certain issues raised by the citizens. As such, the following observations also consider any significant divergences between the national stakeholders' and the citizens' viewpoints.

There were very few priorities identified by the citizens that stakeholders did not agree with. In all Member State, suggestions from citizens were dismissed on a one-off basis by stakeholders, varying from one Member State to the other. There was thus not a specific suggestion that was being broadly dismissed across all countries. For example, the stakeholders did not share the scepticism of Maltese citizens towards EVs. Swedish citizens' suggestion for government monitoring/control of people's mobility, inspired by government interventions during the COVID-19 pandemic, was discounted by Swedish stakeholders as unworkable. The support of citizens in Denmark for improved rural public transport was not shared by the one stakeholder from that country, who argued that conventional public transport could be very uneconomic and perform poorly in environmental terms with the low number of passengers per vehicle often seen on rural bus routes. However, in general, stakeholders did not disagree with citizens' priorities but provided their ideas for additional priorities.

4.2.2 Zero-emission transport

The only countries in which stakeholders did not express some scepticism about EVs were Malta, Estonia and Croatia. There was scepticism in the groups in all other countries about the ecological benefits of EVs (particularly regarding battery production and disposal, but also in terms of the electricity on which they run and therefore their associated carbon emissions). There were also concerns about the equity implications of subsidising their purchase, and about phasing out fossil-fuelled vehicles when, it was felt, there are people living in rural areas and some poorly connected suburbs who would be unable to afford an EV but cannot get access to the things they need without a car. A minority of countries questioned why there is an apparently great emphasis on EVs to the exclusion of other fuels, particularly hydrogen. In general, stakeholders placed more emphasis on energy needs planning to meet higher electricity demand from EVs than citizens did.

Overall, the need to transition to low-emission vehicles was recognised, but the apparent focus in EU policy on EVs was not well understood, given the doubts that so many stakeholders have about them. Stakeholders in many countries felt that it was instead important to focus on a range of low-emission technologies, including those like LPG which can be retrofitted to existing vehicles.

Other policies that were supported to reduce greenhouse-generated emissions from vehicles and from other modes were very similar to those raised by citizens, and were as follows:

- higher taxes on more polluting vehicles;
- lower taxes on low-emission vehicles;
- higher taxes on airlines and/or airline travel;
- road user charging per kilometre;

- investment in hydrogen technology and fuelling infrastructure;
- investment in electricity supply networks, in view of the additional demands that will be put on these by EVs;
- use of biofuels, and conversion of existing vehicles to, for example, biogas operation;
- encouragement of alternative fuels for freight vehicles (those relatively few stakeholders who raised the issue of freight felt that there is a lack of policies in general to reduce emissions from freight transport).

4.2.3 Changing transport mode

Stakeholders were in strong agreement with citizens that public transport needed to be improved to bring about modal shift. Similarly, stakeholders in most countries did not think that levels of cycling would increase without investment in safe, convenient cycling infrastructure, and for this to be open to micro mobility (e.g. scooters) as well as bikes. There was also support for car-sharing (on-street car hire) and carpooling (lift sharing) but, again, stakeholders felt this had to be promoted and perhaps given some fiscal advantages over private cars. Overall, stakeholders wanted improved alternatives to the private car. The corollary of this was that there was a readiness in most countries to see car access restricted for trips into city centres, and in a minority for there to be additional tax on car use, particularly on the most polluting cars. Stakeholders were, in general, more willing to see restrictions on and additional costs for private car use than citizens were, and suggested one or more forms of such restrictions in 19 countries.

In general, stakeholders put more emphasis on changing transport mode as a means of reducing emissions from transport than on changing vehicle technologies. As in the discussions with citizens, there was not a single country in which improvements to local and regional public transport (frequency, speed, network density, vehicle comfort, integration and, usually, price) were not mentioned by stakeholders. In discussions in 16 countries this also extended to national and international rail travel, which was often considered to be a poor alternative to air travel due to high prices, poor connections and (for international rail especially) the difficulty of getting information and buying tickets.

To complement mode shift to public transport, the following additional policies were identified by stakeholders. Support for restrictions on private car use was greater than amongst citizens:

- Restricting access for private cars to inner urban areas – 22 countries;
- *Parking management (pricing, reduced availability) – 14 countries;*
- *Integrating public transport with shared mobility services such as bike-share – 11 countries;*
- *Improved carriage of bikes on trains – five countries;*
- *Staggered working and school opening hours, to reduce congestion – six countries.*

4.2.4 Energy

The relevant information or input on this topic is covered in the section 4.2.2 on zero-emission transport above.

4.3 Energy-efficient buildings

4.3.1 Introduction and general overview

National stakeholders from 27 Member States were interviewed to understand the policies that exist in each Member State concerning the delivery of the EGD, how they felt their Member State was contributing to the EGD goals and what actions they would suggest helping meet those goals. The national stakeholders were also presented with some of the information from the citizen discussions to help guide the conversation and get their viewpoints on how to address certain issues raised by the citizens. As such, the following observations also consider any significant divergences between the national stakeholders' and the citizens' viewpoints.

4.3.2 Increasing renewable energy in buildings

There was no significant discussion among the stakeholders around renewable energy in buildings, suggesting a lack of awareness of the relevance of this topic across countries. A similar situation occurred during the citizen workshops. When the topic was discussed, the main concerns were related to long term-commitments to renewable energy schemes, enabling renewable energy communities and encouraging buildings/homeowners to invest in solar photovoltaic and heat pump solutions.

There were a small number of common observations from the national stakeholders' reports on the theme of increasing renewable energy in buildings as follows:

- In seven countries, national stakeholders felt there needed to be a longer-term commitment to renewables at a national level and assurance that subsidies that are put in place are not removed by, for example, a new government.

- In six countries, national stakeholders suggested community energy projects such as the ability to rent roof space for solar panels when you do not have it available or the orientation of roof space is unsuitable for panels installation.

- Only a small number (two countries) mentioned increasing the use of solar panels in buildings.

- A small number (three countries) also observed that getting permits for renewable technology is a lengthy process.

4.3.3 Improving energy efficiency in buildings

A high number of national stakeholders referred to the need for one-stop shops. This is where the home or building owner can find all the information they need regarding energy efficiency renovation, from understanding the benefits, to connecting with the financial mechanisms and subsidies to finance the renovation and the contractors who can carry out the work. Some Member States have initiatives for one-stop shops already available, but in these instances, the need for improvements was mentioned.

Another suggestion from several Member States was to promote downsizing or living in smaller buildings that would be more energy efficient. Some national stakeholders felt this should be encouraged and the benefits outlined, others felt there should be incentives to encourage homeowners to downsize. Citizens also supported this view in many Member States.

The following outlines the common observation from the national stakeholder reports on the theme of improving energy efficiency in buildings.

- Almost half of national stakeholders (13 countries) specifically mentioned the need for one-stop shops.
- One-third (nine countries) mentioned some need to mandate the checking of a building's energy use regularly, either through measurement and verification or through the use of a renovation or building passport.
- Over a quarter (eight countries) promoted downsizing to reduce energy consumption in buildings.
- A small number (two countries) promoted campaigns to encourage end users to change their behaviour in buildings.
- One country suggested mandating energy efficiency upgrades when a building was purchased (please note that no further information was available whether this would apply to entire buildings only or also individual flats within a building).

4.3.4 Tax system for energy products aligned to the green transition

A few national stakeholders mentioned that there should be lower property taxes for people living in energy-efficient buildings, which would encourage them to invest in renovation. However, if only the wealthy can afford to renovate and then they further benefit from a reduced property tax, the question of fairness would need to be addressed. Otherwise, this topic was not largely discussed, with no other common observations.

4.3.5 Provide funding for the renovation of buildings

In general, the national stakeholders agreed with the citizens that renovation is not affordable for most citizens and only the wealthy can afford to renovate their buildings. However, there were differences in opinion between the national stakeholders and citizens on whether 100% subsidies should be provided. There were also differing of opinions on this issue between the national stakeholders themselves. Some national stakeholders felt that it would not be possible to achieve the EGD goals without 100% subsidies, where other national stakeholders stated that 100% subsidies would inflate the market and cause other economic issues. It was also suggested that to ensure successful energy efficiency and reduction in carbon consumption, citizens should have a certain level of responsibility and hence should pay something towards the renovation, but the agreed percentage was not discussed.

The following outlines the common observations from the national stakeholder reports on the theme of providing funding for the renovation of buildings.

- Stakeholders from nine countries mentioned that the subsidy and incentive scheme should be re-examined.

- Three countries' national stakeholders felt there should be 100% subsidies available for renovation for all citizens.

- A further three countries suggested there should be a pre-finance mechanism available for those who cannot afford the full costs of renovation before they can claim back the subsidy.

- A further three countries felt there should be a free energy audit service available for all.

4.3.6 Renovate at least 3% of the total floor area of public buildings annually

Most national stakeholders agreed with the citizens that public buildings should lead the way. They held the same view that the positive work in public buildings should be disseminated to citizens as good examples of how to carry out energy-efficiency renovations. Almost one-third (eight countries) of national stakeholders commented on this.

4.3.7 Create world-leading companies

Education, upskilling, and awareness-raising campaigns were common themes, with some national stakeholders mentioning the need for further investment in R&D and innovation. There were also several references to the need to create trust in the experts providing renovation services. Some national stakeholders referred to the need for a certified EU renovation expert label, while stakeholders from a few other Member States disagreed with this and felt this should not be mandated at the EU level but should come from the national level. One good suggestion was the establishment of a professional body of renovation experts which could include certification and training programmes and hence would address all needs of education and training, creating trust in those offering renovation services through certification and the ability to connect with other local and national bodies.

The following outlines the common observation from the national stakeholder reports to the theme of creating world-leading companies.

- Over half of the national stakeholders (14 countries) mentioned the need to increase the capacity of professional engineers in the construction and energy fields.

- A moderate percentage (11 countries) mentioned the need for an EU energy expert label.

- Over one-fifth (six countries) mentioned the need for education in schools and encouraging students to go into professions for energy efficiency in buildings.

4.3.8 Raise global ambition to tackle climate change

Like the citizens, this was a focus topic for the national stakeholders. A large majority (21 countries) of national stakeholders mentioned the need for awareness-raising campaigns on the benefits of energy efficiency measures and renovation and renewables as well as available subsidy schemes.

4.3.9 Improve health and well-being

While this topic was not discussed heavily amongst the citizens, there were a good number of Member States at the national stakeholder level (13 countries) who were aware of the

benefits of improved health and well-being because of energy efficiency renovations and felt this needed to be promoted more amongst citizens. The view was that this would be seen as an added incentive to encourage the uptake of renovation, as health and well-being would be important to the citizens and something they would be willing to invest in.

4.3.10 Address inequality and energy poverty

Like the citizen workshops, there were no major conversations among stakeholders concerning inequality and energy poverty apart from those already mentioned in relation to the Just Transition.

4.3.11 Mobilising industry for a clean and circular economy

Mobilising the industry for a clean and circular economy was discussed by some national stakeholders, but there were no clear common observations.

5. Notable ideas from citizens and stakeholders

5.1 Sustainable food systems

Some of the most noteworthy ideas proposed as listed here below.

- Bulgarian citizens suggested the creation of a sort of EGD information officer, someone to translate the information on practical aspects of the EGD. This person would serve as a point of contact for food system stakeholders on relevant upcoming legislation, grants, and other opportunities.

- Citizens from the Czech Republic and Italy proposed social media event campaigns for local food markets.

- Citizens of Luxembourg brought forward reducing the influence of agro-industrial lobbies on food system research. The citizens pointed out that the pressure of agro-industrial lobbies influences the research themes and results, which doubts evidence-informed policymaking in food systems.

- The citizen panels for Italy and France suggested the revision of market working hours to make them more accessible.

- Maltese and Swedish citizens proposed investments to renovate local market infrastructure – e.g., sanitation and transport hubs. Maltese stakeholders proposed the organisation of free buses to food markets.

- Danish and French stakeholders suggested legislation on obligatory price reductions of soon-to-expire food products in supermarkets. This action was brought up to oblige supermarkets (and potentially other food-based businesses) to reduce food waste generation.

5.2 Sustainable and smart mobility

There was a great deal of commonality between suggestions from stakeholders and citizens.

- In Belgium and Ireland, citizens suggested that parking in cities could be reduced to help to reduce car use.

- The Slovenian citizens were very concerned about waste and wanted a system to publicise and reduce cars' full life cycle carbon impacts. The Slovenian stakeholders wanted the EU to use conditionality of funding to increase the likelihood that structural and other EU funds are truly spent on measures to reduce emissions from transport.

- The citizen group in Portugal wanted an obligatory training course for schools and workplaces on environmental stewardship. The stakeholder group in Portugal highlighted that housing policies should be aligned with walking, cycling and public transport policies so that housing is well-located and generates trips for these modes.

- In Slovakia, citizens wanted to see more investment in public transport. German stakeholders were supportive of very cheap or even free public transport.

- French and Italian citizens emphasised the importance of improving personal security on public transport if more people – especially women – were to use it more often.

- The Swedish and Croatian citizen groups felt it would be beneficial to reward people (financially) who choose to move away from fossil fuel-based transport to low-emission alternatives. Croatian stakeholders felt the 15-minute city concept was relevant to most Croatian cities.

- The Greek citizen workshop suggested information campaigns on sustainable mobility issues tailored to different groups in society.

- Finland's citizen workshop was more than averagely concerned about accessibility in rural areas and suggested that this could be improved with local energy production systems, self-driving demand-responsive buses, more school taxis, and carpooling.

- Polish citizens wanted regional rail services expanded, bike parking at all stations, and the ability to take bikes on trains. Polish stakeholders wanted to see safer conditions on roads for cyclists and pedestrians.

- The Latvian citizens' workshop highlighted the relevance of micro-electric mobility, such as e-scooters, to the urban transport landscape and wanted government support for these vehicles, not just electric cars.

- Hungarian stakeholders pointed out the need to produce renewable electricity if EVs are indeed to reduce carbon emissions.

- Bulgarian and Romanian citizens were supportive of higher taxes on polluting vehicles. The Estonian and Luxembourgish stakeholders expressed the same view.

- Danish citizens wanted to see (more) tax on air travel. Dutch citizens here called for a total ban on short-haul flights, although they did not define the distance.

- The Danish stakeholder talked about the need for low-carbon fuels in maritime transport. At the same time, Hungarian citizens brought up the topic of clean freight transport in the context of river transport. Czech Republic citizens pointed out that there should be a shift from road to rail for freight.

- Belgian stakeholders pointed out that the move to phase out fossil-fuel-powered vehicles should be used to reduce the number of vehicles overall and produce a less car-dependent society. Similarly, Austrian, and Dutch stakeholders stressed the need to reduce total amounts of travel to achieve emissions reduction targets.

- Cyprus stakeholders wanted to see more work and school buses to provide a bespoke public transport alternative for school pupils and employees of specific organisations. Similarly, citizens made several suggestions regarding scheduling work and school hours to reduce double trips to school (children are picked up and taken home for lunch) and reduce congestion. In Malta, citizens suggested tax incentives/reliefs for employers willing to subsidise alternative green transport for their staff. Maltese stakeholders suggested green travel plans for employers to promote car-sharing, flexible working and works buses.

- Finnish and French stakeholders were keen that the EU create international standards for data sharing for smart ticketing and information (something the EU is already proposing) and achieve convergence in EV charging technology, including on-road charging. Lithuanian citizens shared the same view on integrated public transport travel information and ticketing.

5.3 Energy-efficient buildings

The following good suggestions are taken from citizens' and stakeholder's workshop reports:

- On the legislative side, a few suggestions were brought forward. Belgian stakeholders highlighted the importance and value of the Smart Readiness Indicator (SRI), which will force the sector to adapt and improve as well as measure energy use. Lithuanian stakeholders proposed creating a national implementation model concerning energy-service companies (ESCO).

- Several countries suggested linking energy efficiency and funding to the specifics of the building.

- In Belgium, citizens suggested mandating energy efficiency requirements for houses but linked to the size of the house to ease economic pressure. In other words, renovating a smaller house to a B2 standard should be cheaper than a larger one.

- Danish citizens proposed creating subsidies for the use of recycled materials in construction and making it illegal to abandon an older building.

- Finnish citizens proposed linking renovation subsidies to its geographical location (urban/rural) or the value of the house.

- Hungarian citizens proposed to make loans or subsidies conditional to the age of the building, i.e., the older the building, the higher the subsidy.

- The Polish citizen group suggested offering financial compensation to favour the construction of houses that surpass the energy efficiency of the current regulations.

- Stakeholders brought forward the creation of targeted education campaigns in several countries (e.g., Czech Republic, Belgium). Danish stakeholders added that the wording used in marketing campaigns related to sustainability should be regulated to avoid greenwashing. The Estonian stakeholder proposed involving young speakers and influencers in social media campaigns. For Slovakian stakeholders, it was necessary to mandate that energy climate and security are topics of prime-time public media debates.

- French citizens suggested ensuring stability in the price of energy for those who renovate their homes; this was also suggested by Finnish and Dutch stakeholders, who maintained that there should be no negative financial consequence for moving to cleaner energy.

- French citizens believed that for renters, renovation could imply more expensive rent but guaranteed lower energy bill prices. Cypriot stakeholders introduced the idea of a

'green lease' where tenants are aware of and agreed to the increases in rent given the drop in electricity and heating bills.

- In Cyprus, citizens proposed that the architectural industry should promote better space design for energy efficiency and educate the end-user on the related benefits, such as energy efficiency and healthier homes. The construction industry should also push bioclimatic design and its benefits and promote using local materials and local tradespeople.

- Education and certification were mentioned by both citizens and stakeholders in several Member States (Cyprus, Slovenia etc.). Spanish stakeholders put forward ideas to incentivise businesses to move from new building construction to refurbishment and provide training and upskilling to enable this. Portuguese stakeholders suggested creating a framework for a global City-University led approach to energy efficiency. Croatian stakeholders proposed creating scholarships for those going from secondary to tertiary education in energy efficiency renovation. Irish stakeholders also said there was a need to provide training for public council property owners and tenants on improving energy efficiency.

- Some ideas proposed were linked to lifestyle. German citizens mentioned that energy consumption is linked to the personal feeling of comfort, so different habits should be taken into account. French citizens suggested promoting physical activity to warm the individual instead of turning the heat on.

- Both citizens and stakeholders also discussed self-consumption. For example, Romanian citizens and French stakeholders proposed creating possibilities for citizens to become energy-independent through renewable energies.

6. National Roadmaps towards the implementation of the European Green Deal

6.1 Austria

6.1.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[9] in Austria that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[10]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Austria's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Austria did not point out any relevant food policies on a national level.

However, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Austria.

- The country's Biodiversity Strategy (BMK.at, 2014)[11](Biodiversitäts-Strategie Österreich 2020+), published in 2014, looks to protect biodiversity and minimise the impact of human activity, including food production, on biodiversity.

- The National Strategy For Fruit And Vegetables (BMK.at, 2018)[12] (Nationale Strategie Obst und Gemüse) from 2018 accompanies the European Structural and Investment Funds (ESIF) operational programme and outlines support mechanisms for producing fruit and vegetables. Environmental components play an important role, specifically in reducing residue from pesticides and other substances, protecting natural resources (especially water and soil), reducing waste and reducing the negative impact of fruit and vegetable production on biodiversity and climate change.

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[9] A stakeholder meeting took place on 4 October 2022 and involved 1 national authority, 1 local authority and 2 research and academia community member.
[10] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[11] BMK.de (2014). Biodiversitäts-Strategie Österreich 2020+. Available at: https://www.bmk.gv.at/themen/klima_umwelt/naturschutz/biol_vielfalt/biodiversitaets_strategie_oe2020.html#:~:text=Die%20Biodiversit% C3%A4ts%2DStrategie%20%C3%96sterreich%202020,und%20die%20Gef%C3%A4hrdungsursachen%20zu%20minimieren (Accessed on 14 November 2022).
[12] BMK.de (2018). Nationale Strategie Obst Und Gemüse. Available at: https://www.ama.at/getattachment/e5d02964-acf8-4f37-a2be-57d2d525422e/AT_Nationale_Strategie_Obst_Gemuse_2018.pdf. (Accessed on 14 November 2022).

General overview of actions per theme

The actions proposed by the Austrian citizens and stakeholders on transforming the current food system in Austria consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the food system components, focusing on sustainable food processing, distribution and retail. Finally, the proposed actions mainly focus on implementation tools such as communication, education and interaction, which can be implemented immediately.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement	

Theme	**Action**
Sustainable food production (3)	Development of technical support mechanisms for farmers and small-scale food producers
	Incentives for new food start-ups
	Legislation on better conditions for farm animals
Sustainable food processing, distribution & retail (7)	Making healthy and sustainable food more available to socially vulnerable groups
	Education on reading food labels
	Development of a food label QR code
	Standardisation of food packaging deposit systems
	Regulation preventing unfair competition in the area of sustainable food products
	Ban sales of out-of-season produce
	Work with other EU countries to develop new sustainability certificates
Sustainable food consumption (3)	Encouraging sustainable food procurement mechanisms to be set up
	Awareness campaigns on sustainable consumption
	Promotional campaigns for buying food from local and small-scale farmers
Food loss and waste reduction (3)	Food waste should be used as animal feed to replace specially grown animal feed crops
	School education on food waste
	Revision of regulation on food expiry dates
Ensuring food security (0)	
Combating food fraud (1)	Stringent control mechanisms for quality labels
Across the entire food cycle (2)	Implementation of experiential and participative activities on food system transition
	Development of a platform for food system stakeholders to cooperate in facilitating sustainable food system transition in rural as well as urban areas

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

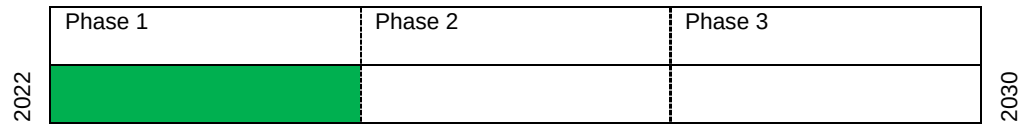
Theme	Barrier	Idea Source[13]
Sustainable food production	Agricultural policies are not sufficiently targeted to deal with climate challenges.	S
	Mass agriculture production is privileged in access to subsidies over local farming.	S
	Lack of funding programmes for start-ups and small/family farming to make them self-sufficient.	C
	Conflictual debates on increasing organic agriculture slow the achievement of goals and cause disorientation.	S
Sustainable food processing, distribution & retail	The use of several labels on food products causes disorientation.	C
Sustainable food consumption	Quality food products are not affordable for everybody.	C
	A cultural change is needed to reduce high meat consumption.	S
Food loss and food waste reduction	Regulations on waste in households are not developed enough.	S
Across the entire food cycle	There is a lack of common objectives between different political parties.	S
	Separating departments and lack of interdisciplinary cooperation cause slow management of complex policies.	C
	There is a lack of climate-relevant regulations in gastronomy and trade.	S
	Personal investments are forced to compensate for public incentives in innovative food projects.	S
	Lack of support for science and education programmes for regions and individuals on food systems.	C
	Lack of media campaigns promoting the sustainable food transition.	S
	Lack of awareness towards climate transition and lack of concrete and inspiring roadmaps for the population.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Austria. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory

[13] C – Citizens; S – expert stakeholders

activities. All these actions can be implemented straight away. Some, such as education on reading food labels, are easy to implement (low-hanging fruit). However, they also have a limited potential to contribute to the food system transformation. Others, such as advocating for the expansion of green food procurement, may be more difficult to implement successfully but can produce knock-on effects in significantly changing the food procurement patterns.

Theme	Action name	Description	Idea Source[14]
Sustainable food processing, distribution & retail	Making healthy and sustainable food more available to socially vulnerable groups	Development of mechanisms (food banks, social food stores etc.) to make healthy and sustainable food available to socially vulnerable groups.	S
	Education on reading food labels	Educational workshops should be organised across Austria on how to read food labels with understanding.	C
	Development of a food label QR code	A QR code should be added to food labels containing more information on the food product (e.g. product origin, animal welfare, environmental impact) so that physical labels contain only key information.	S
Sustainable food consumption	Encouraging sustainable food procurement mechanisms to be set up	Sustainable food procurement should be encouraged in businesses, public bodies, and events.	S
	Awareness campaigns on sustainable consumption	Awareness campaigns should be organised to promote sustainable consumption (e.g. asking questions like 'why is an organic/ vegetarian diet better for us and the environment?').	S
	Promotional campaigns for buying food from local and small-scale farmers	Promotional campaigns should be organised, encouraging citizens to buy food from local and small-scale food producers.	C
Food loss and waste reduction	Food waste should be used as animal feed to replace specially grown animal feed crops	Food waste should be repurposed as animal feed to reduce the use of new crops for animal feed as much as possible.	C
	School education on food waste	Schools should introduce classes on food waste into the regular curricula.	C
Combating food fraud	Stringent control mechanisms for quality labels	The responsible agencies should more rigorously inspect food quality label claims.	C
Across the entire food cycle	Implementation of experiential and participative activities on food system transition	Experiential and participative decision-making workshops (e.g. hackathons and gamification workshops) should be organised on food system transformation. These should provide decision-makers with new ideas for food system transformation and engage citizens.	S

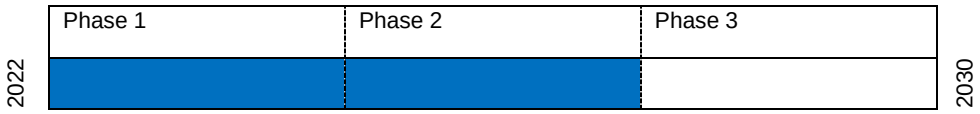
[14] C – Citizens; S – expert stakeholders

	Development of a platform for food system stakeholders to cooperate in facilitating sustainable food system transition in rural as well as urban areas	A platform should be developed for food system stakeholders to cooperate in facilitating sustainable food system solutions in rural and urban areas, aiming to create circular food systems.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions deemed unaffordable and unlikely to occur without support through subsidies and other incentives. These actions specifically concern development of support mechanisms for sustainable food production and incentives for new food start-ups. These actions are partly taking place on a smaller scale but can be significantly ramped up with incentives.

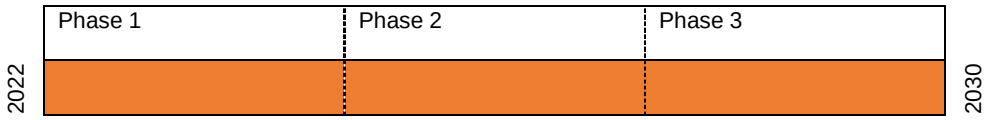
Theme	Action name	Description	Idea Source [15]
Sustainable food production	Development of technical support mechanisms for sustainable farmers and small-scale food producers	Small-scale sustainable food producers should have access to technical support (e.g. exchange of best practices, training on sustainable methods, and financial support).	S
	Incentives for new food start-ups	The government should financially incentivise new food start-ups to multiply sustainable food products as well as create new jobs.	C

[15] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in how sustainable food production occurs, regulating products' sales and revising existing legislation on food products.

Theme	Action name	Description	Idea Source[16]
Sustainable food production	Legislation on better conditions for farm animals	Legislation should be developed to ensure better conditions for farm animals (e.g. housing improvements and limited number of transported animals per truck).	C
Sustainable food processing, distribution & retail	Standardisation of food packaging deposit systems	Food packaging deposit systems should be standardised throughout the whole country.	S
	Regulation preventing unfair competition in the area of sustainable food products	New regulations should be made to ensure that sustainable food producers can compete with foreign food producers.	S
	Ban sales of out-of-season produce	Out-of-season produce should be banned from markets and supermarkets.	C
	Work with other EU countries to develop new sustainability certificates	Austria should work with other EU countries on establishing new sustainability certificates (e.g. on animal welfare, transportation of the food product, and pesticide use).	C
Food loss and waste reduction	Revision of regulation on food expiry dates	Revision of regulation on the use of best-before dates on food packaging to prevent unnecessary food waste.	C

[16] C – Citizens; S – expert stakeholders

Just Transition

Participants reflected on the importance of equitable access to sustainable food for everyone despite the likely price increases expected to follow a sustainable food system transition.

6.1.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[17] in Austria that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[18]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Austrian policies on the EGD and Citizen and National Stakeholder Reports

Austria has, in the recent past, introduced several policies and initiatives to reduce emissions from the transport sector, including:

- 'Klimaticket'[19], a single inexpensive ticket for all public transport;
- A 2030 master plan for mobility (although this is not aimed directly at promoting travel behavioural changes, and is rather focused on services and infrastructure)[20];
- A master plan for the transport of goods[21];
- A strategy for shared mobility[22];
- The introduction of a carbon tax[23]; and
- Investments in public transport (Austrian Railways framework plan[24]).

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[17] A stakeholder meeting took place on 4 October 2022 and involved 1 national authority, 2 research and academia community members and 1 civil society representative.
[18] Prof Tom Rye, Molde University College, Norway
[19] More information is available at https://www.klimaticket.at/en/.
[20] BMK, Austria's Mobility Masterplan. Available at https://www.bmk.gv.at/en/topics/mobility/mobilitymasterplan2030.html (Accessed 24 November 2022)
[21] Cf. Tuna J., Federal Ministry Republic of Austria (2022). Master Plan for freight transport. Available at https://www.etp-logistics.eu/wp-content/uploads/2022/08/Master-plan-for-freight-tansport-Countries-and-regions-initiatives-supporting-zero-emission-road-freight-and-logistics-Workshop-1-Austria-Jakob-Tuna-June-20-2022.pdf (Accessed on 24 November 2022).
[22] Mobilität mit Zukunkt, Factsheet Strategy for Shared Mobility. Available at https://vcoe.at/publikationen/vcoe-factsheets/detail/vcoe-factsheet-2020-03-mobilitaet-als-dienstleistung-erspart-teuren-autobesitz (Accessed 24 November 2022)
[23] Icap Carbon Action (2022). Austria's national ETS enters into force. Available at https://icapcarbonaction.com/en/news/austrias-national-ets-enters-force (Accessed on 24 November 2022).

Austria is spending EUR 1.147 billion of Recovery Funds on improving its rail network, replacing polluting public transport vehicles; and extending the network of charging stations across the country[25]. In addition, there are changes to fiscal rules to benefit clean vehicles, including how commuting costs are treated in the tax system. Overall, these policies together are expected to cut annual transport GHG emissions by 2.6 mTCE by 2030.

The workshops with citizens and stakeholders showed that the public does not disagree with most of these policies, except for the emphasis on EVs. However, if anything, the groups showed a desire for stronger policies to reduce the need to travel and to increase the cost of using polluting modes. In more details:

Citizens were of the strong opinion that public transport should be improved and reorganised and made faster and more affordable in both urban and particularly in rural areas. Road users should bear their external costs more directly through taxes and there should be active disinvestment in fossil fuel mobility. They wanted to see sustainable alternatives for the last mile, such as cargo bikes. The group was very sceptical about the environmental-friendliness of EVs and battery production and felt that much more emphasis must be placed on other fuel types and on changing people's travel habits. They were willing to see less air travel (reduced short-distance flights, for example), with 'health warning' labelling about the CO2 impacts of each travel choice, but also thought that such a move would also need incentives to people to change, for example by offering an EU-wide discount railcard, and other public transport discounts.

Stakeholders generally agreed with the suggestions from citizens, although they were not totally unanimous that improving rural public transport is viable or sensible (simply because it is so difficult to provide a viable public transport system in rural areas). They also were surprised that citizens had not put more emphasis on bikes. Cycling infrastructure should be improved to make it a safe and easy alternative. They also stressed that reductions in transport emissions must mean reductions in actual travel (mobility).

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders, as well as the experts' opinions.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

[24] Rail Journal, Austria's plans 2bn investment in rail network. Available at https://www.railjournal.com/financial/austria-plans-e18-2bn-five-year-investment-in-rail-network/ (Accessed on 24 November 2022).
[25] European Commission (2021). Austria's Recovery and resilience Plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/austrias-recovery-and-resilience-plan_en#austrias-recovery-and-resilience-plan (Accessed on 24 November 2022).

Theme	Action	Idea source[26]
Clean vehicles	Incentives to buy and/or use cleaner vehicles but not just EVs	C&S
	Low-emission zones	S
Better public transport (PT)	Better PT vehicles	C&S
	Cheaper PT	C
	Even better PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city developed	S
Pricing and charges for transport	Taxation of polluting modes of transport and vehicles e.g. CO2 tax (at EU level)	C&S
	Removal of (hidden) subsidies for air travel	C&S
	Removal/reform of subsidies for commuting costs	S
Planning and operation of transport networks	PT network improvement	C&S
	Sustainable last-mile freight solutions supported	
Governance	Support from EU and national level for mobility planning by lower levels of government	S
	Indicators across EU to measure progress towards EGD and communication of these	S
Greening transport in general	Education and awareness-raising	S
	Exchange of experience between professionals within Austria and further afield	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

[26] C – Citizens; S – expert stakeholders

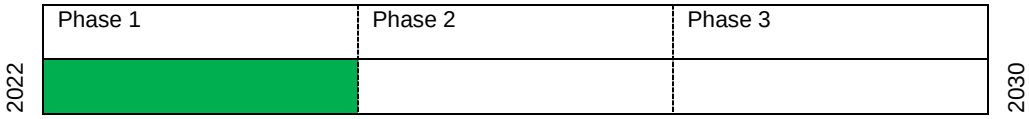
Theme	Barrier	Idea source[27]
Governance	Subsidies for air traffic and commuters are counterproductive for sustainable mobility and work against the objectives of the EGD.	S
Spatial planning and city development	The rapid expansion of cities and towns is challenging for maintaining and increasing levels of sustainable mobility, and it is a lengthy process to make settlements more sustainable in transport terms by increasing densities.	S
Greening transport in general	An economic policy based essentially on growth, is not aligned with the objectives of the EGD.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Austria. These mainly comprise communication and education activities. All these actions can be implemented straight away.

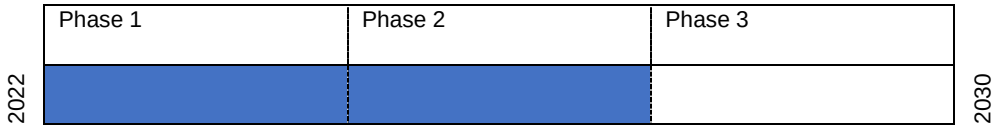
[27] C – Citizens; S – Expert Stakeholders

Theme	Action name	Description	Idea source[28]
Greening transport in general	Education	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution, especially in schools from early age.	C
	Exchange of experience	Organise projects to exchange best practice between different Member States to provide expertise and advice in reaching the mobility goals.	S
	Individual travel planning to reduce car use	Encouraging people to eliminate or shorten trips by private car, using smart tools and personalised travel planning techniques. This would help people plan how to, for example, substitute shorter trips for longer ones, combine single trips for different purposes into one trip for multiple purposes, share vehicles and use e-commerce and e-working more.	C

Actions requiring grants and incentives or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source[29]
Clean vehicles	Encouraging the development and use of LEVs	There was concern about too much focus being placed on EVs as a solution. More research and financial support are required to stimulate the development and use of a range of types of low-emission vehicles.	S
	Low-emission zones	These were mentioned briefly as a means of encouraging the renewal of the fleet to less carbon-intensive technologies.	

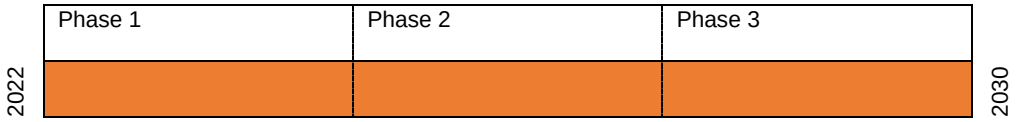
[28] C – Citizens; S – Expert Stakeholders
[29] C – Citizens; S – Expert Stakeholders

Better public transport	Better PT vehicles	Investing in new, low-emission and more comfortable public transportation vehicles.	C&S
	Cheaper PT	It was recognised that public transport is good in Austria at present but to make it even more attractive, reduced fares are required, such as the recent Climate Protection ticket.	C
Spatial planning and city developmen t	More bike paths	Few details were provided but there was a view from stakeholders that, particularly in the context of the 15-minute city, cycling (including e-bikes) could make a significant contribution to the transition to low-carbon mobility.	S
Pricing and charges for transport	Taxation of polluting modes of transport and vehicles e.g. CO2 tax (at the EU level)	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	Removal of (hidden) subsidies for air travel	Air travel should be taxed more, including fuel.	
	Removal/reform of subsidies for commuting costs	Austria, like Germany, is a country where tax deductions are allowed on commuting costs and where employers frequently contribute to commuting costs as part of the salary. Both areas should be reformed to reduce the incentive to commute long distances and to incentivise the use of low-emission modes for commuting.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national levels.	C&S
	Sustainable last-mile freight solutions supported	Little detail was given but citizens wanted to see more attention paid to reducing deliveries by diesel vans in city logistics.	C
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Austrian citizens and experts require policy changes and regulations to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better

coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [30]
Clean vehicles	No suggestions in this category	/	/
Better public transport	Even better PT integration	Better planning and coordination of public transport routes to a level even better than it already is in Austria. There is a particular need to address rural areas, which might require demand-responsive solutions.	S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport, certainly in larger cities.	S
Pricing and charges for transport	No suggestions in this category	/	/
Planning and operation of tspt networks	No suggestions in this category	/	/
Governance	Support from the EU and national level for mobility planning by lower levels of government	EU and national levels should provide more financial support and expertise to lower levels of government when they are developing and implementing sustainable urban mobility plans (SUMPs). This could emulate existing programmes such as those in Flanders (BE) and Slovenia.	S
	Indicators across the EU to measure progress towards EGD and communication of these	This concept was not expanded on in much detail but the essential idea was that the EU should be better at measuring progress towards EGD objectives and communicating this progress.	S

Just Transition

Citizens were concerned about the Just Transition impacts of a focus on e-mobility. Otherwise, the main discussion of this issue was amongst stakeholders. They observed that the concept of 'leaving no one behind' does not mean continuing to offer the same opportunities as before to everybody but ensuring that the more vulnerable people are no longer disadvantaged.

All groups should be taken into consideration and should have the same mobility opportunities, but it will be necessary to reduce overall levels of mobility for everyone.

[30] C – Citizens; S – Expert Stakeholders

Stakeholders were concerned that subsidies that are intended to reduce the impacts of the fair transition are often available to all, when it would obviously make more sense from a behaviour change point of view to target them.

6.1.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders31 in Austria that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission32. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Review of national plan with respect to EGD and Citizen and National Stakeholder Reports

According to Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?, commissioned by the Renovate Europe campaign[33], Austria's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €3.5bn. This can be broken down as follows concerning the EGD priorities:

Increasing renewable energy in buildings	There is €159m allocated for the exchange of gas and oil boilers in the residential sector and €159m allocated for grid coupled photovoltaics and electricity storage for business.
Improving energy efficiency in buildings	Austria's Long-Term Renovation Strategy (LTRS), plans to cut building emissions by 80% by 2025, however this is not reflected by the goals of the NRRP.
Tax system for energy products aligned to the green transition	This was not specifically mentioned by the review of the NRRP.

[31] A stakeholder meeting took place on 4 October and involved a member from the national government.
[32] Dr. Ruth Kerrigan. COO of Integrated Solutions.
[33] Ivanova, V. et al. (2021). Renovate2Recover: How transformational are the national recovery plans for buildings renovation?, Renovate Europe. Available at: https://www.renovate-europe.eu/renovate2recover-how-transformational-are-the-national-recovery-plans-for-buildings-renovation/ (Accessed on 2 November 2022).

Provide funding for renovation of buildings	€209m is allocated to the renovation wave. For enterprise, there is €20m allocated for thermal renovation. There is €17.5m allocated to commercial and communal buildings as part of a proposal for climate-friendly town centres along with €5m for green facades. There are two projects planned to demonstrate holistic renovation of historic buildings with a budget of €13.9m. Across these measures, thermal measures account for approx. €106m. To be eligible for funding, projects will need to realise at least a 30% average reduction in primary energy savings, however according to the plan to meet the ambitious goals set out by the LTRS, projects are expected to deliver at least 67% reduction in energy consumption.
Renovate at least 3% of the total floor area of public buildings annually	Based on data until 2016 from an EC study, the renovation rate in the residential sector is 1.7% for medium renovation and 0.2% for deep renovation[34]. Energy renovation in non-residential buildings is only 0.6% medium, and 0.2% deep. In addition, the rates have decreased over the subsequent years instead of increasing as per the goals of the EGD.
Create world-leading companies	There is a lack of qualified energy and construction sector professionals, which is a key barrier to renovation. There is €277m allocated to upskilling and further professional education, but not in the buildings sector.
Raise global ambition to tackle climate change	This was not specifically mentioned by the review of the NRRP.
Improve health and well-being	This was not specifically mentioned by the review of the NRRP.
Address inequality and energy poverty	There is €50m earmarked to fight energy poverty for low-income households through support for heating modernisation and thermal renovation. Energy poverty investment may include thermal renovation and heating system modernisation and is expected to support 2 250 family homes by 2025
Ensure a Just Transition that is fair, competitive, and green	This was not specifically mentioned by the review of the NRRP.
Mobilising industry for a clean and circular economy	This was not specifically mentioned by the review of the NRRP.

The following compares the views of the citizens and the national stakeholders along with Austria's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weakness lie in the current national plans and from the views of the citizens and national stakeholders in order to inform the actions to be taken to ensure adoption of the EGD.

[34] European Commission (2019). Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU: final report. Available at: https://data.europa.eu/doi/10.2833/14675 (Accessed on 2 November 2022).

There was unfortunately only one national stakeholder for the discussion on energy efficiency, who decided she would prefer to fill out the questionnaire than participate in the event as the only attendee. As a result, the information from resulting from the national stakeholder process is not exhaustive, however all their comments have been captured in the report.

Overall, the NRRP does not seem to align with other plans and funds across Austria. There seems to be a disconnect between the NRRP and other activities and initiatives that are ongoing within the Long-Term Renovation Strategy and Austria's existing Climate and Energy Fund that already supports over 100 programmes including some focusing on smart buildings.

Increasing renewable energy in buildings: The NRRP allocates funding for changing gas and oil boilers in residential buildings and integrating solar photovoltaics and electricity storage in commercial buildings. While the funding is still relatively low at approximately €300m, it is greater than what has been allocated for thermal renovation of buildings, which demonstrates that there is at least equal importance to increasing renewable energy in buildings to the renovation of buildings, which is not the case in the majority of plans set out by other Member States. From the citizens perspective, they felt there should be more promotion of district heating and a mandate for an allocation of photovoltaic systems on warehouses. There was no discussion by the national stakeholder on this topic.

Improving energy efficiency in buildings: Austria has ambitious targets to cut emissions by 80% by 2025. While there are multiple one-stop shops and platforms available across the country at present, there is no planned support for these by the NRRP. In addition, one of the suggested actions by the national stakeholder was for the creation of one-stop-platforms which suggests that there is a lack of awareness of these platforms across citizens and stakeholders.

Citizens had a number of concerns regarding the increase in energy consumption as a result of smart living and home working and they also felt that new buildings that are highly energy efficient as a result of stricter regulations could end up distorting market. Citizens also felt that energy performance certifications cannot be mandated unless retrofit is subsidised.

Tax system for energy products aligned to the green transition: Citizens suggested incentives and tax breaks for shared living. This was not discussed by the national stakeholder and there are no plans in the NRRP.

Provide funding for renovation of buildings: Citizens mentioned that renovations are not affordable and that there is not enough information on subsidies and incentive schemes. This view would correlate to the NRRP which does not include a high allocation of funds for building renovation with only €209m allocated towards different initiatives. However, there are other investment programmes at federal and state levels (e.g. a Residential Buildings Subsidy) that can be availed of but it needs to be understood how these can be accessed and also in combination with other schemes. For instance, the Renovate2Recover review mentions Austria's existing Climate and Energy Fund that already supports over 100 programmes including some focusing on smart buildings.

Renovate at least 3% of the total floor area of public buildings annually: The renovation rate in Austria is currently decreasing instead of increasing, which according to the review of the NRRP from the Renovate2Recover report is due to the cost of renovation and the lack of skilled workers.

Citizens felt that public authorities must lead the way and show by example, which was supported by the national stakeholder who mentioned that there are effective initiatives implemented for a climate-neutral public federal administration and this would support the exchange of experience among federal authorities.

Create world-leading companies: There is a lack of skilled workers and the funding allocated by the NRRP does not seem to be going to the right places. The national stakeholder agreed with this insufficiency of skilled workers and mentioned that a stable political and economic conditions would be needed to initiate the necessary steps and invest in the workforce.

Raise global ambition to tackle climate change: Citizens suggested there should be school education programmes on green living and promotion of new professional figures in higher education. The national stakeholder mentioned that Austria has started a campaign called 'Mission 11'[35] that encourages end users to change their behaviour with the aim to reduce their consumption by 11%. In general, both felt there should be further awareness and education campaigns available to promote energy efficiency in building opportunities.

Improve health and well-being: The national stakeholder mentioned that there are no awareness-raising campaigns about the additional benefits for the health or well-being of building renovation.

Address inequality and energy poverty: The NRRP's residential schemes are targeted at low-income households, covering up to 80% of the costs of thermal renovation and heating system replacement and there seems to be a high focus by the NRRP to start with those in energy poverty. However, the national stakeholder felt that these did not go far enough and that it seemed that the green transition is being left as the responsibility of the users/consumers.

Ensure a Just Transition that is fair, competitive, and green: The national stakeholder mentioned that a regulated rent reduction for buildings with poor thermal performance is also being considered in Austria. While this would be beneficial for those renting buildings with poor energy efficiency, it might have an unintended consequence on the affordability of the property owner to renovate the building to improve that thermal performance. As such, how this is fair and part of a Just Transition would need to be examined.

Mobilising industry for a clean and circular economy: Citizens suggested there should be alternative materials for room and heating systems as well as local innovation solutions.

Barriers to each theme

As a result of the discussions with both citizens and stakeholders the following barriers to EGD implementation were identified, these were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

[35] More information available on https://mission11.at.

Theme	Barrier	Idea Source
Increasing renewable energy in buildings	No specific barriers mentioned	/
Improving energy efficiency in buildings	No single body is responsible for implementing the EGD; the central government and the nine provinces are in charge	S
	Smart living and working from home require more energy, as such energy consumption is naturally increasing	C
Tax system for energy products aligned to the green transition	No specific barriers mentioned	/
Provide funding for renovation of buildings	The budget laws are a barrier to the steadiness of the incentive schemes for establishing long-term subsidy programmes	S
	Renovation is not affordable	C
	There is not enough information available on subsidies and incentive schemes	C
Renovate at least 3% of the total floor area of public buildings annually	Budget is often insufficient for public building renovation. Before the gas and electricity price crisis, energy costs were not a priority in public building facility management. The situation has changed recently	S
Create world-leading companies	No specific barriers mentioned	/
Raise global ambition to tackle climate change	No specific barriers mentioned	/
Improve health and well-being	No specific barriers mentioned	/
Address inequality and energy poverty	No specific barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No specific barriers mentioned	/
Mobilising industry for a clean and circular economy	No specific barriers mentioned	/

General overview of actions per the theme

There was only one national stakeholder interviewed and they left the open discussion as there was no participants involved and instead submitted answers via the questionnaire. As a result, the quality of the data received to develop the roadmaps is not of high value. The following are the actions gathered from the national stakeholder report and the report from the workshop with the citizens.

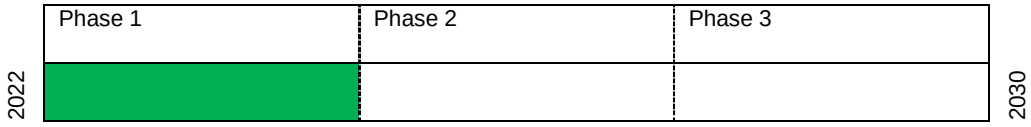
Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Increasing renewable energy in buildings	District heating education and awareness campaigns Subsidies for Renewable Energy
Improving energy efficiency in buildings	Mandated energy performance certification for new buildings One-stop-shop service
Tax system for energy products aligned to the green transition	Shared living incentive schemes and tax breaks
Provide funding for renovation of buildings	Subsidies for energy audits Subsidies for renovation for private buildings
Renovate at least 3% of the total floor area of public buildings annually	Subsidies for renovation for public buildings
Create world-leading companies	No specific actions suggested
Raise global ambition to tackle climate change	Increase capacity of professional engineers in higher education
Improve health and well-being	No specific actions suggested
Address inequality and energy poverty	Measures to encourage building renovation by property owners that do not create inequality or energy poverty
Ensure a Just Transition that is fair, competitive and green	No specific actions suggested
Mobilising industry for a clean and circular economy	Mandate banning products that may harm the environment

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline



Instruments of implementation: communication and education

Actions that can be carried out now with minimal support suggested by the national stakeholders and the citizens are outlined in the following table. These mostly focused around education and subsidies.

Theme	Action name	Description	Idea Source[36]
Increasing renewable energy in buildings	District heating education and awareness campaigns	Education campaigns to raise awareness around district heating solutions	C
Tax system for energy products aligned to the green transition	Shared living incentive schemes and tax breaks	Introduce incentives and tax breaks for shared living	C

[36] C – Citizens; S – expert stakeholders

Provide funding for renovation of buildings	Subsidies for energy audits	Provide subsidies for energy audits and management systems	S
Renovate at least 3% of the total floor area of public buildings annually	Subsidies for renovation for public buildings	Provide subsidies for the energy-efficiency renovation of public buildings	S
Raise global ambition to tackle climate change	Increase capacity of professional engineers in higher education	Promote professional figures in higher education to ensure industry experience is being passed to incoming graduates	C
Address inequality and energy poverty	Measures to encourage building renovation by property owners that do not create inequality or energy poverty	More effective measures should be implemented to encourage building renovation by property owners beyond the current plans with poor thermal performance that are currently under consideration and also to ensure that these improvements will not increase the rent for the tenant	S

Actions requiring grants and incentives that need government support to implement further

Timeline

Instruments of implementation: subsidies, investments and taxes

Actions that can be carried out in the medium term but need government support to implement further were also suggested by the national stakeholders and citizens. There were not many suggested actions here, focussing again on subsidies and the suggestion of a one-stop shop.

Theme	Action name	Description	Idea Source[37]
Increasing renewable energy in buildings	Subsidies for renewable energy	Introduce subsidies for clean energy solutions such as photovoltaics	S
Improving energy efficiency in buildings	One-stop-shop service	Implementing a one-stop-shop service across Austria offering free advice on renovating houses or apartments, like 'Hauskunft' in Vienna or 'Rund um Sorglos' in Salzburg	S
Mobilising industry for a clean and circular economy	Mandate banning products that may harm the environment	Introduce bans for products that harm the environment	C

[37] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

There were no suggested actions that will take longer to implement.

Just Transition

The national stakeholder mentioned that the 100% subsidy for switching from fossil fuels to renewables or district heating for those in low-income households is positive with respect to achieving a Just Transition for the EGD. However, they also mentioned that subsidies for renovation were not 100% funded and this would be a barrier to uptake but also meant that those on lower incomes could not avail of the same opportunities as those on middle or higher incomes who could afford to co-fund the renovation of their properties.

6.2 Belgium

6.2.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[38] in Belgium that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[39]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

Belgian food policy is split across the three administrative regions, meaning only the food health and consumer policy is managed on a federal level, while the rest of food-related policies are managed on the level of Brussels-Capital Region, Flanders Region, and Wallonia Region.

- **Brussels-Capital** – 'Good Food Strategy – towards a sustainable food system in the Brussels Capital Region'[40]. The Brussels region sustainable food strategy, launched in

[38] A stakeholder meeting took place on 6 September 2022 and involved two national/regional/local authorities, two research and education community members, one Civil society representative.
[39] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[40] Government of Brussels Capital Region (2016). Good Food Strategy – towards a sustainable food system in the Brussels Capital Region. Available at

2016, aims to provide 30% of fruits and vegetables for the region from local production by 2035, as well as significantly reduce food waste. The actions comprising the strategy aim at addressing production, supply, demand, good food culture, food waste, innovation, and governance.

- **Flanders** – The region is currently working on a food strategy, to be finished by end of 2022. There is currently a food innovation platform in place, called **Flanders' FOOD**.[41] The platform aims to facilitate the innovation capacity of the agri-food companies by enhancing their scientific and technological knowledge by means of an integrated approach of knowledge creation, knowledge dissemination and partner matching.

- **Wallonia** – Adopted by the Walloon Government on 30 November 2018 and voted unanimously by the Walloon Parliament in April 2019, the Eating Tomorrow Strategy [42] aims to coordinate, connect and facilitate local and regional food initiatives. The framework includes eight general principles and six strategic objectives, including four themes and two transversal ones. Each strategic objective is broken down into operational objectives and action levers.

- **National level** - In Belgium, the Federal Public Service for Public Health, Food Chain Safety and Environment and the Federal Agency for the Safety of the Food Chain (AFSCA) oversee the safety of the food chain and call on the expertise of Sciensano to ensure the monitoring.

General overview of actions per theme

The actions proposed by the Belgian citizens and stakeholders on transforming the current food system in Belgium consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on actions that aim to address the food system. Finally, the actions are equally distributed when it comes to short-, medium- and long-term implementation periods.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (5)	Establishing more urban farms
	Financial and technical support to sustainable local food production
	Research on sustainable food production

https://document.environnement.brussels/opac_css/elecfile/BRO_GoodFood_Strategy_ENGL.pdf (Accessed on 7 November 2022).

[41] More information available on https://www.flandersfood.com/nl.

[42] Government of Wallonia (2020). Stratégie Manger demain. Available at: https://www.mangerdemain.be/ (Accessed on 7 November 2022).

	Investing in production of new types of protein
	Establishing ecological limits on production of food products
Sustainable food processing, distribution & retail (6)	Extension of the use of the Nutriscore to more food products
	EU-wide standard Eco-score label on food products
	Lower prices for sustainable food products
	Adjusting the VAT of food products based on their sustainability
	Carbon tax on food products
	Making food products easier to digest (e.g. by elderly and persons with indigestion)
Sustainable food consumption (5)	Financial support to sustainable local food consumption
	Awareness campaigns for youth on origin of food, cooking, raising their enthusiasm for food sustainability
	Education for citizens on food choices that reduce their environmental impact
	Awareness campaigns on connections between health and food
	Addressing malnutrition of the elderly
Food loss and waste reduction (0)	No action proposed.
Ensuring food security (1)	Investments in developing more resilient food production techniques
Combating food fraud (2)	Increasing transparency of the eco labelling criteria
	Developing universal standards on how the food industry reports on sustainability performance of food products
Across the entire food cycle (6)	Increasing circularity across the entire food system
	School education on the need for a food system transformation
	Practical education on connection between people and food production (understanding where the food we eat comes from)
	Shortening supply chains
	Establishing a special department on a regional level to guide the food system transition and bring proposals and deals from different actors together
	Supporting the development of young farmers

Barriers to each theme

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Barrier	Idea Source[43]
Sustainable food production	Strong influence of agriculture and food lobbies.	S
	Strong lobbies for using specific crop-growing chemicals and fertilisers.	S
	Lack of food safety regulation of new types of food (e.g., alternative protein sources such as insects).	S

[43] C – Citizens; S – expert stakeholders

	Regulatory conditions of sustainable production are the same for the large- and small-scale food producers while the costs are larger for small-scale producers.	S
	Local food production made more difficult by rising land prices, especially in the north of Belgium.	S
	Developing more localised food systems might cause less diversity in food product availability.	S
	Organic food is perceived as more low-yield.	C
Sustainable food processing, distribution & retail	Lack of an Eco-score label on a national level.	C&S
	Increasing price competition from producers from abroad, especially in the context of the energy crisis.	S
	Large-city dwellers have less access to locally produced food.	C
	It is difficult for consumers to see what products are in season, especially for products coming from far away as you're not aware of the seasonality of the products there.	C
Sustainable food consumption	Consumers significantly restricted in their food consumption habits by price.	C&S
	Higher population growth compared to food production. It almost becomes impossible to feed everyone organically.	C
	Meat replacements are not popular enough.	C
Food loss and waste reduction	No barrier highlighted	/
Ensuring food security	EU regulations on selling and implementing CRISPR (Biotechnology Innovative crops).	S
Combating food fraud	No barrier indicated	
Across the entire food cycle	Small food producers still face significantly higher expenses and difficulties when accomplishing organic and biological product requirements compared to larger-scale producers.	S
	The size or agricultural land constantly decreasing due to conversion of agricultural land into farmland for livestock and land for sports and leisure.	S
	School teachers face extremely high workloads, making it difficult for them to implement additional programmes on food systems.	S
	Many schools face a lack of infrastructure and other resources, to equip gardens and kitchens to support sustainable food systems.	S
	Existing solutions for packaging are insufficient. Stores are obliged to take back packaging, yet no one uses this in practice. People used to use plastic bags they received as trash bags at home: now they buy rolls of plastic trash	S

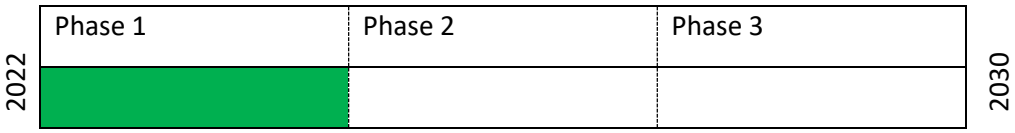
	bags at the store.	

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Belgium. These mainly comprise communication and education activities. All these actions can be implemented straight away. Some, such as awareness campaigns on connections between food choices and health, are easy to implement (low hanging fruit), however, they also have a limited potential to contribute to the food system transformation. Others, such as establishing more urban farms, can be more difficult to implement successfully (dependent on local governments providing limited land for use), but can have knock-on effects, such as achieving more resilient food production and changing food consumption habits of larger groups of citizens.

Theme	Action name	Description	Idea Source [44]
Sustainable food production	Establishing more urban farms	Local governments should dedicate more public spaces to be used for urban farming.	C
Sustainable food consumption	Awareness campaigns for youth on origin of food, cooking, raising their enthusiasm for food sustainability	Awareness campaigns targeting young people, on the topics of the origins of food, importance of cooking food, promoting enthusiasm on sustainable food systems, should be organised.	C
	Education for citizens on food choices that reduce their environmental impact	Educational workshops should be organised, teaching citizens which food choices are most effective for the reduction of their environmental impact.	C&S

[44] C – Citizens; S – expert stakeholders

	Awareness campaigns on connections between health and food	Awareness campaigns should be organised for citizens at large, emphasising the connections between food choices and health.	C
Combating food fraud	Increasing transparency of the eco labelling criteria	The way that eco labelling criteria is used should be made more transparent and clearer, e.g. through online tools explaining the sustainability standards for food products.	S
Across the entire food cycle	School education on the need for a food system transformation	Education for young people on food system transformation should be introduced to official school curricula.	C
	Practical education on connection between people and food production (understanding where the food we eat comes from)	Educational workshops should be introduced for all ages, on raising awareness of the connection between food production and people.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through means such as research, pricing schemes and financial support for small-scale food producers. They also concern making healthy and sustainable food more accessible to society at large as well as specific vulnerable groups. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [45]
Sustainable food production	Financial and technical support for sustainable local food production	More subsidies should be made available for local farmers and food producers to transition to sustainable methods of production.	C

[45] C – Citizens; S – expert stakeholders

	Research on sustainable food production	Investing more funds into research on new sustainable methods of food production.	C
	Investing in production of new types of protein	Investing funds into production of plant-based and insect-based proteins, to increase their ratio against animal-based protein.	C&S
	Making food products easier to digest (e.g. by elderly and persons with indigestion)	Investing in increasing production of easily digestible food for elderly persons and persons with indigestion.	C
Sustainable food consumption	Financial support to sustainable local food consumption	Lowering costs of healthy and sustainable food for the society at large.	C
	Addressing malnutrition of the elderly	Lowering costs of healthy and sustainable food for elderly people, potentially through food vouchers, to address malnutrition among this group.	C
Ensuring food security	Investments in developing more resilient food production techniques	Investing into development of new food production methods more resilient to extreme weather conditions.	C
Across the entire food cycle	Supporting the development of young farmers	Investments into professional education and living standards of young farmers.	S
	Shortening supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in product labelling, taxation and anti-fraud measures. Some of the actions, including Eco/CO2 labelling fall under shared EU and Member-State competency and will be a result of a multi-level policy reform.

Theme	Action name	Description	Idea Source [46]
Sustainable food production	Establishing ecological limits on production of food products	Food products should have clear environmental limits they are not allowed to exceed (e.g. amount of water used, CO2 emitted).	C
Sustainable food processing, distribution and retail	Extension of the use of Nutriscore to more food products	The Nutriscore label should be extended to be used by a wider range of food products.	C
	Lower prices for sustainable food products	Food product prices should be regulated to make them affordable to all.	C
	Adjusting the VAT of food products based on their sustainability	Setting the VAT rate according to the environmental impact of products, favouring more sustainable products.	S
	Carbon tax on food products	Placing additional taxes on CO2-heavy food products.	C
Combating food fraud	Developing universal standards on how the food industry reports on sustainability performance of food products	Transparent and universal standards should be introduced on how the sustainability performance of products is calculated and advertised.	S
Across the entire food cycle	Increasing circularity across the entire food system	Regulation on increasing reusing of inputs in food systems and promoting the circularity of the system.	C
	Establishing a special department on a regional level to guide the food system transition and bring proposals and deals from different actors together.	A department should be founded on regional levels in Belgium to coordinate proposals from different actors on food system and develop them into policy.	C&S

Just Transition

It was noted that production is significantly impacted by the price consumers can pay for food. The way that the food is currently priced is slowing down the transition and blocking access to healthy and sustainable food for the most socio-economically vulnerable groups in society.

Additionally, while the stakeholders noted that the transition will be expensive for everyone, they emphasised that it would be even more costly for small food producers to achieve more sustainable food systems in Belgium compared to the large producers.

[46] C – Citizens; S – expert stakeholders

6.2.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[47] in Belgium that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[48]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

For Belgium, a summary of national government policies that support the EGD in the field of mobility was not found. However, Belgium is spending EUR 1 293 million of Recovery Funds on stimulating the uptake of EVs by the public sector and businesses by requiring more private provision of charging points and investing in 78 000 public charging points, replacing polluting public transport vehicles with 110 electric buses; and changing company car legislation so that from 2026 only zero-emitting vehicles will attract tax relief. In addition, it invests heavily in local and regional public transport infrastructure (new trams and busways, for example) and walking and cycling infrastructure[49]. Many of its actions are directly in line with suggestions made in workshops with citizens and stakeholders, as the following discussion shows (although in the NRRP programme, there is a lack of the tax disincentives and traffic restraint measures also recommended by citizens):

Citizens came up with many interesting suggestions for making transport more sustainable and less carbon-intensive. There was support for kilometre-pricing of road use and higher taxation on air travel (it was seen as too cheap), and some of the proceeds being used to support long-distance night train services and/or tax breaks or allowances for commuting by sustainable modes, especially bike. There was also support for restrictions on parking in cities, but more park and ride around public transport nodes. Participants were well-informed about city logistics and wanted to see financial incentives/disincentives to encourage consolidation and optimisation of loads, especially for the 'last mile', to reduce the impacts of many delivery vehicles in cities. There was a desire to shift longer distance freight to water from road and rail (one participant was very concerned that the priority for freight trains on Belgian railways means that it is not possible to provide an effective passenger service). However, it was unclear what mechanism would be used to bring this about. There was support for electrification of the vehicle fleet if it can be done inclusively, not benefiting only rich drivers, and also bearing in mind that the electricity supply infrastructure is probably insufficient if there is to be very widespread use of EVs. As in most countries, participants wanted to see more, better and cheaper public transport; and they also recognised the difficulties of delivering a Just Transition in mobility in rural areas.

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[47] A meeting took place on 6 September 2022 and involved one regional authority and two research and academia members

[48] Prof Tom Rye, Molde University College, Norway.

[49] European Commission (2022). Belgium's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/belgiums-recovery-and-resilience-plan_en (Accessed on 16 November 2022).

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Stakeholders generally agreed with the suggestions from citizens but also had several more strategic recommendations to do with energy planning and security (for EVs especially) and also about those industries with powerful lobbies that run counter to the EGD – they pointed in particular to the aviation and automotive industries. They were concerned about the environmental impact of sourcing raw materials for EV batteries outside the EU. They also spoke in favour of city traffic restriction measures and additional taxation to disincentivise polluting vehicles, including parking management, circulation plans and pricing. They were somewhat critical of what they saw to be the technological focus of the EGD and thought that it should contain more measures oriented to behaviour change; they pointed out that a move to EVs will not reduce congestion problems not the occupation of public space by private vehicles, and that the move to phase out fossil-fuel powered vehicles should be used as an opportunity to reduce the number of vehicles overall and produce a less car-dependent society.

General overview of actions per topic

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source
Clean vehicles	EV charging network enhancements	C&S
	Energy needs planning	S
	Energy supply and raw materials planning for EVs	S
Better public transport	Better PT vehicles	C&S
	Free or cheaper PT	C
	PT integration	C
Spatial planning and city development	15-minute city	C
	More bike paths	C&S
Pricing and charges for transport	Taxation of polluting vehicles	S
	More disincentives to use polluting vehicles	S
	Additional taxation on air travel	S
	Reduction in (hidden) subsidies to polluting industries	S
	Carbon taxes and company and individual carbon budgets	S
	Reform of company car taxation	S
Planning and operation of transport networks	Long-distance rail investments to substitute for air travel	S
	Improved PT infrastructure and operations	C&S
	Restraint of private motor vehicle traffic	S
	Parking management	S
	Improved coordination of public transport system,	C&S

	more integrated	
Governance	Coordination in mobility planning across levels of government	S
	Shift towards sharing economy in mobility, with reduced vehicle ownership	S
Greening transport in general	Education and awareness-raising for the public	S
	Capacity building in smaller public administrations	S
	Communication of evidence-based emissions reduction targets for mobility	S

Barriers to each theme

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea source[50]
Clean vehicles	The car-dominated nature of many regions and cities in Belgium.	S
	Disruptive impact of increasing use of e-vehicles on energy demand and supply.	S
Better public transport / Planning and operation of transport networks	Powerful automotive and aviation lobbies working against the achievement of EGD objectives.	S
Spatial planning and city development	No barriers identified.	/
Pricing and charges for transport	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport.	S
Governance	Reluctance from politicians to make clear that the transition to a low-carbon society implies some sacrifices, at least in the short term.	S
	Lack of knowledge and capacity in public administrations.	S
Greening transport in general	The perception is that the Green Deal is very technology focused.	S

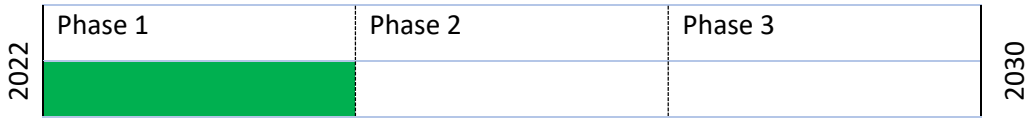
[50] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Belgium. These mainly comprise communication and education activities. All these actions can be implemented straight away.

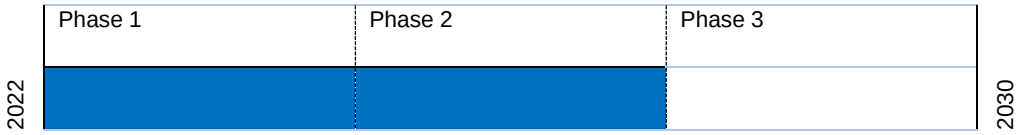
Theme	Action name	Description	Idea source[51]
Greening transport in general	Education and awareness-raising for the public	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution, especially in schools from an early age.	C
	Capacity-building in smaller public administrations	To better deliver on emissions reduction from transport and a fair transition to a low emissions mobility system, stakeholders felt that more capacity is needed in public administrations, especially smaller municipalities.	S
	Communication of evidence-based emissions reduction targets for mobility	The stakeholders believed that emissions reduction targets and how to reach them are poorly communicated. There is low awareness among the public and industry, and this should be improved.	S

[51] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

Theme	Action name	Description	Idea source[52]
Clean vehicles	EV charging network enhancements	The current state of the charging infrastructure was judged to be inadequate for increasing demand.	S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public transport vehicles for both local and national public transport	C&S
	Free or cheaper PT	Public transport fares should be reduced, particularly for regular travellers, and possibly by using the tax system or travel to work allowances.	S
Spatial planning and city developme nt	Improved cycling infrastructure	This action was seen as imperative to support more cycling and micro-mobility. Interurban and rural bike paths were seen to be important to support the use of e-bikes and other electric personal transport modes. This was also possibly a means of ensuring improved accessibility for rural areas.	S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	More disincentives to use polluting vehicles	There was considerable discussion of the role of advertising in promoting the use of aviation and of polluting vehicles, and a view expressed that this advertising should be managed or banned.	
	Additional taxation on air travel	Stakeholders expressed strong views that the EGD should better price external costs to encourage a reduction in emissions; therefore, they suggested a tax on aviation and hypothecation of revenues to less polluting modes, such as international sleeper trains.	S

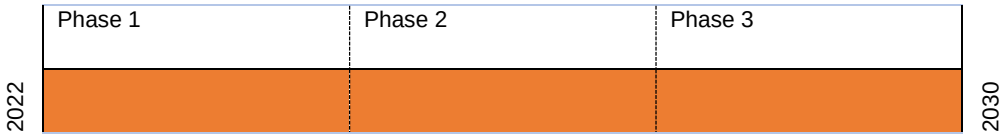
[52] C – Citizens; S – expert stakeholders

	Reduction in (hidden) subsidies to polluting industries	On several occasions, stakeholders expressed that polluting transport industries and manufacturers are 'subsidised'. It was not wholly clear what was meant by this, but the author has interpreted it to mean that (lack of) taxation on some modes of transport is not consistent with the objective that these industries should cover their full external costs.	S
	Carbon taxes and company and individual carbon budgets	In the medium term, stakeholders supported these measures. They felt that carbon budgets, in particular, could help to bring about a Just Transition.	S
	Reform of company car taxation	Stakeholders highlighted on several occasions that company car taxation in Belgium is an effective subsidy to the ownership of polluting cars. Since there are also tax breaks on fuel for such cars and commuting, the situation works against the objectives of the EGD. As noted in the first section of this report, the Belgian government has announced some reforms in company car taxation.	S
Planning and operation of transport networks	Long-distance rail investments to substitute for air travel	As noted above, the suggested a higher level of tax on air travel could be used to subsidise long-distance trains, especially sleepers.	S
	Improved PT infrastructure and operations	Investment in improved public transport capacity and speeds at local, regional, national and international levels.	C&S
	Restraint of private motor vehicle traffic	Circulation plans (selective road closures to increase journey times by car compared to competitor modes) and road space capacity reduction was suggested to cut car use.	C&S
	Parking management	As mentioned above, parking management – pricing, rationing and reduction in parking availability – was suggested to reduce car use.	C&S
Governance	No measures suggested		

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Belgium citizens and experts require implementing policy changes and regulations. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may not require regulation in some circumstances, but they are included here for completeness.

Theme	Action name	Description	Idea source [53]
Clean vehicles	Energy needs planning	At the EU and national levels, energy needs planning, mainly due to the increased use of e-vehicles.	S
	Energy supply and raw materials for EVs	At the EU level, ensuring energy supply and raw materials for necessary clean transport technologies without negatively impacting the people or environments where materials are produced.	S
Better public transport	PT integration	Better planning and coordination of public transport routes. Even though this was already acknowledged at quite a high level in Belgium, more needs to be done.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport. This option implies changes in the land use planning system.	S
Pricing and charges for transport	No specific suggestions		
Planning and operation of transport networks	Restraint of private motor vehicle traffic	There should be measures to restrain personal car use, such as low-emission zones in cities, parking management and circulation plans, which do not necessarily charge more for private vehicle use but make it less convenient compared to alternatives.	S
Governance	Coordination in mobility planning across levels of government	There was concern expressed that mobility planning at the local, regional and national levels are currently disconnected from one another. However, no specific examples were provided of where this problem currently occurs.	S
	Shift towards sharing economy in mobility, with reduced vehicle ownership	This measure implies the promotion of car-sharing and micro-mobility rather than car ownership. This is because the stakeholders felt that a reduction in car use, not just a shift in engine technology, is necessary to tackle congestion, use of public space and safety	S

[53] C – Citizens; S – expert stakeholders

		problems arising from car use.	

Just Transition

Citizens, but more particularly stakeholders, expressed considerable concerns about the Just Transition:

- There was concern about accessibility in rural areas – particularly because the green transition in mobility is nowadays often perceived as being linked to the switch to EVs. Yet, not everyone living in a rural area can afford one or (with current electricity prices) run one.

- Related to the above, the justness of the transition to EVs in general, given that they are unaffordable for many, and also because of the distribution of environmental impacts of battery production (outside the EU).

- The cost of the transition, on whom the cost falls, and how well publicised/well known this is.

6.2.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[54] in Belgium that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[55]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[56], Belgium's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €5.9bn. This can be broken down as follows with respect to the European Green Deal (EGD) priorities:

[54] A stakeholder meeting took place on 6 September 2022 and involved one national authority, three research and education community members, one asynchronous national authority
[55] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[56] Ivanova, V. et al. (2021), see note 30, page 61.

Increasing renewable energy in buildings	Increasing renewable energy in buildings is not explicitly targeted by the NRRP. According to a summary of the National Energy Climate Action Plan, there is a plan for 18.3% share of energy from renewable sources in gross final consumption of energy in 2030 as contribution to the EU renewable energy target for 2030. The final plan however does not elaborate on the policies to achieve this, including the level which would be attributed to renewable energy in buildings[57]. Other sources mention the anticipation for solar PV in buildings without mention of specific policies to enable adoption and with a high focus on renewables at supply level and not integrated directly in buildings[58].
Improving energy efficiency in buildings	Target to renovate 1,300,000m of public buildings and 240,000 homes, including social housing by 2030 for an average reduction of 0.085 MtCO2e per year. There are plans for one-stop shops in certain regions in Belgium.
Tax system for energy products aligned to the green transition	In 2021 and 2022, a reduced VAT rate of 6% will apply for a period of five years to the demolition and reconstruction of dwellings that are the sole and exclusive property of the client/buyer and whose floor area does not exceed 200m[59].
Provide funding for renovation of buildings	€967m (16% of the total budget) provision for the renovation of buildings. This is dedicated towards targeted areas including €332m (approx. 1/3) for renovation subsidies and the rest allocated to public buildings including social housing, schools, universities, sports and cultural facilities, early childcare infrastructure etc. Specific budgets have been allocated to each sector. Depth of renovation will be measured by updated Energy Performance Certificates.
Renovate at least 3% of the total floor area of public buildings annually	Between 2012 and 2016, only 1% of residential renovations were medium depth and only 0.2% were deep renovation. For non-residential dwellings, the splits were 6% medium and 1% deep. According to Renovate Belgium, medium and deep renovations are still a challenge.
Create world-leading companies	Lack of skilled workers is a challenge. There is no specific funding or training set aside for increasing skilled workers in the areas of renovation, however other parts of the plan not focused on buildings could potentially support the development of these skills.
Raise global ambition to tackle climate change	Not specifically mentioned

[57] European Commission (n.d.). National Energy and Climate Plans (NECPs) – Belgium. Available at: https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en (Accessed on 2 November 2022).
[58] International Energy Agency (2022). Executive summary. Belgium 2022 – analysis. Available at: https://www.iea.org/reports/belgium-2022/executive-summary (Accessed on 2 November 2022).
[59] European Commission (n.d.), see note 54, page 90.

Improve health and well-being	Energy poverty is not explicitly planned for although it is envisaged that renovation of social housing will have a positive impact with that sub-sector.
Address inequality and energy poverty	
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned
Mobilising industry for a clean and circular economy	Energy renovation has not been linked to other priorities such as tackling air pollution, adaptation, urban regeneration, mobility, circular economy, and the use of sustainable materials.

Increased adoption of renewables in buildings does not seem to have been explicitly targeted by the NRRP. Also, other documents from IEA, or the National Recovery Plan do not mention specific policies to increase adoption in this area. Citizens also did not have a great awareness of what was being achieved to support increasing renewables in buildings. The national stakeholders suggested that only those supporting renewables upkeep can currently consider them and that policies for energy produced by photovoltaic energy (PV) would be beneficial. Each of these views would suggest that increasing renewables in buildings is not a priority at the national level.

With respect to improving energy efficiency in buildings, citizens noted that renovation should be affordable for everyone, and renovation schemes should be 100% financed. National stakeholders agreed with this view along with renovations typically only being for the very wealthy or the very poor. While the NRRP is providing funding for social housing, there are also significant funds for renovation subsidies with one third of the total renovation budget for residential and non-residential provided for subsidies. However, these subsidies are not 100% financed which would suggest this is a barrier to uptake along with the ease of use of application, which was mentioned by both citizens and national stakeholders with the suggested need for one-stop shops to address this barrier. Citizens specifically mentioned the need for increased subsidies for low-income households. National stakeholders felt that those downsizing/living in a smaller house should receive better incentives.

Both citizens and national stakeholders were strong in maintaining that a building's actual energy use should be checked regularly, to ensure that the building is performing and also to enable a fairer system for monitoring energy use based on the type of building and number of occupants etc. However, the approach set out by the NRRP is to measure the depth of renovation through updated Energy Performance Certificates. National stakeholders felt that measuring energy performance certificates instead of actual energy use would result in an overestimation of savings which would especially impact the vulnerable as they may not see the estimated savings and hence will not get the financial return on their investment. The Renovate2Recover report also mentioned that digitalisation measures in the buildings sector, such as smart buildings, automation and control systems, and building passports, are largely omitted, which contrasts with other sectors, such as mobility and water infrastructure. This is a potential shortcoming of the Belgium NRRP as both national stakeholders and citizens mentioned the positive impact of smart technologies to improve energy use. For example, the importance and value of the Smart Readiness Indicator (SRI), which will force the sector to adapt and improve as well as measure energy use (national stakeholders) and the use of smart technologies to monitor energy use or automate energy efficiency measures such as turning off lights as a result of motion detectors (proposal by citizens).

Citizens mentioned the need for stricter laws for owners of rental homes concerning energy efficiency, e.g. minimum rating if renting a property. However, this must be carried out fairly such that the cost of renovation is not passed on to the tenant. National stakeholders backed up this view, however, the NRRP does not have any plans for minimum standards.

When it comes to creating world-leading companies, a skills shortage was mentioned by all. Citizens felt there should be more support for start-ups in energy efficiency sectors. The national stakeholders mentioned that the Flemish Region needs 70,000 extra employees in very diverse profiles in a context of declining employment in construction, the declining number of students in construction education and a historically low reserve of job seekers. The NRRP does not seem to have a strong focus on increasing the level of skilled workers in the relevant areas that will enable the EGD, and hence this could be addressed at the national level. There was also mention that the quality of work can be poor and hence there is a need for an EU-wide renovation expert label.

To raise global ambition to tackle climate change, citizens mentioned the need for awareness-raising campaigns. National stakeholders felt that communication should stress the positive effects in terms of comfort, health and wellbeing, real estate value etc., which could encourage citizens to adopt energy efficiency schemes. There was also a mention by the national stakeholders for citizen-led actions and co-creation, particularly concerning policies.

Citizens and national stakeholders both agreed that metrics other than energy performance certificates or kWh/year values should be used to measure energy efficiency, and there needs to be a greater link between energy efficiency and comfort and health and well-being. Health and well-being do not seem a priority for renovation from the report on NRRP and hence could be an added incentive for adoption of the EGD by citizens.

Citizens mentioned that lessons learned from one project to another would be suitable to disseminate to all national citizens to encourage the adoption of energy efficiency measures.

General overview of actions per theme

The following is a summary of the actions proposed by the national stakeholders and citizens during the workshops.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	Policies and regulation for increasing solar PV generation in buildings

Improving energy efficiency in buildings	Citizen-led actions and co-creation of policies Awareness-raising campaign on energy savings achieved from renovation Provocative campaigns stating the urgency of the situation Encourage behaviour change in public buildings Awareness-raising campaign on best practices of energy use in buildings Promotion of smart technologies and interactive systems which directly communicate with building users Better ways to measure the energy performance of buildings linked directly to actual energy use instead of the Energy Performance Certificate Mandate checking the technical energy use of the building every few years Create long-term policies for energy efficiency that will not be changed by new governments Enable knowledge transfer between citizens and professionals Enable clear communication of the costs of renovation Campaigns around behavioural change Examine the targets for energy performance that go beyond the minimum target set by the EC Improved quality control of building commissioning Introduce stricter laws for owners of rental homes with respect to energy efficiency, i.e. homes for rent must have minimum ratings Enable transformational change of the construction sector
Tax system for energy products aligned to the green transition	CO2 taxation to address environmental cost of different fuel sources
Provide funding for renovation of buildings	Re-examine policies for incentive schemes and subsidies 100% financed renovation schemes
Renovate at least 3% of the total floor area of public buildings annually	Enable availability of building materials
Create world-leading companies	Training and upskilling for energy and construction professionals Accelerate innovation to market Increased funding for start-ups
Raise global ambition to tackle climate change	No proposal was made.
Improve health and well-being	Awareness raising campaign on the impact to health and well-being as a result of energy efficiency measures Calculating the impact of energy efficiency improvements on other socio-economic factors
Address inequality and energy poverty	Identify how the costs and benefits of renovation can be split between property owners and tenants
Ensure a Just Transition that is fair, competitive and green	No proposal was made.
Mobilising industry for a clean and circular economy	Funding to encourage the use of green materials

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea source[60]
Increasing renewable energy in buildings	Clear regulation and approach for energy production in buildings is needed	S
Improving energy efficiency in buildings	Awareness campaigns on how to improve energy efficiency in buildings is needed	C
	Current regulations are not based on real data as real data from buildings energy use is scare	S
	Citizens do not have clear information on the energy efficiency level of their home	S
Provide funding for the renovation of buildings	There is a need for legal certainties for investors about grants and subsidies	C
	The threshold for low-income houses is too low	C&S
Renovate at least 3% of the total floor area of public buildings annually	Renovation is not affordable	C&S
	Skills shortage to deliver renovation projects	C&S
	There is not enough incentive for tenants to carry out renovation measures	C
	Renovation is only for the very wealthy or the very poor	C&S
	It is not clear what subsidies are available	C&S
	Building materials are not available due to materials shortage	S
	Unknown hidden costs to renovation putting people off	S
Create world-leading companies	More support for start-ups is needed	C
Address inequality and energy poverty	Not everyone will be able to play a part in the Just Transition	S

Other high-level barriers across all themes of the EGD included:

- The ambition of the current policy is not always in line with the targets for 2050
- The actual targets are not clearly set but keep shifting and changing, especially when the EU regulation is translated from European to local levels
- There is no specific body responsible for the integral implementation of the EGD
- There is too much flexibility by national and local bodies to set their own objectives and targets for the EGD
- Decision-making process is too slow
- Stability is crucial for investors seeking to fund energy efficiency projects; however current market is fluctuating

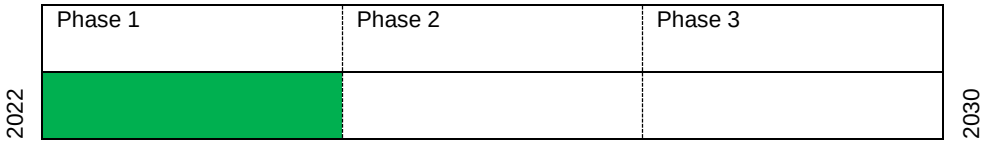
[60] C – Citizens; S – Stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education, increase adoption of PV and CO2 taxation

The following are the actions that were suggested by citizens and national stakeholders that could be carried out in the short term and with minimal support. The focus of the actions was on education and awareness raising campaigns, with some legislative suggestions for policies to increase adoption of solar PV along with other policies around CO2 taxation and ensuring policies are maintained in the longer term.

Theme	Action name	Description	Idea source[61]
Increasing renewable energy in buildings	Policies and regulation for increasing solar PV generation in buildings	A clear regulation and approach for energy produced by PV would be beneficial. This is a complex challenge to tackle, but urgent as it is linked to several issues.	S
Improving energy efficiency in buildings	Citizen-led actions and co-creation of Policies	Co-creation projects providing the opportunity to explore how these policies impact daily life, for example, understanding how much energy is used doing things like running a lightbulb. These are simple measures which have an enormous environmental impact with little personal effort.	S
	Awareness-raising campaign on energy savings achieved from renovation	Emphasising the energy savings obtained over time because of renovation could make energy efficiency initiatives more attractive.	C&S
	Awareness-raising campaign on best practices of energy use in buildings	Targeted campaign should raise awareness on the best practices of energy use in buildings.	S
	Provocative campaigns stating the urgency of the situation	Provocative campaigns should be implemented to make evident the urgency of a change, in the same way that COVID-19 campaigns did. At the same time, it is crucial	S

[61] C – Citizens; S – Stakeholders

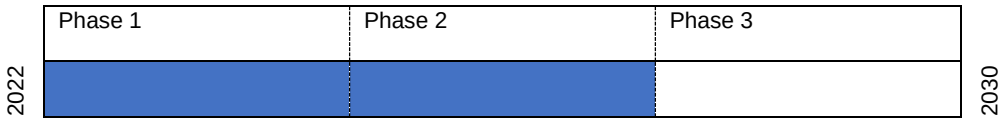
		to make sure we protect people who might be vulnerable to that crisis.	
	Promotion of smart technologies and interactive systems which directly communicate with building users	For example, smart meters informing users on how much energy they use, controls in buildings to optimise efficiency such as motion detectors automatically turning off lights. Note: the effective adoption of these systems would depend on their capillary introduction and local promotion. There are no smart technologies without smart users.	C&S
	Mandate checking the technical energy use of the building every few years	Introduce a measurement on actual energy use for all buildings on a yearly basis to ensure buildings are performing to the best of their ability.	C
	Better ways to measure energy performance of buildings linked directly to actual energy use instead of the Energy Performance Certificate	A new kind of energy metric should replace the kw/h per square metre calculation to reflect the link between energy consumption and comfort of people.	S
	Encourage behaviour change in public buildings	Public buildings should encourage wider behavioural change among citizens, e.g., to switch off the lights when not needed, leading by example. This could be easily done through motion detectors. Changing behaviour in public workplaces will positively affect the employees' behaviour in their daily life.	S
Tax system for energy products aligned to the green transition	CO2 taxation to address environmental cost of different fuel sources	A CO2 taxation would help balance the price of the gas. In a few Member States, such as in Italy, coal energy is still being used to reduce dependence on gas. In these cases, the environmental cost needs to be considered.	S
	Create long-term policies for energy efficiency that will not be changed by new governments	Provide consistent long-term and reliable policy on energy efficiency, to ensure longer term investments.	C
Provide funding for renovation of buildings	Re-examine policies for incentive schemes and subsidies	Examine who should get the subsidies to ensure it is not just the very rich or the very poor and examine other factors such as those looking to downsize.	C&S
Renovate at least 3% of the total floor area of public buildings annually	Enable availability of building materials	Awareness raising campaign on the impact to health and well-being because of energy efficiency measures.	S
Improve health	Awareness-raising	Communication should emphasise	

and well-being	campaign on the impact to health and well-being because of energy efficiency measures	the benefits of renovation in terms of comfort, health and wellbeing, real estate value.	S
Address inequality and energy poverty	Identify how the costs and benefits of renovation can be split between property owners and tenants	The costs and benefits of renovation should be spread between property owners and tenants. Property owners should not offload the cost of renovation on their tenants.	S
Mobilising industry for a clean and circular economy	Funding to encourage the use of green materials along with easy access to product information and green certification	More funds and visibility should be given to repurposed and upcycled construction materials providing better building insulation. Furthermore, easy access to information is key, along with certified product information. Materials claim to have certain properties, but there is not enough data on their actual performance in use.	C&S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: policy formation, more education campaigns, training and upskilling

The following are the actions suggested by citizens and stakeholders that could be carried out in the medium term that require government support. These focused on better policies and laws for energy efficiency, along with increased education campaigns and knowledge transfer portals between citizens and professionals. There was also a strong focus on training and upskilling.

Theme	Action name	Description	Idea source[62]

62 C – Citizens; S – Stakeholders

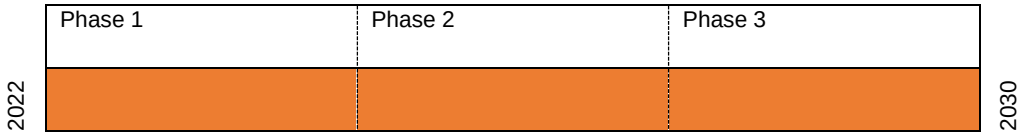
Improving energy efficiency in buildings	Enable knowledge transfer between citizens and professionals	Incentives and policies should ensure that knowledge and skills are properly transferred from one project to the next and from one job to another. Furthermore, the general knowledge about energy efficiency should be improved through educational courses available for everyone, not just people who will enter the construction workforce or policy developers	S
	Enable clear communication of the costs of renovation	Hidden costs make it difficult for some to finance renovation. Renovation costs should be more clearly communicated. Data should be gathered from renovation projects in the early years and used to create a database of costs for others to avail themselves of when undertaking such projects.	S
	Campaigns around behavioural change	Behavioural education is key to achieve energy efficiency goals as users need to understand what actions they can individually take to improve their comfort and energy performances.	S
	Examine the targets for energy performance that go beyond the minimum target set by the EC	There are no proper energy performance standards for public buildings, besides a minimum standard. Setting a higher target would be helpful.	S
	Improved quality control of building commissioning	Quality control commissioning. Monitoring of energy performance would really improve energy performance.	S
	Introduce stricter laws for owners of rental homes with respect to energy efficiency	For example, homes for rent must have minimum energy rating.	C
Create world-leading companies	Training and upskilling for energy and construction professionals	The learning process should involve the workforce at all levels, e.g., a worker fitting a heat pump should have the skills to fit it, not just the company workers who are inspecting and regulating.	S
	Increased funding for start-ups	More support for start-ups in energy efficient sectors.	C
	Accelerate innovation to market	Innovation should be translated into training and new skills for the	S

		workforce, e.g., on new building materials.	

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: financing, policy and regulatory change

Theme	Action name	Description	Idea source[63]
Improving energy efficiency in buildings	Enable transformational change of the construction sector	The most challenging aspects in the construction sector include a certain resistance of the sector to change which affects the speed of the implementation process, and the difficulty to find the appropriate person/ organisation to carry out the construction.	S
Provide funding for renovation of buildings	100% financed renovation schemes	Renovation schemes should be 100% financed to enable renovation to be affordable by all.	S
Improve health and well-being	Calculating the impact of energy efficiency improvements on other socio-economic factors	As part of the long-term renovation strategy, it might be useful to develop a tool to calculate for each Member State the profit in terms of health, public finances, avoided climate costs for each euro invested in renovation.	S

Just Transition

Concerning the Just Transition, the split incentive issue was at the forefront of national stakeholder and citizen discussions. Citizens felt that the cost of renovation should not be passed on to the tenant, and the tenant should also be able to avail of measures to renovate the home they are living in; however national stakeholders felt that renovation

63 C – Citizens; S – Stakeholders

costs should be more equally spread between the property owners and the tenants. As such, there was a clear differing of opinion on this issue.

Both citizens and national stakeholders felt there should be a minimum energy standard for renting a home or building.

National stakeholders mentioned that it is not expected that everyone will be able to participate in the green transition, and from a socio-economic perspective, this should be acceptable.

Concerning who should be able to renovate, citizens and national stakeholders clearly stated that renovation should be affordable for all and not only for the wealthy or the poor. National stakeholders also mentioned that most households already have a loan to purchase their home, and additional loans for renovation are not socio-economically practical.

6.3 Bulgaria

6.3.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[64] in Bulgaria that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[65]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Bulgaria did not point to any key food policies on a national level. This does not necessarily reflect the state of food policies but may indicate the lack of policies visible to the stakeholders.

Additionally, an overview of the national R&I food investment landscape carried out by the EU points to the following policies within food policy in Bulgaria.

- National Action Plan for the Development of Organic Production (Ministry of Agriculture, 2019)[66]. The action plan focuses on 1) improvement of the effectiveness of the organic production and expansion of the national and foreign market of organic products; 2)

[64] A stakeholder meeting took place on 12 October 2022 and involved one research and academia member.
[65] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[66] Ministry of Agriculture (2019). National Action Plan for the Development of Organic Production. Available at: https://www.mzh.government.bg/media/filer_public/2019/08/28/bio-nacionalen_plan_do_2027.pdf (Accessed on 16 November 2022).

maintenance of effective institutional and legal framework for the development of organic farming and effective controlling and monitoring system; and 3) stimulation of practice-oriented research, education, training and consulting in the field of organic production.

- National Programme for Beekeeping for the Period 2020-2022 (Ministry of Agriculture, 2020)[67]. The programme includes measures on 1) technical assistance for beekeepers and beekeepers' associations, 2) fight against aggressors and diseases in the hives, and 3) measures to support the renewal of beehives in the community.

General overview of actions per theme

The actions proposed by the Bulgarian citizens and stakeholders on transforming the current food system in Bulgaria consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production. Overall, the proposed actions mainly focus on immediate implementation tools such as communication, education and interaction.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue: further	Actions requiring grants and incentives that need government support to implement
Orange: Actions requiring changes in regulations that will take longer to implement	

Theme	Action
Sustainable food production (7)	Training for farmers on the use of digital tools to make their production more sustainable
	School courses to include visits to local farms
	Promotional campaigns for urban gardening
	Financial support for small-scale farmers to invest in organic farming methods
	Increase in minimum wages for agricultural workers
	Subsidies for food producers to use renewable energy
	Incentives for new urban farmers
Sustainable food processing, distribution & retail (3)	Promotional campaigns on purchasing food from local and sustainable producers
	Shortening supply chains
	Regulation standardising food labels for organic and sustainable food products on the national level
Sustainable food consumption (2)	Awareness campaigns on maintaining healthy and environmentally friendly diets
	Workshops promoting traditional recipes and local food products
Food loss and waste reduction (2)	Awareness campaigns on the importance of reducing food waste
	Regulation on reducing food waste
Ensuring food security (0)	

[67] Ministry of Agriculture (2020). National Programme for Beekeeping for 2020-2022. Available at: https://www.dfz.bg/bg/selskostopanski-pazarni-mehanizmi/meso-i-pchelarstvo/-/-2020---2022/ (Accessed on 16 November 2022).

Combating food fraud (2)	More stringent monitoring of the quality of food products, especially in comparison to other EU countries
	Funding schemes for consumer rights associations in the area of food policy
Across the entire food cycle (2)	Establishment of regional information officers on the European Green Deal in practice
	Development of educational resources on sustainable food systems

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Barrier	Idea Source[68]
Sustainable food production	Lack of models of sustainable food production for small-scale farms within Bulgaria. This makes farmers unsure of how to transition to sustainable production and what works in practice.	C
Sustainable food processing, distribution & retail	Food labels do not include the regional origin of food products.	S
Food loss and waste reduction	Lack of centres for processing organic waste and knowledge about organic waste processing.	C

[68] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Bulgaria. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns on urban farming, are easy to implement (low-hanging fruit). However, they also have a limited potential to contribute to food system transformation. Others, such as more stringent food product quality monitoring, may be more difficult to implement successfully but can produce knock-on effects in raising the overall food quality.

Theme	Action name	Description	Idea Source[69]
Sustainable food production	Training for farmers on the use of digital tools to make their production more sustainable	Farmers should be given free training on using digital tools to track their production, accessing platforms for sharing best practices in sustainable production, and connecting with customers.	C
	School courses to include visits to local farms	School educational programmes should include visits to local farms and food production participation to get more students interested in farm work.	C
	Promotional campaigns for urban gardening	Urban gardening should be promoted in cities through promotional campaigns.	C
Sustainable food processing, distribution & retail	Promotional campaigns on purchasing food from local and sustainable producers	Promotional campaigns encouraging consumers to purchase food products from local and sustainable producers (e.g. emphasising health, environment, and local economic benefits).	S
Sustainable food consumption	Awareness campaigns on maintaining healthy and environmentally friendly diets	Awareness campaigns should be organised (e.g. in schools, workplaces and public areas) on the importance of maintaining healthy and environmentally friendly diets.	C

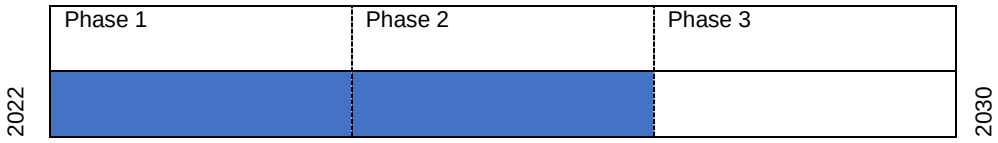
[69] C – Citizens; S – expert stakeholders

	Workshops promoting traditional recipes and local food products	Municipalities should organise workshops on cooking with traditional recipes using local food products.	S
Food loss and waste reduction	Awareness campaigns on the importance of reducing food waste	Awareness campaigns should be organised to reduce household food waste and presenting alternatives for its use.	C
Combating food fraud	More stringent monitoring of the quality of food products, especially in comparison to other EU countries	Quality monitoring of food products should be more stringent, emphasising comparisons with products sold in other regions of the EU.	C
Across the entire food cycle	Establishment of regional information officers on the EGD in practice	Each region should hire information officers to keep citizens, businesses and institutions informed on the practical implications of EGD implementation in the area of food.	S
	Development of educational resources on sustainable food systems	Online educational resources should be developed on various aspects of sustainable food systems (e.g. online courses and forums on food waste prevention, healthy diets, and urban gardening).	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions deemed unaffordable and unlikely to occur without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through measures such as subsidies for farmers and local food producers and technical support for sustainable food production. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[70]

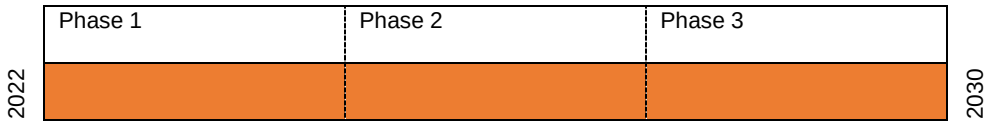
[70] C – Citizens; S – expert stakeholders

Sustainable Food Production	Financial support for small-scale farmers to invest in organic farming methods	Small-scale farmers should receive subsidies to support their shift to organic cultivation methods.	C
	Increase in minimum wages for agricultural workers	Workers in the agricultural sector should have their wages increased through government subsidies to the sector.	C
	Subsidies for food producers to use renewable energy	Food producers should receive subsidies to invest in renewable energy production to use in their operations.	S
	Incentives for new urban farmers	Incentives should be introduced for citizens to take up urban farming (e.g. access to tools and subsidised rent for plots of land).	C
Sustainable food processing, distribution & retail	Shortening supply chains	Subsidies to support reducing the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
Combatting food fraud	Funding schemes for consumer rights associations in the area of food policy	Consumer rights organisations in food policy should receive operational funds from the government.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include the development of national strategies, as well as the regulation of different components of food systems, such as food labels and food waste regulations.

Theme	Action name	Description	Idea Source[71]

[71] C – Citizens; S – expert stakeholders

Sustainable food processing, distribution & retail	Regulation standardising food labels for organic and sustainable food products on the national level	New legislation should be introduced, standardising food labels on organic and sustainable food products across the country.	C
Food loss and waste reduction	Regulation on reducing food waste	New regulations should be introduced to reduce food waste in food-based businesses such as catering, bakeries, and restaurants.	S

Just Transition

Small-scale food producers are usually family businesses, making adopting more sustainable food production techniques significantly more costly than large food corporations. They risk being left behind in sustainable food system transformation without compensatory measures.

6.3.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[72] in Bulgaria that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[73]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Bulgarian policies on the EGD and Citizen and National Stakeholder Reports

Bulgaria's Third National Action Plan on Climate Change (2013-2020) was produced by the Environment Ministry but contains a number of measures to reduce emissions from transport: intelligent transport systems to try to regulate speeds on congested roads to the levels for optimum fuel consumption; public awareness campaigns; eco-driving training for private and commercial drivers; electrification and increase of use of biofuels in the public transport sector; and investment in public transport, cycling infrastructure and freight infrastructure to encourage modal shift[74]. In addition, several fiscal changes are included to encourage the use of EVs. A document in English explaining how many of these measures have been implemented was not available. In addition, Bulgaria is spending EUR 666m of Recovery Funds on stimulating the uptake of EVs; enhancing road safety; replacing

[72] A stakeholder meeting took place on 12 October 2022 and involved two national authorities (Ministry of Transport) and two research and academia members.
[73] Prof Tom Rye, Molde University College, Norway.
[74] Government of Bulgaria (2012). Third National Plan on Climate Change. Available at https://www.preventionweb.net/publication/bulgaria-third-national-action-plan-climate-change-2013-2020 (Accessed on 26 November 2022).

polluting public transport vehicles; and improving intermodal and sustainable urban transport[75].

The workshops with citizens and stakeholders showed that these groups were largely in favour of the measures already being taken by the Bulgarian government to reduce emissions from transport. However, there was also support for increasing taxation of polluting vehicles, and traffic restraint measures in urban areas, which are not currently part of government policy. In more detail:

- ***Citizens*** were keen on promoting distance-working from satellite hub offices (rather than full home working). They were of the strong opinion that public transport should be improved and reorganised and made accessible and affordable in both urban and rural areas, mentioning that it should be renationalised. Cycling infrastructure should be improved to make cycling (and use of scooters) a safe and easy alternative; one way to do this, which met with support among the citizens' group, was argued to be restrictions on the use of cars and parking in urban areas and city centres, complemented by park and ride. They also wanted to see public awareness campaigns to encourage young people to use these modes. The group was also in favour of purchase subsidies for EVs and improved charging infrastructure, possibly financed by a carbon tax. There was some discussion of reducing financing for municipalities that did not do enough to develop sustainable transport.

- ***Stakeholders*** generally agreed with the suggestions from citizens, but also had a number of more strategic recommendations, to do with energy planning and security (for EVs especially) and also for the delivery of sustainable urban mobility plans. They also spoke in favour of traffic restraint measures in cities and additional taxation to disincentivise the use of polluting vehicles.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[76]**
Clean vehicles	EV purchase incentives	C&S
	EV charging infrastructure	C&S

[75] European Commission (2022). Recovery and resilience plans for Bulgaria. Available at https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/recovery-and-resilience-plan-bulgaria_en (Accessed on 26 November 2022).

[76] C – Citizens; S – expert stakeholders

	Energy needs planning	S
Better public transport	Clean PT vehicles	C&S
	Cheaper PT	C
	PT integration across municipal boundaries	C
Spatial planning and city development	More safer bike paths	C&S
	15-minute city	S
Pricing and charges for transport	Taxation of polluting vehicles	S
	More disincentives to use polluting vehicles e.g. Low Emission Zones	S
	Access restrictions and parking restraint in urban areas	C
Planning and operation of transport networks	PT network improvement	C&S
	Park and ride sites	S
Governance	Reduced funding for municipalities without effective SUMPs	S
	Improved funding for sustainable transport for suburban and rural municipalities	S
	Better coordination and support of municipal SUMP efforts by national government	S
Greening transport in general	Education	S
	Exchange of experience	S

Barriers to EGD implementation

Other than the point about low salaries, citizens did not mention barriers to EGD implementation. Stakeholders, however, made a few points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Barrier	Idea Source[77]
Governance	Lack of capacity and knowledge in local authorities to be able to work on sustainable mobility.	S
Clean vehicles	Very low levels of incentives, currently, to encourage people to acquire an EV, and very little charging infrastructure.	S
Pricing and charges for transport	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport.	S
Governance	Lack of coordination mechanisms to ensure horizontal and vertical coherent implementation of EGD goals on the national and local levels	S
Clean vehicles	Energy supply being insufficient and not prepared for the widespread use of EVs.	S

[77] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Bulgaria. These mainly comprise of communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea Source [78]
Greening transport in general	Education	Campaigns should be promoted to stimulate all groups of citizens to participate in the transition to sustainable mobility and to raise public awareness about the objectives of the EGD and the effects of the green transition and new technologies.	C&S
	Exchange of experience	Exchange projects between different municipalities within Bulgaria, especially so that others can learn from good practice in Plovdiv and Sofia, two cities advanced in terms of green transport	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

2022	Phase 1	Phase 2	Phase 3	2030

These actions will have impact in the medium term.

Instruments of implementation: subsidies, investments and taxes

[78] C – Citizens; S – expert stakeholders

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea Source [79]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles. (There was also support for purchase of hydrogen vehicles.) Without much greater intervention, it was claimed that it would take over 100 years to achieve a fully zero-emission fleet in Bulgaria.	S
	EV charging infrastructure	There is currently very little such infrastructure in Bulgaria. Stakeholders were in favour of both publicly funded charging points, and changing the regulatory situation to make it easier for the private sector to provide charging points.	
Better public transport	Cleaner PT vehicles	Investing in new, electric and more comfortable public transportation vehicles	C&S
	Cheaper PT	Entirely free public transport was not advocated but there was a perception among citizens that outside the major cities public transport as well as being slow is expensive in comparison to car.	C
Spatial planning and city development	More safer bike paths	The suitability of the bike and e-scooter for many short distance trips was recognised but it was argued that the lack of safe infrastructure makes it an unattractive mode at present. Walking infrastructure was not however mentioned.	C&S
	15-minute city	This was only very briefly mentioned.	S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport	C&S
	More disincentives to use polluting vehicles e.g. Low Emission Zones	This was not discussed in detail, but low emission zones were referred to positively.	S
	Access restrictions and parking restraint in urban areas	Again, this was not discussed in detail, but citizens were in favour of making it somewhat less easy to drive in urban areas using such measures	C
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional and national level	C&S
	Park and ride sites	Mentioned briefly by citizens.	C

[79] C – Citizens; S – expert stakeholders

Governance	No measures suggested	/	/

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

2022	Phase 1	Phase 2	Phase 3	2030

Instruments of implementation: regulation

Many of the proposals from Bulgarian citizens and experts require policy changes and regulation in order to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea Source [80]
Clean vehicles	Energy needs planning	At the EU and national levels, energy needs planning, mainly due to the increased use of e-vehicles. There were concerns that the Bulgarian electricity grid provider and generators are not prepared for the additional demand.	S
Better public transport	PT integration	Better planning and coordination of public transport routes, especially across municipal boundaries.	C&S
Pricing and charges for transport	No suggestions in this category	/	/
Planning and operation of transport networks	No suggestions in this category	/	/
Governance	Reduced funding for municipalities without effective SUMPs	There was a suggestion from citizens that this form of disincentive was required for 'laggard' municipalities.	C
	Improved funding for sustainable transport for suburban and rural municipalities	There is a concern that knowledge, capacity and funding in sustainable transport is focused on Sofia and, to a lesser extent, Plovdiv. This was also an issue for the Just	S

[80] C – Citizens; S – expert stakeholders

		Transition. Therefore, this could be addressed through changes in funding.	
	Better coordination and support of municipal SUMP efforts by national government	Few details were given but stakeholders perceived that good work is being done by some cities in their SUMPs, but coordination and support from national government could be strengthened.	S

Just Transition

There was little discussion on the Just Transition in the Bulgarian meetings, although stakeholders were aware of the Climate Social Fund, but were not clear about how it worked. They wanted to see more assistance to suburban and rural municipalities in ensuring that transport was available for people without cars and on low incomes. They also suggested that social and emergency services should receive funding support for purchasing EVs as business vehicles.

6.3.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[81] in Bulgaria that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[82]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Bulgaria's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[83], Bulgaria's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €10bn. This can be broken down as follows for the European Green Deal (EGD) priorities:

[81] A stakeholder meeting took place on 12 October 2022 and involved one asynchronous research and academia member
[82] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[83] Ivanova, V. et al. (2021), see note 30, page 61.

Increasing renewable energy in buildings	The NRRP includes measures linked to energy system decarbonisation at the household level, including solar thermal and power systems and heat pump installations. It does not state the level of subsidy or for which building subset, or the overall level of funding allocated.
Improving energy efficiency in buildings	Energy efficiency targets are set to improve the Energy Performance Certificate (EPC) of meetings, targeting class B for residential buildings and class A for state-owned and municipal buildings. Energy efficiency audits will validate the savings in the public and commercial sectors, but there are no established mechanisms for the residential sector.
Tax system for energy products aligned to the green transition	The NRRP did not explicitly address this.
Provide funding for the renovation of buildings	€627m allocated towards multifamily residential homes, €185m towards state and municipal buildings and €118m towards industrial and commercial buildings. There is €1.6m allocated towards four reforms: one-stop shops, quality of energy efficiency certificates, digital system for management of the process and assessment of the sustainability of the projects. The funding allocated for residential properties is in the form of grants with a higher level of funding available for less energy-efficient properties, i.e. 85% for class D and 100% for classes E, F, and G.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC based on 2012-2016 data estimates that only 1.3% of energy renovations in the residential sector were medium depth and 0.1% deep renovations[84]. For non-residential buildings, 5.3% were medium, and 0.6% were deep renovations.
Create world-leading companies	Education programmes are planned for building information management skills. However, wider upskilling or energy and construction professionals are not part of the plan.
Raise global ambition to tackle climate change	The NRRP allocates €7.5m for programme management and information campaigns. This will include the creation of 28 regional centres providing advice and technical assistance to building owners.
Improve health and well-being	The NRRP did not explicitly address this.
Address inequality and energy poverty	The NRRP recognizes the need to address energy poverty, as one-third of the population cannot warm their home adequately. It includes reforms to develop a definition of energy poverty for households to help identify vulnerable owners. Currently, 90% of multifamily properties are represented by class E, F and G properties which can apply for 100% funding for renovation; as such, there are no specific supports for low-income households.
Ensure a Just Transition that is fair, competitive, and green	The NRRP did not explicitly address this.
Mobilising industry for a clean and circular	The NRRP did not explicitly address this.

[84] European Commission (2019), see note 31, page 64.

economy	

The following compares the views of the citizens and one national stakeholder along with the review of the Bulgaria National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD. It should be noted that only one national stakeholder did not stay for the full interview but completed the questions by survey; this national stakeholder was from an academic background. As a result, there was not a wide diversity of opinions from different stakeholder groups at the national stakeholder level.

Increasing renewable energy in buildings: It is not clear from the NRRP what subsidies or level of funding is being allocated for renewable energy in buildings, even though there does seem to be provision for measures linked to the decarbonisation of the energy system. This was confirmed by the national stakeholder, who stated that there are no 100% subsidies for renewable energy in buildings. For example, the state does not incentivise installing solar panels for private use. From discussions with the citizens, it is evident that they see solar panels as a good solution for improving the energy efficiency of buildings.

Improving energy efficiency in buildings: Citizens mentioned that they would be willing to change their behaviour in their everyday lives to reduce energy consumption.

Provide funding for the renovation of buildings: The Bulgarian Association for Construction, Insulation and Waterproofing (BACIW)[85], who reviewed the NRRP as part of the Renovate2Recover report, estimates that the funding provided by the NRRP will only cover 35% of the renovation targets in terms of the area until 2030. Furthermore, the funding will only reach 2% of multifamily buildings, while single-family homes, which host nearly half of the Bulgarian population, are not targeted for support. The report also mentioned that the level of the grant provided for residential properties is 85% for class D properties and 100% for class E, F and G. This raised a strong reaction with the expert community that without further or parallel support for class D properties, there would be limited uptake of the 85% funding.

Despite the high level of funding available for residential properties, citizens cited that the initiatives were difficult to understand. The national stakeholder confirmed this and stated that the incentive schemes needed to be communicated more effectively to citizens.

Renovate at least 3% of the total floor area of public buildings annually: The national stakeholder mentioned that government programmes are underway to provide funding for the national authorities. They felt that the first public buildings that should be addressed are kindergartens, public hospitals, universities and research organisations and that these should be used to set an example. Citizens also felt that it should be a priority to renovate public buildings first. There seems to be adequate funding provided by the NRRP towards these groups.

Create world-leading companies: The national stakeholder mentioned that scientists are considered key drivers of innovation and are viewed as playing a key part in the energy-efficient building sector. However, there is a lack of skills in the workforce and upskilling and

[85] More information available at https://bais.bg/%D0%B1%D0%B0%D0%B8%D1%81/.

reskilling is needed across energy and construction professionals. There are no plans in the NRRP to address this barrier.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholder and citizens for what could be carried out to encourage and enable greater adoption of the EGD. As can be seen, the information provided in this section is low due to insufficient information coming from the national stakeholder workshops, with only one participant in attendance who did not stay for the full allotted time.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	Increased usage of solar panels
Improving energy efficiency in buildings	No actions suggested
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for the renovation of buildings	Low or no-interest loans One-stop shops
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	No actions suggested
Raise global ambition to tackle climate change	Awareness and education campaigns
Improve health and well-being	No actions suggested
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

The citizens and national stakeholders mentioned only a few barriers.

Theme	Barrier	Idea Source[86]
Increasing renewable energy in buildings	Bulgaria has a strong economic dependence on the coal mining industry to deliver electricity needs via coal power plants.	S
	There are no 100% funded subsidy schemes.	S
Improving energy efficiency in buildings	There is no single body responsible for implementing the EGD.	S
	Safety regulations should be improved and simplified.	S
	While initiatives and funds for better insulation exist, some of which, with support from the EC, the national procedures are often too complicated and not transparent enough. These procedures also require the consent of all the neighbours (when people live in blocks of flats). This sometimes impedes the progress towards more energy-efficient buildings as some people cannot afford the co-payment required. A more targeted approach in co-funding, which would consider the specificities of each household's financial situation, could be beneficial for increasing the number of energy-efficient building renovations.	C
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for the renovation of buildings	Not enough information available on incentive schemes and finance initiatives are difficult to understand.	C&S
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned	/
Create world-leading companies	There is a lack of a skilled workforce.	S
Raise global ambition to tackle climate change	No barriers mentioned	/
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

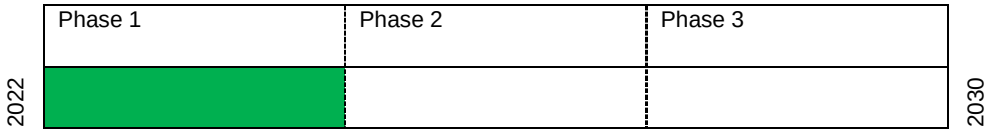
[86] C – Citizens; S – expert stakeholders

Categorized actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as being able to be carried out in the short term with minimal support. There are only a few actions suggested. One-stop shops are mentioned as action, and there are plans in the NRRP to introduce these in Bulgaria. An acceleration of this approach could positively impact the adoption of the EGD by Bulgarian citizens.

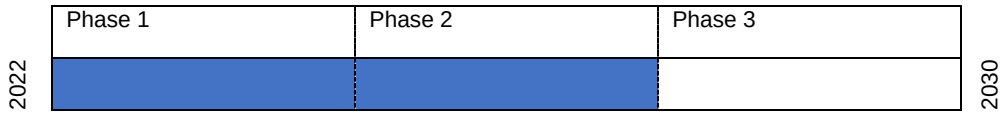
Theme	Action name	Description	Idea Source[87]
Increasing renewable energy in buildings	Increased usage of solar panels	Increase the possibility of using solar panels, perhaps through better and 100% funded incentive schemes.	C&S
Provide funding for the renovation of buildings	Low or no-interest loans	Introduce low or no-interest loans for energy efficiency measures.	C
	One-stop shops	Create one-stop shops for available initiatives.	C
Raise global ambition to tackle climate change	Awareness and education campaigns	Raise awareness on the use of the insulation as a good material for energy efficiency based on its reputation in Bulgaria to date.	C

[87] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



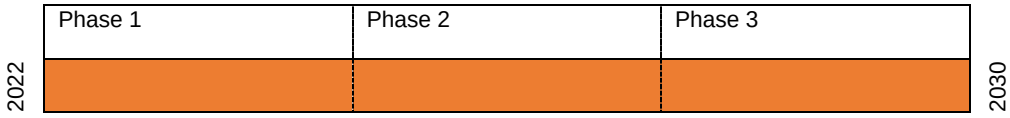
Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

No actions identified by the citizens and national stakeholders can be carried out in the medium term and may require government support.

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



There were no actions suggested by citizens and stakeholders in this category.

Just Transition

The national stakeholder mentioned that awareness of the benefits of improved health and well-being resulting from energy renovation should be publicised widely.

The national stakeholder mentioned that there are no 100% subsidy schemes for renovation and that it is only affordable for the wealthy. However, this contradicts the review of the NRRP, which mentions 100% subsidies for buildings of class E, F and G, of which 90% of residential multifamily homes are within this category. It is unclear, however, if there are any subsidies for single-family dwellings, and perhaps this is what the national stakeholder was referring to.

The national stakeholder also mentioned that Bulgaria relies on its coal mining industry to provide coal for coal-fired electricity plants. Moving away from fossil fuels towards clean energy could harm the Bulgarian economy.

6.4 Croatia

6.4.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[88] in Croatia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a lo-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[89]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Croatia's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Croatia did not point to any food policies on a national level, however, they pointed out the importance of the national implementation of the Farm to Fork strategy. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of visible policies to the stakeholders present.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policies within food policy in Croatia.

- 2030 National Development Strategy (Croatian Parliament, 2021)[90] – One of the goals of the cross-sectoral strategy is self-sufficiency in food production as well as the development of the bioeconomy. This strategy goal outlines several objectives, including increases in productivity of agriculture and aquaculture as well as their resistance to climate change; contribution to climate neutrality, reduction in pesticide use and increase of organic production; strengthening competitiveness and innovation; and improving quality of life in rural and coastal areas.

General overview of actions per theme

The actions proposed by the Croatian citizens and stakeholders on transforming the current food system in Croatia consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food production and consumption. Overall, the proposed actions are mainly focused on immediate implementation tools such as communication, education, and interaction.

[88] A stakeholder meeting took place on 10 October 2022 and involved 1 research and academia member
[89] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[90] Croatian Parliament (2021). 2030 National Development Strategy. Available at: https://narodne-novine.nn.hr/clanci/sluzbeni/2021_02_13_230.html (Accessed on 23 November 2022).

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production (6)	Platforms for cooperation of local sustainable food producers with public food authorities.
	Promotional campaigns on domestic food production.
	Subsidies for sustainable local food producers.
	Financial support for cooperatives of sustainable food producers.
	Subsidies for schools to develop vegetable gardens.
	Regulation on the rights of food producers' cooperatives.
	Regulation making it mandatory for all food producers to publish sustainability reports.
Sustainable food processing, distribution & retail (2)	Promotional campaigns on buying produce from local sustainable food producers.
	Subsidies to expand existing campaigns on consumption of local sustainable food products.
Sustainable food consumption (7)	School education on maintaining healthy diets.
	Promotional campaigns on healthy diets.
	Creation of a website on reading food labels with understanding.
	Regulation making use of local produce in school meals mandatory.
	Regulation making it mandatory for supermarkets to sell local produce whenever available instead of imported produce.
	Regulation on making food labels more accessible.
Food loss and waste reduction (4)	Development of food donation systems for food-based businesses.
	Awareness campaigns on proper disposal of food waste.
	Subsidies for improvements in food donation logistics.
	Development of a national strategy on reuse and disposal of food waste.
Ensuring food security (0)	
Combating food fraud (0)	
Across the entire food cycle (2)	Educational programmes for kindergartens, elementary and high schools on sustainable food systems.
	Involvement of diverse stakeholders in the implementation of existing strategies on food systems.

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

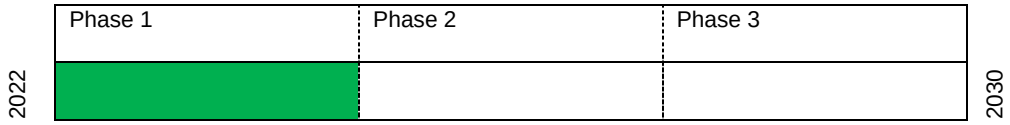
Theme	Barrier	Idea Source[91]
Sustainable food processing, distribution and retail	Lack of clarity on what qualifies as sustainable food packaging.	S
	Lack of integration between EU and national regulation on food labelling.	S
	There is no national strategy on promoting sales of organic and sustainable food.	C
	Increases in food product costs are regularly transferred to the consumer.	C
	Lack of understanding of the content of food labels.	C
Sustainable food consumption	Organic and high-quality food products unaffordable for many consumers.	S
Food loss and waste reduction	Lack of coherence on handling food waste on a national level.	C
	Insufficient financial support for the development of food donation systems.	C
	Unclear responsibilities in management of waste materials from food production and distribution.	S
Across the entire food cycle	In principle, there is a strategy for more sustainable food systems, but it is not implemented in an inclusive and effective way.	S
	Decision-making on the national level suffers from insufficient stakeholder engagement.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Croatia. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns on domestic food production, are easy to implement (low hanging fruit); however, they also have a limited potential to contribute to

[91] C – Citizens; S – expert stakeholders

the food system transformation. Others, such as making food policy-making processes more inclusive, may be more difficult to implement successfully, but can produce knock-on effects, in making food policy more robust.

Theme	Action name	Description	Idea Source [92]
Sustainable food production	Platforms for cooperation of local sustainable food producers with public food authorities	Platforms should be created to facilitate communication between local sustainable food producers and public bodies responsible for food policy (e.g., on regulatory challenges and distribution).	S
	Promotional campaigns on domestic food production	Promotional campaigns should be developed on the topic of domestic food production (e.g., cultivation of vegetable gardens).	S
Sustainable food processing, distribution & retail	Promotional campaigns on buying produce from local sustainable food producers	Promotional campaigns should be organised to encourage citizens to purchase their food produce directly from local food producers (e.g., through TV ads).	C
Sustainable food consumption	School education on maintaining healthy diets	Education on maintaining healthy diets should be incorporated into school curricula (e.g., choosing healthy ingredients, cooking workshops).	C
	Promotional campaigns on healthy diets	Promotional campaigns should be organised on maintaining healthy diets (e.g., using more vegetables and fruits in consumption).	S
	Creation of a website on reading food labels with understanding	A website should be created explaining how to read and understand food product labels.	S
Food loss and waste reduction	Development of food donation systems for food-based businesses	A food donation system should be developed together with food-based businesses such as restaurants and supermarkets to give away unused food.	C
	Awareness campaigns on proper disposal of food waste	Awareness campaigns should be organised educating citizens how to properly dispose of food waste.	S
Across the entire food cycle	Educational programmes for kindergartens, elementary and high schools on sustainable food systems	Educational programmes should be introduced at various levels of education on sustainable food systems (e.g., food production, food waste management, composting, healthy nutrition etc.).	C
	Involvement of diverse stakeholders in the implementation of existing strategies on food systems	More emphasis should be placed on the involvement of more diverse stakeholders in the implementation of sustainable food system strategies on local and regional level.	S

[92] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

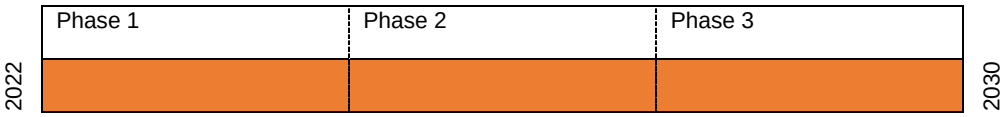
Theme	Action name	Description	Idea Source[93]
Sustainable food production	Subsidies for sustainable local food producers	Subsidies should be provided for sustainable local food producers so that their products can compete with often cheaper industrial food products.	C&S
	Financial support for cooperatives of sustainable food producers	Financial support should be ensured for sustainable food producer cooperatives (e.g., operational grants).	C
	Subsidies for schools to develop vegetable gardens	Subsidies should be provided for schools to develop vegetable gardens and integrated them into education and school meals.	C
Sustainable food processing, distribution & retail	Subsidies to expand existing campaigns on consumption of local sustainable food products	Subsidies should be provided to expand campaigns on consumption of local and sustainable food (e.g., Kupujmo hrvatsko).	C
Food loss and waste reduction	Subsidies for improvements in food donation logistics	Subsidies should be provided to ensure more effective food donation systems (e.g. grants for vehicles, rent-free municipal spaces for distribution).	S

[93] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include development of national strategies, as well as regulation of different components of food systems, such as food labels, food waste reduction, and distribution of local produce.

Theme	Action name	Description	Idea Source[94]
Sustainable food production	Regulation on the rights of food producers' cooperatives	Regulation should be developed on the rights of food producers' cooperatives (e.g., granting their members free access to food markets).	C
	Regulation making it mandatory for all food producers to publish sustainability reports	Regulation should be introduced obliging food producers to publish standardised sustainability reports.	S
Sustainable food consumption	Regulation making use of local produce in school meals mandatory	Regulation should be developed to make the use of local food products in school meals mandatory.	S
	Regulation making it mandatory for supermarkets to sell local produce whenever available instead of imported produce	Regulation should be developed making it mandatory for supermarkets to sell local produce preferentially over imported produce.	C
	Regulation on making food labels more accessible	Regulation should be developed making food product labels more accessible (e.g., only including essential information, using larger fonts, presenting allergens more clearly).	S
Food loss and waste reduction	Development of a national strategy on reuse and disposal of food waste	A national strategy on food waste should be developed (e.g., outlining alternative uses for expired food and systems of handling disposed food).	S

[94] C – Citizens; S – expert stakeholders

Just Transition

The sustainable food system transition is likely to result in higher prices of healthy and sustainable food. Mechanisms should be put in place to make sure this does not mean that socio-economically vulnerable people are excluded from access to high-quality food. This should be done through price structuring as well as food donations.

6.4.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and stakeholders[95] in Croatia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[96]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Croatia's policies on the EGD and Citizen and National Stakeholder Reports

Croatia has a National Integrated Energy and Climate Plan (2019) to cover the period to 2030[97]. It sets a target for 2030 to have 13.2% of the energy consumption in transport powered by renewable energy. In addition, it includes a raft of proposed measures, including a special environmental fee for motor vehicles; a special tax on motor vehicles; a new regulatory framework for the development of cleaner transport; financial incentives for energy-efficient vehicles; development of alternative fuel infrastructure; training for drivers in eco-driving; promotion of boat transport using alternative fuels; and an advanced biofuels market development plan. Croatia is spending EUR 768 million of Recovery Funds on providing hydrogen fuelling infrastructure and producing biofuels, subsidising the purchase of 2 000 EVs for the public sector and businesses, and low-emission vehicles and boats for public transport services[98]. The public transport system in Zagreb will be enhanced, as will TEN-T rail corridors (Zagreb to Rijeka and the Serbian, Bosnian, Hungarian and Slovenian borders).

The workshops with citizens and stakeholders revealed some ideas that – although not contradictory to the EU and national government proposals – are currently not included in national policies, such as car-sharing and the 15-minute city.

- ***Citizens*** strongly believed that public transport should be improved and reorganised, emphasising that long-distance rail transport is currently in a parlous state, and the

[95] A stakeholder meeting took place on 19 October 2022 and involved a representative from a municipality and a representative from academia.
[96] Prof Tom Rye, Molde University College, Norway.
[97] Ministry of Environment and Energy (2019). Integrated National Energy and Climate Plan for the Republic of Croatia for 2021-2030. Available at: https://mingor.gov.hr/UserDocsImages/UPRAVA%20ZA%20ENERGETIKU/Strategije,%20planovi%20i%20programi/hr%20necp/Integrated%20Nacional%20Energy%20and%20Climate%20Plan%20for%20the%20Republic%20of_Croatia.pdf (Accessed on 25 November 2022).
[98] European Commission (2021). Nacionalni plan oporavka i otpornosti 2021-2026. Available at: https://ec.europa.eu/info/files/recovery-and-resilience-plan-croatia_en (Accessed on 25 November 2022).

integration of public transport systems is very poor and outdated. They wanted the government to encourage citizens to use more public transport and electric car-sharing using different tools, such as transport-sharing applications, positive discrimination, discounts, subsidies, and free options (financed by taxes). They also thought that a national public relations campaign and increased education on the benefits of different travel behaviour would be helpful. They also wanted to see an improved infrastructure for shared alternative transport modes in cities (e-bikes, e-scooters, park and ride) and the use of IT and AI to improve the intelligence of transport systems.

- ***Stakeholders*** generally agreed with the suggestions from citizens but also wanted to see an emphasis on the 15-minute city as they felt the model is ideally suited to many Croatian cities, which are not large. They also spoke in favour of traffic restraint measures in cities but expressed scepticism about a shift to EVs given the current shortage of charging infrastructure and the high cost of EVs.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source**[99]
Clean vehicles	Clean vehicle purchase incentives (not just EVs but biofuel and hydrogen)	C&S
	Fuelling and charging infrastructure for clean vehicles	S
Better public transport	Better PT vehicles	C&S
	Cheaper PT	C
	PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	S
	Restraint of private motor vehicle traffic through, e.g. access control and parking management	S
Pricing and charges for transport	Taxation of polluting vehicles	S
	Discounts for using clean transport	C&S
Planning and operation of transport networks	PT network improvement	C&S
	Use of IT and AI to improve the operation and integration of transport systems	
Governance	More support from the national government for sustainable urban mobility planning (SUMPs)	S
Greening transport in general	Education and awareness-raising	S
	Exchange of experience	S

[99] C – Citizens; S – Expert Stakeholders

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These do not, though, refer directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea Source[100]
Governance	Lack of political will to implement difficult policies.	S
Governance	Old-fashioned regulations and standards for road design makes difficult or impossible the implementation of sustainable transport infrastructure, e.g. cycle lanes.	S
Governance	Poor coordination between levels of government and between Ministries at the national level.	S
Governance	Bias in spending towards interurban road construction.	S
Governance	Lack of capacity at the local government level to work on sustainable transport.	S
Clean vehicles	EVs are too expensive for the Croatian market and their level of income. Other fuels should be explored instead.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Croatia. These mainly comprise communication and education activities. All these actions can be implemented immediately.

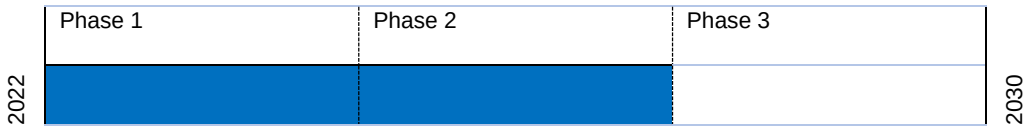
[100] C – Citizens; S – Expert Stakeholders

Theme	Action name	Description	Idea source[101]
Greening transport in general	Education	Changing people's habits through education: encourage more thinking about changing habits and reducing pollution, especially in schools from an early age, but also in national campaigns aimed at the general public.	C&S
	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer-term are written in italics in the 'action name' column.

Theme	Action name	Description	Idea source[102]
Clean vehicles	Clean vehicle purchase incentives (not just EVs but also other clean transport/vehicles)	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy cleaner vehicles and retrofit older vehicles.	C&S
	Fuelling and charging infrastructure for clean vehicles	Few details were given, but in general, there was perceived to be a very great shortage of such infrastructure in Croatia.	S
Better public transport	Better PT vehicles	Investing in new, cleaner-fuelled and more comfortable public transport vehicles.	C&S

[101] C – Citizens; S – Expert Stakeholders
[102] C – Citizens; S – Expert Stakeholders

	Cheaper PT	Reduced fares on public transport.	C&S
Spatial planning and city development	More bike paths	Few details were given, respondents wanted to see more cycling and micro-mobility infrastructure, especially in urban areas.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	C&S
	Discounts for using clean transport	The above revenues should be used to give discounts and subsidies (appropriately targeted to less wealthy members of society) to change their vehicles and use sustainable transport.	C&S
Planning and operation of tspt networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national levels.	C&S
	Use of IT and AI to improve the operation and integration of transport systems	The transport system in Croatia was seen to be greatly lacking in this respect, not only in network management but also in information provision and ticket purchasing.	S
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Croatian citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source[103]
Better public transport	PT integration	Better planning and coordination of public transport routes and services is greatly lacking at present in Croatia, outside Zagreb.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrain personal car use and to make driving in urban areas less attractive, such as low emission zones in cities (which often include an element of pricing) and access controls and parking management.	S
Planning and operation of transport networks	No suggestions in this category	/	
Governance	More support from the national government for sustainable urban mobility planning (SUMPs)	At the regional level, cooperation between municipalities in implementing SUMPs (for example, the development of bicycle infrastructure connecting municipalities) and financial support and expertise from the national government to help.	S

Just Transition

There was some concern expressed, only by stakeholders, about the deprivation of rural communities regarding access to public transport. Public transport is often missing as it is not cost-effective to be organised by the public sector. There was also a note that electric vehicles are too expensive for the Croatian economic context and thus not affordable for most citizens.

6.4.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[104] in Croatia that in their view can support the achievement of the European Green Deal (EGD).

[103] C – Citizens; S – Expert Stakeholders
[104] A stakeholder meeting took place on 19 October 2022 and involved one research and academia member and one national authority.

The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[105]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[106], Croatia's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth EUR 6.3 billion. This can be broken down as follows for the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	€2.7m is allocated towards a model green urban renewable strategy and green infrastructure pilots. The 'Fighting Energy Poverty' programme also promotes renewable energy sources in buildings.
Improving energy efficiency in buildings	€1.6m is allocated for establishing systematic energy management and developing new financing models. The NRRP also states that the Energy Efficiency First Principle is to be applied and that projects are expected to support holistic renovations. Multi-family homes and public buildings undergoing renovation are expected to achieve a 50% reduction in heat demand. For heritage buildings, the expectation is a 20% reduction in heat demand. There is also funding provided for one-stop shop programmes. There is also a clear mechanism for verifying savings post-renovation through the SMIV tool (System for Monitoring, Measurement and Verification of Energy Savings).
Tax system for energy products aligned to the green transition	Not specifically mentioned.
Provide funding for the renovation of buildings	€798m of the €6.3bn NRRP is allocated to renovating buildings. €600m is planned for the renovation of buildings damaged in earthquakes to include energy measures during the renovation; of this, €23m is allocated for residential buildings and €577m for public buildings. €134m allocated for buildings not affected by earthquakes and €40m for heritage buildings.

[105] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[106] Ivanova, V. et al. (2021) , see note 30, page 61.

Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 1.5% of residential sector renovations were medium depth, and 0.1% were deep renovations. For non-residential, there was only 1.1% medium and 0.2% deep energy savings[107]. It is anticipated that these percentages have changed due to renovation programmes targeting 50% savings for most projects; however, there is no measurement to confirm this expectation. The plan allocates €4m to improve administration efficiency and digitalise the renovation process. Deep renovation is supported by up to 80% of total costs, with regular renovation supported by up to 60%.
Create world-leading companies	€5.3m is allocated for skills development for green jobs. This includes a framework for ensuring adequate skills for green jobs for post-earthquake reconstruction.
Raise global ambition to tackle climate change	Not specifically mentioned.
Improve health and well-being	Not specifically mentioned.
Address inequality and energy poverty	A designated 'Fighting Energy Poverty' programme also includes promoting renewable energy sources in buildings.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned.
Mobilising industry for a clean and circular economy	Alongside the green infrastructure projects, there is funding allocated towards circular economy projects.

The following compares the views of the citizens and the national stakeholders along with Croatia's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Increasing renewable energy in buildings: Citizens felt that solar energy was a significant positive, and a future where all buildings should have solar energy was envisioned. Promoting green infrastructure from the NRRP was also seen as a positive by the citizens.

Improving energy efficiency in buildings: National stakeholders mentioned projects where savings after renovation had not been achieved, possibly due to a lack of change of behaviour or user habits post-renovation. Education on how the building should be used post-renovation should also be provided to ensure these issues do not arise.

Tax system for energy products aligned to the green transition: Citizens suggested a VAT tax relief should encourage citizens to invest in renovation measures. National stakeholders suggested introducing tax laws so that the obliged tax amount depends on the energy class of the building. It should be noted, however, that this could harm the Just Transition, resulting in lower taxes for those who can afford to renovate their buildings.

[107] European Commission (2019), see note 31, page 64.

Provide funding for the renovation of buildings: while there are subsidies for the renovation of the building, 80% for deep renovation and 60% for regular renovation, citizens mentioned that there is a high investment cost required for renovation compared to the national average income, which is unrealistic for citizens. National stakeholders mentioned there is no 100% funding scheme but did not view this as a negative as they knew other countries, e.g. Bulgaria, where 100% funding schemes had not been successful. The opinion was that if there is a high percentage of co-financing, the prices of goods and services will also rise. Citizens suggested there should be a fund to pre-finance the renovation measures, which would prevent citizens from having the cash to finance the measures and claim back the costs later.

Citizens mentioned a lack of trust and transparency in the administration of co-financing mechanisms and abuses in the system from administration to execution to performance monitoring. National stakeholders mentioned that there is no provision to protect citizens if the work is not carried out to a high quality, so more education for citizens and checklists of what to expect should be prepared so that the citizens can take a more active role in ensuring the quality of work.

Citizens also mentioned that the complexity of the application process for funding should be reduced.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt that public buildings should lead the way. National stakeholders mentioned that Croatia has good examples of local and regional self-governing organisations carrying out good examples of renovation projects. Further work and clear guidelines for the renovation of buildings, especially those of a heritage nature, are needed.

Create world-leading companies: National stakeholders and citizens both mentioned the need for a more skilled workforce if Croatia is to achieve the EGD goals. National stakeholders suggested more formal education for construction and energy professionals for the green transition. Croatia faces the specific problem that the priority is on reconstruction post-earthquake. However, the NRRP addresses this by enabling incentives for those reconstructing after an earthquake with energy renovations. There is also investment provided for upskilling the energy and construction professionals and proposed accreditation for installers which is positive and may address the concerns of the national stakeholders and the citizens.

National stakeholders also mentioned concerns regarding the quality of the renovation and the negative impacts of increasing insulation without improving the ventilation as a result, which can result in mould. This consolidated the view that further education for the renovation workforce and certification of contractors should be introduced as education for citizens to understand what to expect from a renovation project.

Raise global ambition to tackle climate change: Citizens felt there should be more education and better availability of information regarding how to improve the energy efficiency of your building. They also felt that the benefits of energy efficiency projects should be communicated widely to the public.

National stakeholders also mentioned a need for education and awareness of citizens on how renewable energy and renovation projects are implemented as well as knowledge of how to apply for incentive schemes; this would enable a deeper level of scrutiny on the contractors. They also suggested new tools, software or applications for renovation projects. These could also be used to implement counselling centres or one-stop shops,

and using software or digital tools would be more successful than relying on individual experts.

The national stakeholders suggested starting to promote jobs in green construction from early education and creating scholarships and attractive programmes.

Mobilising industry for a clean and circular economy: National stakeholders also mentioned there should be plans to ensure no future damage, e.g. a plan for the end of life of solar photovoltaic panels that do not damage the environment.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens for what could be carried out to encourage and enable greater adoption of the EGD. There is a wide range of actions across most topics, except for health and well-being, energy poverty, the Just Transition and a clean and circular economy where no suggested actions exist. There are also no actions suggested for the longer term, as the participants felt that all actions should be carried out in short to medium term to achieve the EGD targets.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	Promote self-sufficiency and energy neutrality
Improving energy efficiency in buildings	Improving spatial and urban planning laws in line with the EGD goals Promote centralised heating systems Standard template contracts for renovation to protect homeowners Enable easier decision-making for multi-owner apartment buildings Improved frameworks and guidelines for the restoration of heritage buildings Control mechanisms for ensuring the quality of the renovation Awareness campaigns of the impact that energy efficiency can have on your energy bill
Tax system for energy products aligned to the green transition	Taxation system related to the energy efficiency of the property VAT tax relief on renovation projects

Provide funding for the renovation of buildings	Pre-financing fund for those who cannot afford the upfront cost of renovation Support measures for applying for finance
Renovate at least 3% of the total floor area of public buildings annually	Increase the number of Development of Sustainable Energy and Climate Action Plans (SECAPs) Examples of public buildings leading the way
Create world-leading companies	Remove the first come, first served tender process to create competition and increase the quality of the renovation. Modernise and improve the formal education curricula for green construction Create scholarships for those going from secondary to tertiary education in this area
Raise global ambition to tackle climate change	Increase the number of regional energy agencies across Croatia Increase knowledge of what should be included in a renovation project Develop tools, software and applications Public education and awareness-raising campaigns on the benefits of renovation Increased and improved education campaigns
Improve health and well-being	No actions suggested
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source**[108]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	The tendering process for funding projects should be improved, and the first come, first served approach should be removed. The elements of project evaluation should be defined as part of the call for co-financing. Also, tenders should be published more frequently or kept open continuously.	S
	The available funds are depleted in a very short time	S

[108] C – Citizens; S – expert stakeholders

	and according to the the first come, first served principle, without proper evaluation of the quality or result of planned projects.	
	There is a significant lack of necessary resources (human, financial, time) in the responsible national institutions that should prepare the grounds for implementing EGD-related activities.	S
	There is a lack of education on how to operate a building post-renovation to ensure savings are achieved.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for the renovation of buildings	The citizens are familiar with how the financing works and support the existing co-financing support schemes, but the application process needs to be simplified.	S
	The lack of internal finances for the systematic preparation of projects to apply for funds is also a barrier.	S
	Citizens need a high investment to co-fund renovation projects that is beyond what the person on the average national income can afford.	C
	There is a lack of trust in financial mechanisms.	C
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned	/
Create world-leading companies	There is a lack of skilled workers to carry out renovation projects.	C&S
Raise global ambition to tackle climate change	No barriers mentioned	/
Improve health and well-being	Poor quality of renovation can lead to negative consequences, e.g. mould leading to a poor indoor environment.	S
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as being able to be carried out in the short term with minimal support. A diverse range of actions is suggested across most topics, ranging from improvements to legislation, promotion and awareness campaigns, increasing the number of public energy agencies and suggestions for taxation measures.

Theme	Action name	Description	Idea Source[109]
Improving energy efficiency in buildings	Improving spatial and urban planning laws in line with the EGD goals	Improving the work of the spatial planning and work of the construction office (permitting), coordinating the issuance of permits in line with planned energy systems. Permits should not be issued for other heating systems if a district heating system is planned.	S
	Promote centralised heating systems	Increasing activity on the development of centralised heating systems	S
	Standard template contracts for renovation to protect homeowners	Template contracts for renovation works should be developed defining the crucial elements so that all parties (house owners, constructors etc.) are protected	S
	Enable easier decision-making for multi-owner apartment buildings	The existing legislation should be changed to enable easier decision-making and to facilitate the renovation of multi-apartment buildings (property law, law on the management of multi-apartment buildings).	S
	Improved frameworks and guidelines for the restoration of heritage buildings	Improve the legal framework for the restoration of protected buildings and develop guidelines and frameworks for restoration of cultural heritage to prevent the destruction of cultural heritage, but also to enable their	S

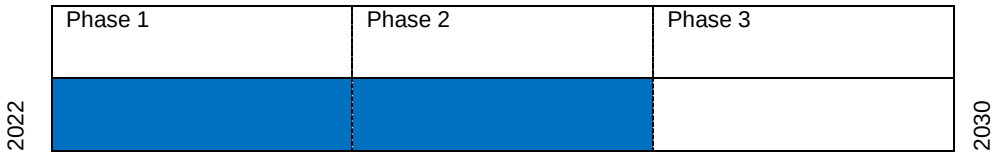
[109] C – Citizens; S – expert stakeholders

		restoration.	
Tax system for energy products aligned to the green transition	Taxation system related to the energy efficiency of the property	Changes in the taxation system to encourage building renovation and introduction of real estate tax law with the amount depending on the energy class of the building.	S
	VAT tax relief on renovation projects	VAT tax relief to encourage renovation.	C
Provide funding for the renovation of buildings	Pre-financing fund for those who cannot afford the upfront cost of renovation	Create a fund for pre-financing of renovation measures to support those who cannot afford to pay the full costs in advance.	C
	Support measures for applying for finance	Development and implementation of support measures such as support for the documentation preparation for renovations.	S
Renovate at least 3% of the total floor area of public buildings annually	Increase the number of Development of Sustainable Energy and Climate Action Plans (SECAPs)	There should be a Development of Sustainable Energy and Climate Action Plans (SECAPs) and proper local energy planning.	S
	Examples of public buildings leading the way	Public buildings should lead by example.	C
Create world-leading companies	Remove the first come, first served tender process to create competition and increase the quality of the renovation	Improve the existing tender process for project funds. The removal of the first come, first served principle and the introduction of project evaluation procedures with defined elements to identify the best projects. Tenders should be published more often or even continuously.	S
Raise global ambition to tackle climate change	Increase the number of regional energy agencies across Croatia	Energy agencies in Croatia have achieved good results, and the foundation of new regional agencies should be encouraged.	S
	Increase knowledge of what should be included in a renovation project	Serious and structured work on increasing citizens' knowledge of how renovations and renewable energy projects are implemented should be implemented.	C&S
	Develop tools, software and applications	Include new digital tools to modernise the existing curricula in the education system by taking as a model the modern curricula already created through different EU-funded projects, and improve knowledge about energy efficiency and energy neutrality.	
	Public education and awareness-raising campaigns on the benefits of renovation	Communicate the benefits of energy efficiency to the public in a clear and easy-to-understand manner.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and may require government support. These mainly focus on improving companies' ability to offer renovation and ensuring tighter control on the quality of renovation achieved. Further education and awareness-raising campaigns are also included.

Theme	Action name	Description	Idea Source[110]
Increasing renewable energy in buildings	Promote self-sufficiency and energy neutrality	Introduce additional elements in education and promotion, such as energy self-sufficiency and energy neutrality.	S
Improving energy efficiency in buildings	Control mechanisms for ensuring the quality of the renovation	Improvement of the control on construction companies to see if they meet the technical requirements regarding the133orkforcee and other conditions.	C&S
	Awareness campaigns of the impact that energy efficiency can have on your energy bill	Energy efficiency should be used as an argument to reduce the chances of rising energy prices and shortage of energy supply.	S
Create world-leading companies	Modernise and improve the formal education curricula for green construction	Modernise the formal education (schools, universities) curricula with content on new materials, new processes and approaches, sustainable practices, etc.; improve the system of formal (schools, universities) and informal education, the latter being learning practical skills and training that increase the	S

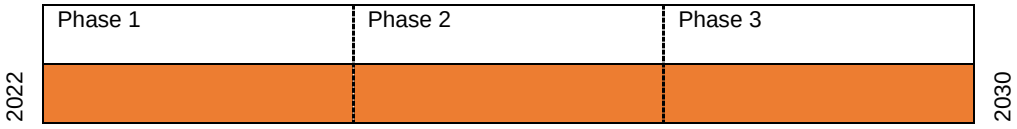
[110] C – Citizens; S – expert stakeholders

		competencies of the workforce.	
	Create scholarships for those going from secondary to tertiary education in this area	Increase the enrolment of children in secondary construction schools, for example, by promoting scholarships	S
Raise global ambition to tackle climate change	Increased and improved education campaigns	Improve the current approach for campaigns and education – a continuous and systematic approach, not ad hoc, only before the publishing of tenders	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

There were no actions suggested by citizens and stakeholders that would take longer to implement and could need greater government support. This was because the national stakeholder felt that to achieve the targeted EGD goals, all the activities identified and discussed should be implemented either in the short term (in the next two years) or medium term (next three to five years).

Just Transition

In Croatia, current policies differentiate between types of buildings, which impacts the Just Transition positively. The national stakeholders mentioned that this could be further improved by including more categories, such as energy-poor households, groups of multiple buildings etc.

Concerning the tendering process for renovation projects, national stakeholders mentioned that the ‘first come, first served’ approach should be abandoned as it is unfair and does not create equal competition amongst contractors.

6.5 Republic of Cyprus

6.5.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[111] in Cyprus that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission112. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Cyprus did not point to any key food policies on a national level. However, they pointed out a successful municipal food waste programme likely to be scaled up to the national level. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of policies visible to the stakeholders present.

- Holistic Waste Management Program (Municipality of Aglantzias, 2020)[113] – The food waste reduction programme implemented by the Municipality of Aglantzias strives to avoid food waste and promote package recycling since 2020, through the campaign 'Pay as you throw' and is a successful measure to reduce food waste and hold people accountable for the waste they produce. Aglantzias is the only municipality to have implemented such a policy, but the programme has been approved to be put into practice nationwide and is expected to start in 2022.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policy in Cyprus.

- Rural Development Programme 2014-2020 (Ministry of Agriculture, Rural Development and Environment, 2014)[114] – Main agricultural policy and funding framework for the development of the primary production sector. Its purpose is to improve the competitiveness of the agricultural sector, ensure the sustainable management of natural resources and achieve equal development through the creation of employment. The plan's priorities include improving the quality of the production and promoting Climate resilience in food production.

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[111] A stakeholder meeting took place on 5 October 2022 and involved one research and academia member.
[112] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[113] Municipality of Aglantzias (2020). Holistic Waste Management Program. Available at: https://aglantzia.org.cy/aigli/en/ (Accessed on 28 November 2022).
[114] Ministry of Agriculture, Rural Development and Environment (2014). Rural Development Programme 2014-2020 Available at: https://agriculture.ec.europa.eu/system/files/2019-11/rdp-factsheet-cyprus_en_0.pdf (Accessed on 28 November 2022).

General overview of actions per theme

The actions proposed by the Cypriot citizens and stakeholders on transforming the current food system in Cyprus consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food production. The proposed actions are mainly focused on short-term, immediate implementation tools such as communication, education, and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (5)	Awareness campaigns on preservation of bees
	Awareness campaign on urban farming
	Subsidies for local and organic food production
	Subsidies for urban farming
	Legislation ensuring fair compensation for agricultural workers
Sustainable food processing, distribution & retail (1)	Shortening food supply chains
Sustainable food consumption (2)	Educational programmes in kindergartens and schools on maintaining sustainable diets
	Subsidies for programmes ensuring equal access to healthy food
Food loss and waste reduction (2)	Awareness campaigns on reducing household food waste
	Development of taxes for food waste generated by restaurants
Ensuring food security (0)	
Combating food fraud (2)	Ensuring stringent monitoring of food product quality
	Stringent monitoring of product quality in relation to other EU Member States
Across the entire food cycle (1)	Development of collaboration mechanisms between different food system stakeholders

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

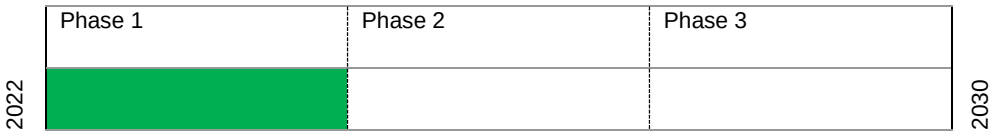
Theme	**Barrier**	**Idea Source** [115]
Sustainable food production	Lack of subsidies for sustainable food producers.	S
Across the entire food chain	Lack of coordination between different public sector bodies (e.g. Ministry of Interior, Department of Environment, Ministry of Labour).	S
	Difficulties in revision of existing food policies.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Cyprus. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as awareness campaigns on the preservation of bees, are easy to implement (low-hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as more stringent food product quality monitoring, may be more difficult to implement successfully but can produce knock-on effects, in raising the overall food quality.

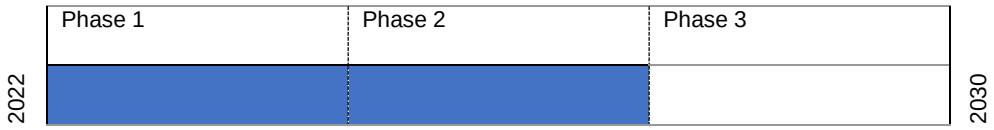
[115] C – Citizens; S – expert stakeholder

Theme	Action name	Description	Idea Source [116]
Sustainable food production	Awareness campaigns on preservation of bees	Awareness campaigns should be organised on the importance of bee preservation for food production and biodiversity preservation.	C
	Awareness campaign on urban farming	Awareness campaigns should be organised on the benefits of urban farming.	C
Sustainable food consumption	Educational programmes in kindergartens and schools on maintaining sustainable diets	Educational programmes should be implemented in kindergartens and schools to maintain sustainable and healthy diets.	C
Food loss and waste reduction	Awareness campaigns on reducing household food waste	Awareness campaigns should be organised in various media on the importance and methods of reducing food waste.	C
Combating food fraud	Ensuring stringent monitoring of food product quality	Stringent monitoring should be carried out on the quality of food products.	C
	Stringent monitoring of product quality in relation to other EU Member States	Stringent monitoring should be carried out to make sure that food products are of the same quality as those sold in the rest of the EU.	C
Across the entire food cycle	Development of collaboration mechanisms between different food system stakeholders	Collaboration mechanisms should be developed for cooperation between different food system stakeholders (e.g. ministries, universities, research organisations, local authorities, NGOs, businesses).	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for

[116] C – Citizens; S – expert stakeholders

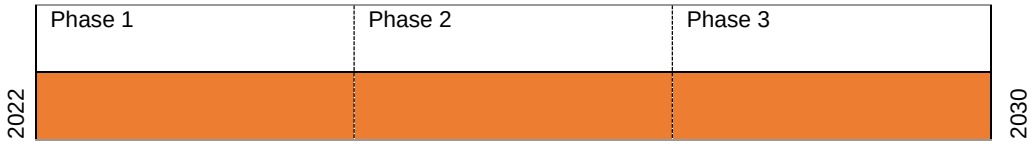
farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale, but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [117]
Sustainable food production	Subsidies for local and organic food production	Subsidies should be ensured to support and expand local and organic food production.	C&S
	Subsidies for urban farming	Subsidies should be ensured for urban farming (e.g. subsidised rent of plots of land, subsidies for tools etc.).	C&S
Sustainable food processing, distribution & retail	Shortening food supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
Sustainable food consumption	Subsidies for programmes ensuring equal access to healthy food	Subsidies should be ensured for programmes (e.g. food banks, food vouchers), ensuring equal access to healthy food.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus coming with the longest development period before they can be implemented. Accordingly, these actions depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include taxation tools as well as regulation of the labour conditions in the agricultural sector.

[117] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [118]
Sustainable food production	Legislation ensuring fair compensation for agricultural workers	Legislation on minimum wages in the agricultural sector should be developed to ensure fair wages.	C
	Development of taxes for food waste generated by restaurants	A system should be developed taxing restaurants for the amount of food waste they generate.	S

Just Transition

To ensure a Just Transition, low-income members of society who cannot access healthy and sustainable food products should be supported by the public authorities. This could be done through measures such as food donations by restaurants and supermarkets, as well as food vouchers.

6.5.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[119] in Cyprus that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[120]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Cyprus' policies on the EGD and Citizen and National Stakeholder Reports

The Vision and Goals for the Cyprus Ministry of Transport are available on the Ministry's website[121]. They do not mention greenhouse gas emissions reduction from transport, although there is mention of sustainable transport. The Environment Ministry webpage on climate change[122] does not refer to any national policy to reduce emissions from transport. Cyprus is spending EUR 74m of Recovery Funds on stimulating EV uptake by the public

[118] C – Citizens; S – expert stakeholders
[119] A stakeholder meeting took place on 5 October 2022 and involved onr national authority, onr research and academia member and 1 civil society representative.
[120] Prof Tom Rye, Molde University College, Norway.
[121] Ministry of Transport, Communication and Works, Republic of Cyprus (n.d.). Available at http://www.mcw.gov.cy/mtcw/mtcw.nsf/mission_en/mission_en?OpenDocument (Accessed on 25 November 2022).
[122] Department of Environment, Republic of Cyprus (n.d.). Available at http://www.moa.gov.cy/moa/environment/environmentnew.nsf/page22_en/page22_en?OpenDocument (Accessed on 25 November 2022).

sector and businesses, implementing low-emission zones (where free public transport is also available), and improving the walking and cycling network[123].

The workshops with citizens and stakeholders revealed general support for national government and EU policy to reduce emissions from transport, other than some scepticism about the affordability and environmental benefits of Evs. There was also a readiness to restrain car use in urban centres and to levy more tax on polluting vehicles.

- ***Citizens*** strongly believed that public transport should be improved and reorganised and made accessible and affordable in both urban and rural areas. Cycling infrastructure should be improved to make it a safe and easy alternative; one way to do this, which met with support among the citizens' group, was argued to be restrictions on the use of cars in urban areas and city centres. The group was also in favour of purchase subsidies for Evs and improved charging infrastructure, although there was some scepticism about the environment-friendliness of battery production. They also wished to see encouragement for other alternative modes of transport in urban areas, such as car-sharing and electric scooters.

- ***Stakeholders*** generally agreed with the suggestions from citizens but also had several more strategic recommendations to do with energy planning and security (for Evs especially) and the delivery of sustainable urban transport plans. They also spoke in favour of city traffic restraint measures and additional taxation to disincentivise the use of polluting vehicles, either directly on owners or companies. They also wanted to see more work and school buses to provide a bespoke public transport alternative for school pupils and employees of specific organisations.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[124]**
Clean vehicles	EV purchase incentives	C&S
	EV charging infrastructure	S
Better public transport	Better and cleaner PT vehicles	C&S
	Free or cheaper PT	C

[123] European Commission (2021). Cyprus Recovery and Resilience Plan 2021-2026. Available at: http://www.cyprus-tomorrow.gov.cy/cypresidency/kyprostoavrio.nsf/all/B37B4D3AC1DB73B6C22586DA00421E05/$file/Cyprus%20RRP%20For%20Upload%2020052021.pdf?openelement&_x_tr_sl=el&_x_tr_tl=en&_x_tr_hl=it&_x_tr_pto=wapp&_x_tr_sch=http (Accessed on 25 November 2022).
[124] C – Citizens; S – expert stakeholders

	Dedicated buses to get people to school and work	C
Spatial planning and city development	More bike paths and better walking conditions	C&S
	Bike-sharing schemes integrated with public transport	C
Pricing and charges for transport	Taxation of polluting vehicles	C
	Taxation of employers according to the percentage of their staff who drive to work	C&S
Planning and operation of transport networks	PT network improvement	C&S
	Improved carpooling (lift-giving) systems	C&S
	Bus priority lanes	C
Governance	Implementing sustainable urban mobility plans (SUMPs) binding on local authorities	S
	Changing school and work hours to eliminate unnecessary journeys and reduce the intensity of rush hours	C&S
	Better coordination of actions between the local and national government and different administrative agencies	S
Greening transport in general	Experimental events, e.g. road closures on a Sunday to show people what a pedestrianised street can be like	S

Barriers to EGD implementation

Citizens noted that bringing about the travel behaviour change necessary to achieve EGD objectives is difficult in Cyprus because bus services are very poor, car ownership is high, urban sprawl is increasing, the hot weather can make cycling and walking unpleasant, and because roads, cycleways and walking are perceived to be unsafe. These issues must be addressed if a transition to more sustainable transport is to be achieved.

Stakeholders made a small number of points about barriers to EGD implementation. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea Source[125]
Governance	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport	S
Governance	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport	S
Greening transport in general	A strong culture of car use and unwillingness to change travel behaviour among citizens	C&S
Governance	Some cultures of seeking to find ways around laws and regulations	S

[125] C – Citizens; S – expert stakeholders

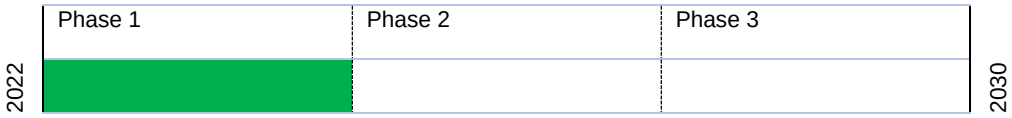
Governance	Lack of coordination mechanisms to ensure horizontal and vertical coherent implementation of EGD goals on the national and local levels	S
Clean vehicles	The disruptive impact of increasing the use of e-vehicles on energy demand and supply	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Cyprus. These mainly comprise communication and education activities. Such actions can be implemented straight away.

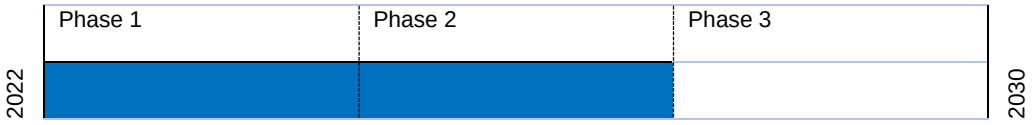
Theme	Action name	Description	Idea source[126]
Greening transport in general	Experimental events to raise awareness of sustainable transport	Both groups of contributors were keen on the idea of road closures on Sundays and/or public holidays so that people could experience the car-free city and that this would help to build awareness and acceptance of the need and the possibility to be able to change.	C&S
Governance	Changing school and work hours to eliminate unnecessary journeys and reduce the intensity of rush hours	This action could be done voluntarily and/or by regulation. Both groups of contributors were keen on it, pointing out that the identical start times in most workplaces and the school lunch break contribute to unnecessary congestion and journeys.	C&S

[126] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

Theme	Action name	Description	Idea source[127]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	EV charging infrastructure	There is currently very little EV charging infrastructure in Cyprus, and participants wanted more to make EV ownership viable	C&S
Better public transport	Better and cleaner PT vehicles	The current quality of public transport is perceived to be very low. Both groups of participants felt that improved and cleaner-fuelled vehicles would encourage more use of public transport.	C&S
	Free or cheaper PT	Free or cheaper public transport was also seen as important, particularly for people in rural areas and those at risk of social exclusion.	C
	Dedicated buses to get people to school and work	In Cyprus, some employers and schools have their dedicated buses, available only to pupils and/or employees. Both stakeholders and citizens felt that an expansion of this service would encourage a greater number of people to travel by public transport.	C&S
Spatial planning and city developmen t	More bike paths and better walking conditions	Cycling and walking infrastructure are of low quality and discontinuous, contributing to the perception that cycling, in particular, is unsafe. People wanted to see improvements.	C&S
	Bike-sharing schemes integrated with public transport	Bike-sharing schemes are virtually unknown in Cyprus, but participants felt that more such schemes, in tandem with improved cycling infrastructure, would encourage more people to travel by bike.	

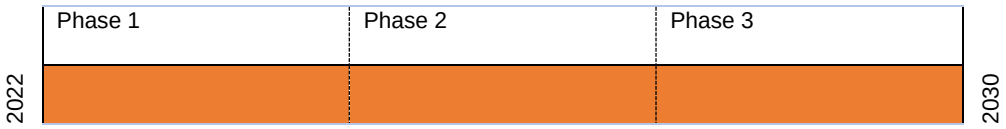
[127] C – Citizens; S – expert stakeholders

Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	Taxation of employers according to the percentage of their staff who drive to work	Few details were provided about this suggestion. Those who suggested it felt that a way to reduce peak hour congestion would be to tax employers. This could be used with the suggestion for staggered working hours to incentivise employers to stagger their hours more.	C&S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national level.	C&S
	Improved carpooling (lift-giving) systems	There was a desire to formalise existing informal lift-giving schemes so that it is easier for people to find and offer a lift. This would be done by setting up an online platform and app.	C&S
	Bus priority lanes	These were briefly mentioned as a way of making bus travel more attractive.	C
Governance	No measures suggested	/	/

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Cyprus citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source[128]
Clean vehicles	No suggestion in this category		/
Better public transport	No suggestion in this category		/
Spatial planning and city development	No suggestion in this category		/
Pricing and charges for transport	No suggestion in this category		/
Planning and operation of networks	No suggestion in this category		/
Governance	Implementing sustainable urban mobility plans (SUMPs) binding on local authorities	Few details were provided, but stakeholders commented that although SUMPs are now common amongst municipalities in the country, they have little incentive to implement them. In order to achieve change and emissions reduction, a more mandatory approach is required.	S
	Better coordination of actions between the local and national government and different administrative agencies	At the regional level, cooperation between municipalities in implementing SUMPs (for example, the development of bicycle infrastructure connecting municipalities).	S

Just Transition

Citizens did not raise any issues regarding the Just Transition apart from possible inequalities related to subsidies and incentives for EV purchase and use and the marginalisation of people in rural areas if car use becomes very expensive for them. When prompted, stakeholders mentioned the need to ensure that marginalised groups have a transport system that maintains and, if possible, enhances accessibility for them without increasing their transport costs. People living in rural areas should not be put at a disadvantage because of the transition to a low-carbon transport system. Stakeholders also suggested that the risk of an unfair transition might be reduced if a platform is introduced to make civic participation fairer and to improve the communication between the citizens and the government.

6.5.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[129] in Cyprus that, in their view, can support the achievement of the European Green Deal (EGD).

[128] C – Citizens; S – expert stakeholders
[129] A stakeholders meeting took place on 5 October 2022 with two participants coming from national authorities.

The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[130]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Cyprus in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[131], was not available for Cyprus. As a result, the following table compares the priorities of the EGD with Cyprus's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP[132] and Cyprus's Integrated NECP[133] [134] and Cyprus's Long Term Renovation Strategy (LTRS)[135].

Editor's note: the information extracted from the NECP and the LTRS is contradictory; the editor is aware of the contradiction.

Increasing renewable energy in buildings	Cyprus' target for renewable energy contribution for 2030 is 22.9% of gross final energy consumption. However, since 2015 new renewable energy projects are no longer receiving any subsidy anymore. Cyprus's LTRS allocates €100 million for investments in energy performance and renewable energy sources to households, businesses and the public sector to help achieve the targets set out.
Improving energy efficiency in buildings	For energy efficiency, reduce final energy consumption by 2.0 Mtoe and primary energy consumption by 2.4 Mtoe by 2030. The 'energy efficiency first' principle has been applied in planned policies and measures.

[130] Dr. Ruth Kerrigan, COO of Integrated Environmental Solutions Ltd
[131] Ivanova, V. et al. (2021) , see note 30, page 61.
[132] European Commission (2020). EC staff working document. Assessment of the final energy and climate plans of Cyprus. Available at https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_cyprus_en_0.pdf (Accessed on 29 November 2022).
[133] Government of Cyprus (2020). Cyprus' Integrated National Energy and Climate Plan. Available at https://energy.ec.europa.eu/system/files/2020-01/cy_final_necp_main_en_0.pdf (Accessed on 29 November 2022).
[134] European Commission (n.d.) National Energy and Climate Plans (NECPs) – EU countries' 10-year national energy and climate plans for 2021-2030. Available at: https://commission.europa.eu/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-energy-and-climate-plans_en (Accessed on 2 November 2022).
[135] European Commission (n.d.) Long-term renovation strategies. Available at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/long-term-renovation-strategies_en (Accessed on 2 November 2022).

	The final plan includes many aspects related to buildings.
Tax system for energy products aligned to the green transition	There will be a reduced VAT rate of 5% instead of 19% for energy efficiency projects for households.
Provide funding for renovation of buildings	The estimated overall amount of investment for the period 2021-2030 is €13.7 billion. Grant schemes exist for the subsidy of renewable energy schemes for solar for households and commercial buildings but there is no Feed-in-Tariff (FIT) available. With respect to building renovation, €8.7m will be allocated for improving the energy efficiency for buildings used by SMEs, €18.4m energy retrofits in households, €20m for improving the energy efficiency in central government public buildings and €1.17m for pilot projects of combined heat and power generation in public and semi-public buildings. There is also €150m allocated to an energy efficiency obligation scheme for suppliers. According to Cyprus's LTRS there is an estimated €67m for investments in thermal insulation, windows and air-conditioning and heating solutions that do not rely on fossil fuels.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 2% of residential sector renovations were medium depth and 0.4% deep renovations. For non-residential there was 7.7% medium, and 1% deep energy savings[136].
Create world-leading companies	National objectives and funding targets for research, innovation and competitiveness will triple annual spending in research and innovation (R&I) on energy and climate by 2023. There is also €30m allocated for support to small and medium Enterprises. Cyprus's LTRS also makes reference to education and training programmes for construction and energy professionals.
Raise global ambition to tackle climate change	The plan includes education, training and public awareness and there is €1.67m funding for soft measures such as information campaigns, trainings, workshops, etc.
Improve health and well-being	The final plan provides information and analysis of air quality and air emissions policy. It also provides a detailed quantitative description of the impacts of the additional measures on air pollutants compared to existing measures.
Address inequality and energy poverty	In its plan, Cyprus sets objectives for energy security through liquefied natural gas (LNG) imports and electricity interconnections with Greece and Israel.

[136] European Commission (2019), see note 31, page 61.

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Ensure a Just Transition that is fair, competitive, and green	The final plan considers the just and fair transition, and also provides information on the social, employment, and skills impacts of the transition to a climate-neutral economy.
Mobilising industry for a clean and circular economy	The circular economy and its potential for reducing GHG emissions is only mentioned in relation to waste management.

In general, national stakeholders outline that funding programmes for both renewable energy and renovation of buildings exist, however they could be improved in the future. Existing schemes include funding for the insulation of roof and walls, thermal upgrade of aluminium openings and replacing the mechanical equipment of homes.

Increasing renewable energy in buildings: Citizens felt that there was significant potential for solar technology in Cyprus and this should be promoted more. Grants and subsidies currently exist for solar technology.

Improving energy efficiency in buildings: Citizens understand that taxes need to increase to tackle the climate change emergency, however they need to understand better how this tax money will be spent. They felt that the size of living spaces should be reduced to improve energy efficiency, however they recognised that this would be a cultural change as many in Cyprus live in big houses. National stakeholders agreed this would not be easy to address.

Citizens also recognised that house prices have increased due to increased cost of materials along with the increased cost of energy supply and as a result, this makes it harder to push the boundaries of energy efficiency in buildings.

National stakeholders suggested regulations for the renovation of apartments should be introduced, tackling barriers such as co-ownership, eviction of tenants during renovation and the potential for increased rents following renovation. Successful schemes in other countries should also be examined, for example, the ‘green lease’ in the USA where tenants are aware of and agree to the increases in rent given the drop in electricity and heating bills.

Provide funding for renovation of buildings: Citizens stated that the cost of renovation is too high, and it is difficult to access subsidies as they are too complicated to understand. They felt that the national government and the EU should fund the renovation fully at the start to kick-start the process and get it moving. However, they also felt that subsidies should be different depending on your income threshold. The national stakeholders disagreed with this viewpoint as they felt that the participants would not take responsibility for their buildings or the scheme if it was fully funded however they did acknowledge that due to increased utility costs, it is difficult for homeowners to afford to renovate their homes. Regardless of the level of funding, both citizens and national stakeholders mentioned there should be easier access to the funding schemes themselves. Cyprus’s LTRS outlines that renovation financing is the biggest obstacle to the energy upgrading of buildings and that public grant schemes are the most important tool for increasing energy renovation.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt that public buildings should lead the way. National stakeholders agreed and felt that the energy performance regulations for public buildings should be higher than that of non-public buildings.

Create world-leading companies: Citizens suggested that architects should lead the way with respect to energy efficiency design and should communicate this with the building owners. They also felt that the Architectural, Engineering and Construction (AEC) industry should look at other innovative techniques such as bioclimatic design and using local resources and should also be educating all stakeholders on this.

National stakeholders highlighted a gap in the technical support that is available for the renovation of buildings. While there are plenty of well-trained professionals, more training is also required, and they also specifically mentioned training for the AEC sector.

Raise global ambition to tackle climate change: Citizens felt that education on energy efficiency should start from a very young age and national stakeholders agreed. National stakeholders also mentioned that general education and awareness campaigns are needed to achieve the EU goals.

Mobilising industry for a clean and circular economy: Citizens felt that local materials should be used for energy efficiency projects, but this also meant that materials for energy efficiency projects need to be produced locally. They also felt a 'whole building approach' should be mandated for construction.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There were not a high number of actions presented and areas such as the tax system for energy products aligned with the green transition, improving health and well-being, and ensuring a Just Transition were not covered.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Promote the use of solar technologies Full implementation of plans for renewable energy
Improving energy efficiency in buildings	Promote down-sizing Establish 'smart metering systems' to evaluate energy consumption
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Introduce income thresholds for subsidies
Renovate at least 3% of the total floor area of public buildings annually	Government should be a pioneer in delivering energy efficiency for public buildings
Create world-leading companies	Education for the AEC industry on innovative technologies Establish a professional body for renovation experts
Raise global ambition to tackle climate change	Education and awareness raising campaigns Education campaigns in schools Education for those on lower incomes

Improve health and well-being	No actions suggested
Address inequality and energy poverty	Ensure renovation is affordable to all
Ensure a Just Transition that is fair, competitive, and green	No actions suggested
Mobilising industry for a clean and circular economy	Produce and use local materials Mandate a whole building approach to construction

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source** [137]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	Cost for renovation is too high.	C
	Political visions on urban development may create conflict, especially during times of prosperity. People would rather focus on building new projects and abandon the idea of renovations.	S
	There are no existing regulations to manage the difficulties that come with renovations, such as increased rent, the possibility of eviction, etc.	S
	There is a need to accelerate the implementation of the 'green passport'/ 'renovation passport' of buildings.	S
	There is a barrier with renovations in apartment blocks because of the decision-making process. If one of the tenants refuses to accept the work, it becomes a serious obstacle.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	It is difficult to access subsidies as they are too complicated to understand	C
	There are currently issues with the provision of loans coming from banks. There is a difficult process to apply for a loan for renovations. This could be solved similarly to how it is done in the Netherlands by integrating a government loan into the programmes.	S
Renovate at least 3% of the total floor area of public buildings annually	There is a lack of technical assistance from the government in the processes of the programmes.	S
Create world-leading companies	No barriers mentioned	/
Raise global ambition to tackle climate change	No barriers mentioned	/

[137] C – Citizens; S – expert stakeholders

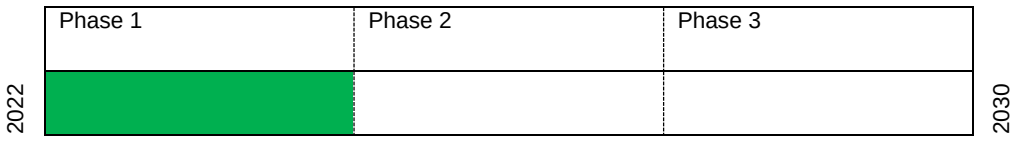
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	The cost of rent may increase, and people may not be able to afford the increased rent as a result. More adjustments and campaigns should be implemented to inform citizens about the long-term benefits due to the lower cost of energy.	S
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. There was a strong focus on education and awareness as well as training programmes. The national stakeholders did not agree with some of the actions proposed by the citizens.

Theme	Action name	Description	Idea Source[138]
Increasing renewable energy in buildings	Promote the use of solar technologies	Solar technologies should be promoted more due to their potential in Cyprus' climate.	C
Improving energy efficiency in buildings	Promote down-sizing	Reduce the living space for new buildings to improve energy efficiency; this will be cultural for Cyprus as many live in big houses. National stakeholders felt this would be difficult to achieve.	C
Provide funding for renovation of buildings	Introduce income thresholds for subsidies	Subsidies given out should be based on your income threshold. This would make renovation accessible for all.	C&S
Renovate at least 3% of the total floor area of public buildings annually	Government should be a pioneer in delivering energy efficiency for public	Priority should be given to public buildings to lead the way and this should be pioneered by the government.	S

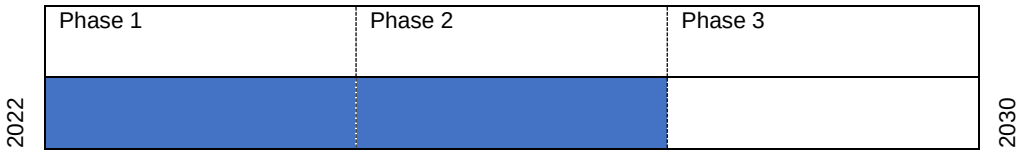
[138] C – Citizens; S – expert stakeholders

	buildings		
Create world-leading companies	Education for the AEC industry on innovative technologies	The AEC industry should look at bioclimatic design, using local and educating others on why we should do this.	C
	Establish a professional body for renovation experts	Form a system of experts on renovation at the EU level whom national experts can address.	S
Raise global ambition to tackle climate change	Education and awareness-raising campaigns	Understanding how to use our spaces better to improve energy efficiency in general.	C&S
	Education campaigns in schools	Education starting from a young level on energy efficiency; introduce an environmental course in schools, both primary and secondary. This should be part of the curriculum.	C&S
	Education for those on lower incomes	There should be greater education for those on lower incomes as they are less likely to be informed of energy efficiency in buildings.	S
Mobilising industry for a clean and circular economy	Produce and use local materials	Enable the use of local materials in energy efficiency projects.	C
	Mandate a whole building approach to renovation construction	For the renovation of buildings, ensure a whole building approach is adopted. For example, do not replace the gas boiler with a heat pump without ensuring that the building has also been insulated and made airtight, otherwise the maximum efficiency of the heat pump may not be achieved.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There were only two actions proposed.

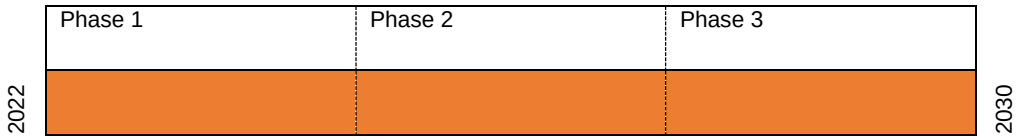
Theme	Action name	Description	Idea Source[139]
Improving energy efficiency in buildings	Establish 'smart metering systems' to evaluate energy consumption	Use 'smart metering systems' to constantly evaluate how energy consumption is measured. This also applies to energy production, which some programmes already consider (e.g. there are a lot of sunny days in Cyprus where solar panels are productive).	S
Address inequality and energy poverty	Ensure renovation is affordable to all	There should be more regulation for funding to allow for adjustments according to the beneficiary's income. Some consideration must go to citizens in the low-income category, as no matter what the percentage of the funding is, they may never be able to benefit from the programmes	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately. There was only one action proposed which was quite high level.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[140]
Increasing renewable energy in buildings	Full implementation of plans for renewable energy	The plans for renewable energy strategies in compliance with the EGD goals should be fully implemented.	S

[139] C – Citizens; S – expert stakeholders
[140] C – Citizens; S – expert stakeholders

Just Transition

National stakeholders discussed the issue of 100% funding and the negative impacts if 100% funding is provided that the homeowner takes no responsibility for the implementation of or resulting renovated building. However, they acknowledged that even a small percentage of co-funding might be too much for those on lower incomes. They also mentioned that different areas will have higher bills due to colder climates, e.g., mountainous regions, and this should be considered in the level of funding that is provided.

The also discussed the owner-tenant issue and the fact that those on lower rents would not be able to afford increased rents in renovated buildings and hence are forced to live in energy-inefficient buildings.

6.6 Czech Republic

6.6.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[141] in the Czech Republic that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[142]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

During the national stakeholder meeting, participants could not mention any relevant policies. However, an overview of the national R&I food investment landscape by the European Commission points to the following strategy as a key piece of food policy in Czechia.

- The Strategy of the Ministry of Agriculture of the Czech Republic with outlook to the year 2030 (Czech Government, 2016)[143] aims at securing food self-sufficiency, reducing environmental and transport costs, and increasing the food industry's competitiveness and efficiency. The strategy also has a specific research and innovation focus.

[141] A stakeholder meeting took place on 7 September 2022 and involved one local authority.
[142] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[143] Czech Government (2016). The Strategy of the Ministry of Agriculture of the Czech Republic with outlook to the year 2030. Available at: https://eagri.cz/public/web/mze/ministerstvo-zemedelstvi/koncepce-a-strategie/strategie-resortu-ministerstva-1.htm (Accessed on 8 November 2022).

General overview of actions per theme

The actions proposed by the Czech citizens and stakeholders on transforming the current food system in the Czech Republic consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on actions that aim to address sustainable food processing, distribution & retail. Finally, the actions emphasise the long-term implementation period.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (6)	More support for local food production
	Subsidies for new urban farmers
	Incentives for sustainable crop cultivation methods
	Developing clear legislation on urban farming
	Stricter regulation on agriculture and animal husbandry emissions, as well as on chemical/pesticide use
	Better use of water in food production
Sustainable food processing, distribution & retail (10)	Digitalisation of information on the origin and sustainability of food
	Promotion of local farmers' markets through social media
	Shortening the supply chain
	Subsidised rent for food producers and sellers
	Support for local farmers to get their products into supermarket chains
	Minimal quotas on the purchase of local produce for supermarket chains
	Creation of a new market entity to support the sale of local products
	Food packaging and labels, including information in Czech
	Reduce the power of big chains to set the prices, payments, and invoicing conditions
	Standardisation of food certificates
Sustainable food consumption (2)	Campaigns to preserve traditions in food products
	School canteens should be supported to cook meals with seasonal and local products.
Food loss and waste reduction (1)	Awareness campaign on consuming 'ugly' produce
Ensuring food security (2)	Pricing quality products in an accessible way for everyone
	Greater protection of farmlands
Combating food fraud (0)	
Across the entire food cycle (1)	Education campaigns for citizens on the need for a transition towards sustainable food systems

Barriers to each theme

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source** [144]
Sustainable food production	The current model of European agricultural subsidies works against the sustainable food system transformation, e.g. by contributing to the reduction of biodiversity.	S
	The current economic model does not support local farmers, who need to make profits and cut costs, even if they are aware of the environmental issues caused by their choices.	S
Sustainable food processing, distribution & retail	Food processing is not sufficiently supported, so producers need to cut costs by exporting slaughtered meat and/or outsourcing food processing abroad.	S
Across the entire food cycle	Since there is not a single body or institution responsible for the sustainable transition agenda, the potential failure of the transition might be caused by a confluence of the agrarian lobby and the 'departmentalism' of various Czech ministries that deal with limited parts of the agenda.	S
	There are problems concerning the structure of agricultural enterprises, a legacy of the previous communist system in the country, unresolved issues of competencies and sometimes even unproductive warfare amongst the ministries.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in the Czech Republic. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All of these actions can be implemented straight away. Some, such as awareness campaigns on consuming non-visually appealing produce, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as the digitisation of information on the origin and

[144] C – Citizens; S – expert stakeholders

sustainability of food, can be more difficult to implement successfully but can have knock-on effects, such as achieving food systems more resilient to fraud.

Theme	Action name	Description	Idea Source[145]
Sustainable food processing, distribution & retail	Digitalisation of information on the origin and sustainability of food	The information on the origin and sustainability of food products should be available online in a public register.	C
	Promotion of local farmers' markets through social media	Local farmers' markets should be promoted via social media so more citizens would be aware of local food availability.	C
Sustainable food consumption	Campaigns to preserve traditions in food products	Awareness campaigns should be organised on traditional Czech food products such as Tuzemák, Pomazánkové máslo ('butter') etc.	C
Food loss and waste reduction	Awareness campaign on consuming 'ugly' produce	Awareness campaigns should be organised on why consuming 'ugly' produce is safe and contributes to food waste reduction.	C
Across the entire food cycle	Education campaigns for citizens on the need for a transition towards sustainable food systems	Educational events should be organised on the importance of the sustainable food system transformation, supported by local representatives, municipalities, and the non-profit sector.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

2022	Phase 1	Phase 2	Phase 3	2030

These actions will have an impact in the medium term.

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through means such as research, support to schools and financial support for small-scale food producers. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

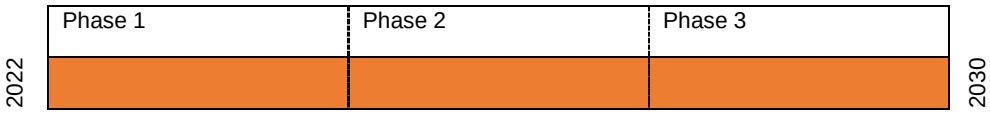
[145] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [146]
Sustainable food production	More support for local food production	Local food producers should be supported through incentives.	C
	Subsidies for new urban farmers	Taking up urban farming should be promoted through subsidies for equipment and renting farming spaces.	C
	Incentives for sustainable crop cultivation methods	Incentives should be provided for citizens taking up carbon-neutral farming, vertical farming in cities, roof farming, etc.	C
Sustainable food processing, distribution & retail	Shortening the supply chain	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
	Subsidised rent for food producers and sellers	Cities and municipalities should offer subsidised prices on the rent of spaces for small food producers and vendors.	C
	Support for local farmers to get their products into supermarket chains	Farmers should be given technical support to get their products into supermarket chains.	C
Sustainable food consumption	School canteens should be supported to cook meals with seasonal and local products.	Incentives for school canteens to prepare meals based on locally grown and produced food.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in product labelling, taxation and market relations regulation (e.g. between supermarket chains and small-scale producers).

[146] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [147]
Sustainable food production	Developing clear legislation on urban farming	In law, urban farming should be defined as a non-market food production method and be integrated into the wider food policy.	C&S
	Stricter regulation on agriculture and animal husbandry emissions, as well as on chemical/pesticide use	Regulation on agriculture, animal husbandry and chemicals/pesticide use should be more restrictive to pressure the farming sector into being a positive force for food system transformation.	C
	Better use of water in food production	Water use in food production should be strictly regulated to avoid unnecessary waste.	C
Sustainable food processing, distribution & retail	Minimal quotas on the purchase of local produce for supermarket chains	Regulation defining minimum quotas on what amount of local produce supermarkets must purchase should be introduced.	C
	Creation of a new market entity to support the sale of local products	A new market body should be introduced to facilitate the sale of local products.	C
	Food packaging and labels, including information in Czech	Food packaging and labels should include information in the Czech language since most of the information is currently available only in English.	C
	Reduce the power of big chains to set the prices, payments, and invoicing conditions	Large supermarket chains should be more restricted in their powerful negotiation position against the farmers.	C
	Standardisation of food certificates	Food labels and certificates should be standardised (e.g. clearly visible, guaranteed quality etc.).	C
Ensuring food security	Pricing quality products in an accessible way for everyone	Healthy and sustainable food products should be priced to be available to everyone.	C
	Greater protection of farmlands	Farmlands should be protected from overuse and degradation by law.	C

Just Transition

The sustainable food systems transition runs the risk of excluding the population's low-income groups in case healthy and sustainable food products come at higher prices. This should especially be considered in the context of the low Czech wages compared to the EU average.

Czech citizens consider support for urban gardening as one of the best ways to address social inequalities. Besides its environmental advantages, this practice heightens the resilience and sense of belonging to a community (social cohesion). It can serve as insurance for a fair approach, or at the very least, to balance out the inequalities resulting from the strive for the green transition.

[147] C – Citizens; S – expert stakeholders

6.6.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[148] in the Czech Republic that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[149]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of the Czech Republic's policies on the EGD and Citizen and National Stakeholder Reports

Transport accounts for about 16% of the Czech Republic's total emissions, and this proportion is growing as other sectors fall and as travel demand increases[150]. The country has a Clean Mobility Action Plan with targets and initiatives for public transport and freight, including low-emission zones (although those latter are not directly targeted at GHG emissions) [151]. The plan also envisages growing use of biofuels and electric vehicles, but a recent assessment by the European Parliamentary Research Service suggests that fuelling and charging infrastructure is lacking relative to other EU countries, and the electricity generation mix remains dominated by fossil fuels[152]. To try to address some of these issues, the Czech Republic is spending EUR 1.193m of Recovery Funds on improving its rail infrastructure to make it more competitive with the road for both passenger and freight, stimulating the uptake of EVs and hydrogen vehicles by the public sector and businesses through purchase subsidies; replacing polluting public transport vehicles; and installing a network of over 4 300 EV and 52 public transport EV charging stations[153].

The workshops with citizens and stakeholders revealed a general alignment of their views with national and EU policy on reducing emissions from transport. In more detail:

- ***Citizens*** strongly believed that public transport should be improved and reorganised and made accessible and affordable in both urban and rural areas. However, they were concerned that providing an adequate public transport system in rural areas could be challenging. Cycling infrastructure should be improved to make it a safe and easy

[148] A stakeholder meeting took place on 7 September 2022 and involved one representative from a municipality.
[149] Prof Tom Rye, Molde University College, Norway.
[150] Data from UNFCC's National Greenhouse Gas Inventory Report of the Czech Republic (2020). Available at https://unfccc.int/sites/default/files/resource/cze-2020-nir-7may20.pdf (Accessed on 25 November 2022).
151 The Czech National Action Plan for Clean Mobility was introduced in 2015. An updated action plan was introduced at the end of 2019 by the Ministry of Industry and Trade, Ministry of Environment and Ministry of Transport, and accepted by the Czech Government in 2020. Available at: https://www.mzp.cz/C1257458002F0DC7/cz/cista_mobilita_seminar/$FILE/OPZPUP-Aktualizace_NAP_CM-20200609.pdf (Accessed on 25 November 2022).
[152] European Parliament (2021). Climate action in the Czech Republic. Latest state of play. Accessible at: https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)689329 (Accessed on 25 November 2022).
[153] European Commission (2021). National recovery plan (NPO). Documents available at: https://www-planobnovycr-cz.translate.goog/dokumenty?_x_tr_sl=cs&_x_tr_tl=en&_x_tr_hl=it&_x_tr_pto=wapp

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alternative. The group also favoured purchasing subsidies for Evs and other clean vehicles. They also wished to see park-and-ride sites to keep city centres free of cars.

- The single ***stakeholder*** who participated in discussions generally agreed with the suggestions from citizens, highlighting improved public transport and better cycling infrastructure. Still, he was also concerned about the potential equality impacts of the shift to lower carbon transport.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[154]**
Clean vehicles	EV purchase incentives	C&S
Better public transport	Better PT vehicles	C&S
	Cheaper public transport	
Spatial planning and city development	More and safer bike paths	C&S
Pricing and charges for transport	Taxation benefits ensure that the green transition does not exclude poorer people	S
Planning and operation of transport networks	PT network improvement	C&S
	Park and ride	C
Governance	Better coordination between levels of government in developing and implementing measures	S
Greening transport in general	Education	S
	Exchange of experience	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation, and the stakeholder raised only two points. As in other countries, these did not relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholder believes to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

[154] C – Citizens; S – expert stakeholders

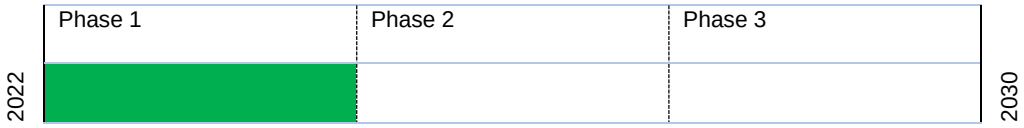
Theme	Barrier	Idea Source[155]
Governance	Lack of political involvement at the national and local level in the Czech Republic about the measures necessary to achieve a shift to low-carbon mobility.	S
Governance	Organisational and administrative fragmentation at the national and local levels in the country hampers the development and effective implementation of measures.	S
Clean vehicles	Disruptive impact of increasing use of e-vehicles on energy demand and supply.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in the Czech Republic. These mainly comprise communication and education activities. All these actions can be implemented straight away.

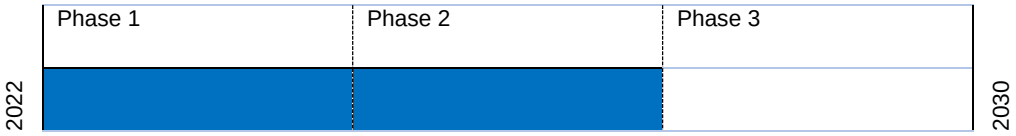
Theme	Action name	Description	Idea source[156]
Greening transport in general	Education	Changing people's habits through education: encourage more thinking about changing habits and reducing pollution, especially in schools from an early age.	S
	Exchange of experience	Exchange projects between different Member States and administrations within the Czech Republic, providing expertise, advice and consultations in reaching mobility goals.	S

[155] C – Citizens; S – expert stakeholders
[156] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

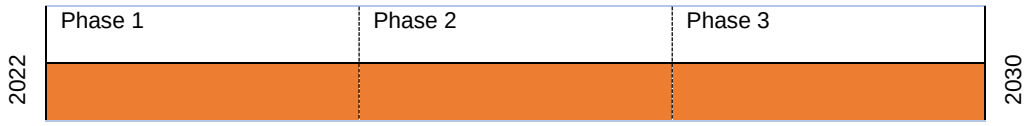
Theme	Action name	Description	Idea source[157]
Clean vehicles	EV purchase incentives Better PT vehicles	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
Better public transport	Cheaper public transport	There was no discussion of free public transport, but there was concern that public transport was potentially too expensive for rural dwellers.	C&S
Spatial planning and city developmen t	More and safer bike paths	Few details were provided, but both groups wanted to see improved cycling infrastructure and to make cycling a safer option.	S
Pricing and charges for transport	Taxation benefits ensure that the green transition does not exclude poorer people	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national level.	C&S
	Park and ride	A measure suggested reducing car use in inner cities. It was unclear whether this also implied restrictions on car use in inner cities.	C
Governance	No measures suggested	/	

[157] C – Citizens; S – expert stakeholders

Actions that can be carried out now with minimal support

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from the Czech Republic citizens and experts require policy changes and regulations to be implemented. Depending on how they are developed in detail, some of the proposals could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source[158]
Governance	Better coordination between levels of government in developing and implementing measures	Few details were provided, but this was recognised as a weakness in the governance of the transition to cleaner transport.	S

Just Transition

There was concern expressed by one stakeholder about the following aspects of a Just Transition in mobility:

- Rising energy prices were seen to risk excluding less well-off people from e-mobility (and all-powered personal mobility in general).
- This led him to suggest that there should be targeted fiscal policies to ensure that people on low incomes are not penalised more than the average by increasing transport costs related to the shift to lower carbon mobility.

[158] C – Citizens; S – expert stakeholders

6.6.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[159] in the Czech Republic that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[160]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Czech policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover: How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[161], the Czech Republic's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth EUR 7.85 billion. The budgetary envelope can be broken down as follows concerning the EGD priorities:

Increasing renewable energy in buildings	The NRRP refers to gas as a suitable replacement for coal as a heat source, a potential stumbling block for the energy system transition and wider decarbonisation. The residential programme boosted by the NRRP includes a 'heat bonus', which applies if insulation or solar PV is applied in combination with a boiler replacement. Apart from this, there is little other mention of increasing renewable energy in buildings.
Improving energy efficiency in buildings	A total of €1.14bn (~15%) is allocated to building-related measures, of which €806m is for energy renovation of buildings (~10%). €20m is allocated to feasibility assessments and awareness-raising, education, training, and advice provision in the fields of energy saving and greenhouse gas reduction. Czechia's Long-Term Renovation Strategy (LTRS) sets the increase in the quality and complexity of renovation as the key objective for the residential sector. It also sets to increase the number and complexity of renovation as its objective for the public and business sectors. Technical assistance, national communication campaigns and communication and information centres are flagged as key to overcoming barriers. There is €98m set aside for project preparation in the public sector.
Tax system for energy products aligned to the green transition	The buildings part of the NRRP does not include loans and other financial instruments. There is no indication in the plan of using loans for renovation nor a direct reference to drawing in private finance.

[159] A stakeholders meeting took place on 7 september 2022 with a participant from a national authority and a member of academia.
[160] Dr. Ruth Kerrigan, COO of Integrated Environmental Solutions Ltd.
[161] Ivanova V. et al. (2021), see note 30, page 63.

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Provide funding for the renovation of buildings	The largest share of €393m is allocated to the existing 'New Green Savings' scheme, which supports complex renovations of residential buildings. It finances a range of measures targeting deep renovation, including building envelope measures, heat replacement, adaptation, and solar power. A further €295m is allocated to renovate public and state buildings. A further €334m will fund another scheme – Kotlíkové dotace ('boiler subsidies'), targeting coal replacement and air quality improvement in single-family homes in rural communities.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC estimates that based on floor area for residential buildings in the Czech Republic, only 1.6% of renovations were medium depth and 0.1.% deep renovations. Energy renovation in non-residential buildings comprised only 1.4% medium and 0.4% deep[162].
Create world-leading companies	Programmes for upskilling energy and construction professionals are not part of the plan.
Raise global ambition to tackle climate change	Not discussed
Improve health and well-being Address inequality and energy poverty	The plan includes no explicit mention of energy poverty or targeting specific household groups. However, it can be assumed that solid fuel (coal) heating replacements will partially reach low-income households, focusing on air quality improvement in rural areas.
Ensure a Just Transition that is fair, competitive and green	The use of the Just Transition Fund and EU ETS revenues are foreseen in the residential sector.
Mobilising industry for a clean and circular economy	The programme is relatively strong in encouraging the realisation of more comprehensive benefits by supporting adaptation (e.g. green roofs, shading) and improvements of indoor environments (e.g. in schools). There is a bonus for environmentally certified materials or savings achieved through Energy Performance Contracts or Performance Design & Build methods.

It can be seen from the table that the emphasis of the Czech Republic's funding is on the renovation of buildings to improve energy efficiency; however, there is not a high emphasis on renewable energy, with only a minor focus on solar PV. There are mechanisms in place to fund deep and medium renovation. Nevertheless, the uptake of these types of renovations is low, with only 0.1% deep renovations in the residential sector and only 0.4% in the non-residential sector. Upskilling is also not part of the plan. There is funding available for education and awareness-raising. However, the level of funding could be considered low given the level of the challenge. There is also no explicit focus on targeting specific household groups or addressing energy poverty.

This information is consolidated from the citizen reports, where the citizens' knowledge centred around the priorities of better insulation, new windows, burning fewer fossil fuels

[162] European Commission (2019), see note 31, page 61.

and new renovations and constructions. As such, the citizens' awareness seems to be well linked to the focus from the national level.

However, the citizens' core concerns related to the cost of renovations being too high, the need for certified and reliable companies to help with the whole process and trust and assurance in the quality and delivery of the completed renovation work. This also correlates well with the lack of focus from the national level on upskilling energy and construction professionals, consolidating the citizens' viewpoint.

The national stakeholders were also aware of this issue, stating that national initiatives supporting the green transition are not always perceived as effective. However, this was linked to communication and education rather than to a lack of skilled workers and the reliability of the work completed. In addition, the national stakeholders stated that a trademark of 'certified expert on EE' already exists. This would suggest that even though this trademark already exists, perhaps the delivery is still unreliable due to a lack of a skilled workforce.

Furthermore, national stakeholders outlined that it would be helpful to have one company to take care of all the main steps of a renovation project. As such, if this barrier could be addressed, along with an increase in skilled workers, this might be one measure to increase trust between citizens and professionals carrying out the work, encouraging citizens to uptake energy efficiency renovation projects.

Citizens also did not have much knowledge of renewables, with only a little knowledge of solar PV. This is also consolidated by the priorities set at the government level, which only include a small grant for a heat bonus should the citizen couple PV with a gas boiler upgrade. From the national stakeholder discussions, there was also little discussion around the integration of renewables in buildings, which would suggest this topic is not being widely discussed.

The national stakeholders, however, did mention one specific scheme, Zelená domácnostiam ('Green for Households'), which promotes solar PV, solar collectors, heat pumps, biomass boilers and wind turbines. However, it is unclear if this programme is backed by a government incentive scheme and the citizens were not aware of it during the citizen stakeholder groups, which also consolidates the need for further information, education and communication between government, national stakeholders and citizens.

There was a difference in view between citizens' and national stakeholders' views on who should receive the highest funding for building renovation. Citizens felt that older homes should receive more financing as these will require higher renovation costs. In contrast, national stakeholders felt that citizens in smaller houses or flats should receive better incentives for renovation. This would suggest that more discussion around this topic would benefit all in determining the plan for incentivising renovation that would maximise uptake.

National stakeholders outlined that education in schools was required and that more extensive awareness campaigns should be promoted. They also felt that energy efficiency is currently not prioritised by the Czech government, and further commitment at the local and national levels would be required to ensure the delivery of the EGD. There was also a divergence between the citizens who felt the information on renovation schemes was lacking and the national stakeholders who felt the information were readily available. This might suggest that how the message is delivered has not been designed for different levels of diversity of the citizens and different demographic backgrounds. Perhaps further work on how the information is communicated is required.

Citizens felt that the incentive schemes were designed for the very rich or poor (a common theme with other EU countries). The national stakeholders mentioned that more supporting programmes were coming. However, one action could be accelerating and communicating this with citizens.

The split incentive is, however, still a significant barrier, with property owners passing on costs to tenants, which should not be allowed. However, there was no concrete suggestion for addressing this issue.

Both citizens and stakeholders agreed on prioritising public building renovation as an example for the private sector, and the national stakeholders mentioned that this was already underway. As such, another action could be wider dissemination regarding what is being done in public buildings.

Barriers to EGD implementation

As a result of the discussions with both citizens and stakeholders the following barriers to EGD implementation were identified, these were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[163]
Increasing renewable energy in buildings	Lack of commitment from governments for renewable energy schemes.	C
Improving energy efficiency in buildings	Lack of prioritisation of energy efficiency matters at a local and national level.	S
	Generic information campaigns that do not address all demographics and diversity of backgrounds.	S
Provide funding for the renovation of buildings	Lack of available funding or not a high enough level of funding to encourage citizens to engage.	C&S
	Hidden costs of renovation which is not covered from funding.	C
Renovate at least 3% of the total floor area of public buildings annually		
Create world-leading companies	Lack of reliability and trust in the energy and construction professionals delivering renovation projects.	C
	Lack of expertise means that citizens take on the work themselves, which does not lead to creating competition for companies looking to move into this space.	S
Address inequality and energy poverty	Lack of fairness amongst who will receive the funding, type of demographic as well as type and location of house.	C&S
Ensure a Just Transition that is fair, competitive and green	Split incentive between property owners and tenants.	C&S

[163] C – Citizens; S – expert stakeholders

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders and information available regarding the Czech Republic's current National Recovery and Resilience Plan.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	Government support for renewables beyond the current 'heat bonus' to encourage uptake of systems that do not use fossil fuels, e.g. heat pumps
Improving energy efficiency in buildings	Education campaigns around renewables for buildings Education in schools Co-creation of education campaigns with citizens of different diversity and demographic backgrounds to ensure the message is reaching all citizens
Tax system for energy products aligned to the green transition	Provide tax rebate for those implementing energy efficiency or renewable energy projects
Provide funding for renovation of buildings	Accelerate funding mechanisms that address the squeezed middle, i.e. not the very rich or the very poor but all those in between Increase financial subsidies beyond current levels to encourage uptake
Renovate at least 3% of the total floor area of public buildings annually	Disseminate the work being carried out in public buildings to show-case the positive impact of building energy efficiency and renewable integration projects
Create world-leading companies	Upskilling programmes for energy and construction professionals to improve trust and reliability in the works delivered as well as creating world-leading companies Link upskilling programmes with the creation of a one-stop-shop programme where all renovation works are delivered by one single party
Raise global ambition to tackle climate change	Measure improvements Disseminate what is being achieved by Czechia at a European level
Improve health and well-being	Demonstrate the impacts of health and well-being as a result of renovation from public building projects already underway
Address inequality and energy poverty	Citizen-led discussions around what level of funding is fair for all demographics, types and locations of house to ensure fairness for all
Ensure a Just Transition that is fair, competitive and green	
Mobilising industry for a clean and circular economy	No actions suggested

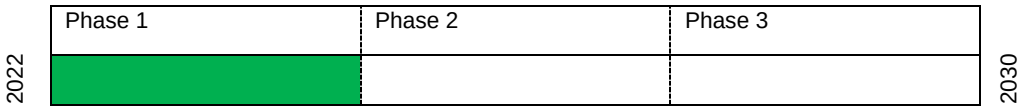
Categorised actions with descriptions

Actions that can be carried out now with minimal support

Citizens were not willing to do many actions without any additional support. A common theme was information about renewables in buildings and the need for trust and reliability in those delivering building energy renovation projects. As such, the suggested actions that can be carried out in the short term with minimal support would be education campaigns, citizen assemblies and dissemination activities.

Timeline

These actions can mostly be implemented and have effect in the short term.



Theme	Action name	Description	Idea Source[164]
Improving energy efficiency in buildings	Education campaigns around renewables for buildings	Between citizens, national stakeholders and the national roadmap, the integration of renewables is not prevalent. This would suggest that more education on the importance of renewables is required. There are two core EGD goals around renewables, 1) renewables to account for 40% of energy supply by 2030 and 2) achieve 49% of renewables in buildings by 2030 as well. Energy supply accounts for all energy supply at a national infrastructure level, while achieving 49% renewables in buildings relates to the buildings themselves and improving the efficiency of buildings. Achieving this second goal, along with increasing energy saving targets by 36% by 2030 improves the energy efficiency of buildings, which in turn reduces the reliance on infrastructure and makes the 40% goal of clean energy supply more achievable. However, in general, renewable goals are seen to be required only at the infrastructure level and focus from most EU countries is penetration of the grid and not building integrated renewables. The suggested action here is to educate both national stakeholders and citizens on the importance of renewables in	C&S

[164] C – Citizens; S – expert stakeholders

		buildings.	
	Education in schools	Education in schools is important everywhere to ensure that the youth of today understand how to save energy in their own homes as they are occupants of their own homes.	S
	Co-creation of education campaigns with citizens of different diversity and demographic backgrounds to ensure the message is reaching all citizens	Buildings are occupied by many different groups of different diversity and demographic backgrounds. As such, information and education campaigns need to target a wide variety of groups. One way to achieve this and ensure that the message is appropriate for as many stakeholder groups as possible would be to carry out some focused workshops to co-create the information campaigns. This could also lead to more than one type of campaign to reach as wide a cohort of people as possible.	C&S
Provide funding for renovation of buildings	Accelerate funding mechanisms that address the squeezed middle, i.e. not the very rich or the very poor but all those in between	It was mentioned by the national stakeholders that there are plans to deliver enhanced mechanisms for stakeholders that do not fall into the very rich or very poor categories, however there was no further information provided. Given that this was a high priority from the citizens that more funding should be provided to this cohort of citizen, accelerating this funding could be an immediate action to be taken.	S
Renovate at least 3% of the total floor area of public buildings annually	Disseminate the work being carried out in public buildings to show-case the positive impact of building energy efficiency and renewable integration projects	It was mentioned by the national stakeholders that the public sector has been prioritised for funding to set an example for others. More dissemination of the benefits of building renovation projects would be useful for all citizens to understand both the energy and indoor environmental quality benefits.	S
Improve health and well-being	Demonstrate the impacts of health and well-being as a result of renovation from public building projects already underway	More education in general that building energy renovation does not only reduce energy and carbon emissions and the energy bill but that it also has added benefits on the health and well-being of the occupants of the building through improved thermal comfort.	S
Address inequality and energy poverty **Ensure a Just Transition that is fair, competitive, and green**	Citizen-led discussions around what level of funding is fair for all demographics and different types and locations of houses to ensure fairness for all	There was a divergence between citizens and national stakeholders with respect to where the priorities for funding should lie with respect to the demographic of citizen that can access the funding as well as the size and location of the buildings to access funding. To ensure fairness for all, a citizen assembly to discuss this issue with all demographics and then co-create the campaign with the citizens could be beneficial.	C&S

Actions requiring grants and incentives that need government support to implement further

In the medium term, there are several actions that national stakeholders and governments could take to accelerate and incentivise the uptake of actions that will help deliver the EGD. These focus mainly on government financial support, upskilling programmes and programmes such as one-stop shops to ensure citizens quick and easy access to reliable and trustworthy energy and construction professionals and disseminating the impact nationally and at the EU level.

Timeline

These actions will have impact in the medium term.

Theme	Action name	Description	Idea Source[165]
Increasing renewable energy in buildings	Government support for renewables beyond the current 'heat bonus' to encourage uptake of systems that do not use fossil fuels, e.g. heat pumps	It is unclear if there are grants and incentive schemes for renewables in buildings beyond the 'heat bonus'. To ensure the EGD goal of 49% renewables in buildings by 2030, additional supports would be required.	S
Provide funding for renovation of buildings	Increase financial subsidies beyond current levels to encourage uptake	In general, citizens felt the subsidies were not high enough and only addressed the very rich or the very poor, and that additional subsidies to address the squeezed middle would be required to ensure the delivery of the EGD.	S
Create world-leading companies	Upskilling programmes for energy and construction professionals to improve trust and reliability in the works delivered as well as creating world-leading companies	Between the National Recovery and Resilience Plan (NRRP) and the feedback from citizens and stakeholders, there is not enough upskilling of energy and construction professionals to ensure quality and reliability of building energy renovation works. As such, upskilling programmes should be included in the NRRP as a priority.	S
	Link upskilling programmes with the creation of a one-stop-shop programme where all renovation	One mechanism for upskilling energy and construction professionals and ensuring delivery of the EGD goals would be to create a one-stop-shop programme where citizens can get	S

[165] C – Citizens; S – expert stakeholders

	works are delivered by a single party	access to what they need for building energy renovation and at the same time, this programme could be used to upskill energy and construction professionals.	
Raise global ambition to tackle climate change	Measure improvements	Measure and disseminate the level of renovation and the impact of renovation on both energy and carbon emissions and indoor environmental quality to disseminate Czechia's green transition and encourage uptake from citizens.	C&S
	Disseminate at a what is being achieved by Czechia at a European level	Further outreach across Europe with respect to the impact of Czechia's NRRP.	S

Actions requiring changes in regulations that will take longer to implement

In the longer term, governments could consider other initiatives, such as tax rebates.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Theme	Action name	Description	Idea Source[166]
Tax system for energy products aligned to the green transition	Provide tax rebate for those implementing energy efficiency or renewable energy in building projects	In addition to grants and incentive schemes for building energy renovation, also introduce a tax rebate for those who are implementing energy efficiency or renewable energy in building projects.	S

Just Transition

There was not much discussion of the Just Transition from either the citizens or the national stakeholders. One of the common themes between citizens and national stakeholders was the affordability of renovation and there was another common theme between renovation only being for the very rich or the very poor. There was a divergence of views on who should benefit from incentive schemes, and as such a suggested action was a citizen assembly to discuss where money for grants and incentives should go, in order to ensure a Just Transition is achieved. This could also be extended to discuss other items such as the

[166] C – Citizens; S – expert stakeholders

split incentive issue between the property owner who pays for the renovation and the tenant who benefits, amongst others.

6.7 Denmark

6.7.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[167] in Denmark that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[168]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Denmark's policies on food systems

The participants of the stakeholder meeting in Denmark did not point to any existing food system policies in Denmark affecting the food system transformation. This does not necessarily reflect the actual food policy in Denmark but does give an insight into the policies visible to the stakeholders present.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following programmes as key pieces of food policy in Denmark:

- Green Solutions of the Future – Strategy for investment in green research, technology and innovation (Ministry of Higher Education and Science, 2020)[169]. The strategy includes climate and environmentally friendly agriculture and food production as one of its four priorities. The strategy sets the intention to substantially lift the level of green research funds, particularly in areas in which impacts are the largest, namely in agriculture, alongside industry, the energy sector and transportation, all of which are involved in food system' operations.

- Climate Neutral 2050 (Danish Agriculture & Food Council)[170]. In close collaboration with other Danish research and in line with the United Nations' global objectives, this plan aims to build an economically sustainable path to climate-neutral food systems. The plan to have net zero emissions across all the food system's sub-sectors, from primary production to logistics and waste streams, relying on solutions provided by investments in R&I.

[167] A stakeholder meeting took place on 23 August 2022 and involved one research and education community member, one national authority and one local authority.
[168] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[169] Ministry of Higher Education and Science (2020). Green Solutions of the Future – Strategy for investment in green research, technology and innovation. Available at: https://ufm.dk/en/publications/2020/filer/green-solutions-of-the-future (Accessed on 12 December 2022).
[170] Danish Agriculture & Food Council – Climate Neutral 2050. Available at: https://agricultureandfood.dk/climate-neutral-2050/climate-neutral-2050 (Accessed on 12 December 2022).

- Gastro 2025 (Ministry of Environment and Food, 2019)[171]. A plan to develop culinary diplomacy, launched in 2019. The initiative sets the ambition to make Denmark a global centre for sustainable gastronomy inspired by the intention to provide better food for more people.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Sustainable food production (9)	Urban farming promotion
	Research on organic farming
	Research on sustainable agriculture
	Shortening distance from farm to fork by supporting local farmers
	Growing legumes locally to replace meat and dairy
	Supporting transition to sustainable production
	Improving animal welfare
	Reform of the conventional-organic farming system divide into a tiered system
	Reform of farming subsidies to promote vertical farming
Sustainable food processing, distribution & retail (7)	Regulation on sustainable and minimised food packaging
	Regulation defining key sustainability terms on food packaging
	Price structuring reflecting the environmental impact of food
	Environmental and health criteria in public procurement
	Higher taxation on meat and unhealthy food, lower taxation of organic and healthy food
	Adaptation of regulation around direct produce sales
	Eco/CO2 emissions labelling
Sustainable food consumption (5)	Awareness campaigns on making sustainable consumption choices
	Education on healthy and environmentally friendly food consumption
	Workplace food policy
	Research on consumer motivations
	Making organic products more affordable
Food loss and waste reduction (3)	Cooking workshops on cooking with food scraps
	Lowering prices on soon-to-expire food
	Food waste regulation on food suppliers (stores, restaurants, etc.)
Ensuring food security (1)	Increasing plant health and biodiversity

[171] Ministry of Environment and Food (2019). Gastro 2025. Available at: https://fvm.dk/fileadmin/user_upload/MFVM/Foedevare/Handout_Regeringens_Gastro_2025__EN_.pdf. (Accessed on 12 December 2022).

Combating food fraud (1)	EU body on food sustainability
Across the entire food cycle (1)	Shortening supply chains

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

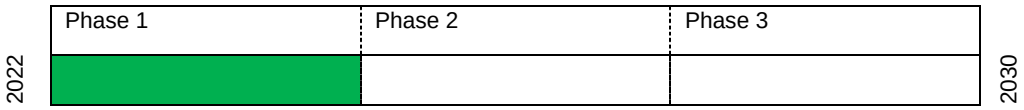
Theme	**Barrier**	**Idea Source** [172]
Sustainable food production	EU subsidies support high dairy and meat production, which goes against the implementation of EGD.	C&S
	Regulations on novel food production are slowing down innovation.	C&S
	Lack of financial support for food producers to transition from conventional to organic farming.	C&S
Sustainable food processing, distribution & retail	Rules for climate labelling on food products are voluntary.	C
	Pricing policies do not make food product prices reflect their environmental impact (e.g. meat and dairy are unrealistically cheap).	C&S
Combatting food fraud	Lack of control mechanisms on misleading food marketing.	S
Across the entire food cycle	Lack of political consensus on the urgent need for sustainable food system transformation.	C
	Lack of emphasis on systemic solutions in food policy.	C
	Food policy often revised with electoral changes.	C

Categorised actions with descriptions

Actions citizens and stakeholders can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

This category concerns actions that can be taken straight away by individual citizens, organisations and businesses, and are proposed by citizens and stakeholders in Denmark. These mainly comprise communication and education activities. All these actions can be

[172] C – Citizens; S – expert stakeholders

implemented straight away. Some, such as cooking workshops, are easy to implement (low-hanging fruit), however, they also have a limited potential to contribute to the food system transformation, because of their relatively small scale. Others, such as workplace food policies, can be more difficult to implement successfully (organisations need to change their procurement policy), but can have knock-on effects, such as achieving more sustainable procurement and changing food consumption habits of larger groups of citizens.

Theme	Action name	Description	Idea source[173]
Sustainable food production	Urban farming promotion	Urban farming should be promoted for individual citizens to develop more connection with the food they consume.	C
Sustainable food consumption	Workplace food policy	Workplaces should introduce food policies making environmentally friendly and healthy options more easily accessible and affordable for their employees.	C
	Awareness campaigns on making sustainable consumption choices	Awareness campaigns on making climate-conscious food choices, need to reduce food waste and meat consumption, as well as to eat local and seasonal food.	C
	Education on healthy and environmentally friendly food consumption	Education should be provided for citizens of all ages for them to make more informed choices on healthy and environmentally friendly food.	C
Food loss and waste reduction	Lowering prices on soon-to-expire food	Businesses should reduce food waste by selling soon-to-expire food at lower prices.	C&S
	Cooking workshops on cooking with food scraps	Small-scale community workshops to promote cooking with food scraps and seasonal produce.	C

Actions requiring grants and incentives

Timeline

These actions will have impact in the medium term.

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern

[173] C – Citizens; S – expert stakeholders

increasing the sustainability of food production, through means such as research, pricing schemes and financial support for small-scale food producers. Many of these actions are taking place on a smaller scale, but can be significantly ramped up with incentives.

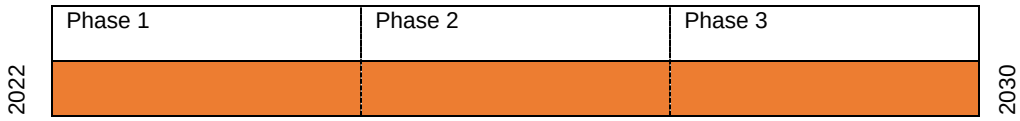
Theme	Action name	Description	Idea source[174]
Sustainable food production	Research on organic farming	Stimulate research to understand the potential of organic farming more clearly, as well as its future development.	C
	Research on sustainable agriculture	Stimulate research on the type of protein-rich crops that can be grown in Denmark in an environmentally and commercially sustainable way.	C&S
	Shortening distance from farm to fork by supporting local farmers	Invest in shortening the distance from farm to fork by supporting local producers in thinking more commercially and initiating connections with (local) markets.	C
	Growing legumes locally to replace meat and dairy	Incentivise growing diverse crops including protein-replacement produce, in order to transition away from the large-scale meat and dairy production.	C
	Supporting transition to sustainable production	Financial support to farmers attempting to transition to sustainable food production.	S
	Increasing plant health and biodiversity	Financial support to farmers attempting to support strengthening of biodiversity and plant health.	C
Sustainable food consumption	Research on consumer motivations	Stimulate research on what drives individual food choice motivations of Danish citizens.	C
	Making organic products more affordable	Lower the prices of organic and healthy food products to make them more affordable to socially vulnerable citizens, through subsidies.	C
Across entire food cycle	Shortening supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others)	S

[174] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation and legislation

This category concerns actions that are unlikely to take place without regulatory frameworks. Most of the ideas from Danish citizens and experts fall into this category. These actions mostly refer to sustainable food processing, distribution and retail. This can happen through various means such as changes in how the environmental impact is reflected on product labelling, taxation, public procurement standards, and food waste regulation. Some of the actions, including Eco/CO2 labelling and reform of the farming subsidy system fall under shared EU and Member State competency and will be a result of multi-level policy reform.

Theme	Action name	Description	Idea source[175]
Sustainable food production	Improving animal welfare	Regulation should be introduced to support welfare of animals used for food production.	C
	Reform of farming subsidies to promote vertical farming	Regulation on farming subsidies should be adjusted to promote vertical farming as well as other innovative farming and food production methods.	C
	Reform of the conventional-organic farming system divide into a tiered system	Develop a tiered farming practice classification allowing targeted use of pesticides.	C
Sustainable food processing, distribution and retail	Regulation on sustainable and minimised food packaging	Regulation should be introduced on materials use, general reduction and standardisation of food packaging.	C
	Regulation defining key sustainability terms on food packaging	Clear standards need to be introduced when it comes to using terms having to do with food sustainability, in order to avoid greenwashing.	C
	Price structuring reflecting the environmental impact of food	Regulation should be introduced to make products with higher environmental impact more expensive.	C&S
	Environmental and health criteria in public procurement	Public procurement of food should be focused on health and environmental criteria, not exclusively cost criteria.	S
	Higher taxation on	Introduction of special taxes on meat and	C&S

[175] C – Citizens; S – expert stakeholders

	meat and unhealthy food, lower taxation of organic and healthy food	unhealthy foods, as well as food products shipped from large distances (e.g. meat from Argentina).	
	Adaptation of regulation around direct produce sales	Regulation and bureaucratic procedure on direct product sales by farmers should be streamlined and made more understandable.	S
	Eco/CO2 emissions labelling	Eco/CO2 emissions labelling (inclusive of the entire supply chain) on food products will make it easier for consumers to make climate-friendly choices; as well as serve as an incentive for producers.	C
Food loss and waste reduction	Food waste regulation on food suppliers (stores, restaurants etc)	Stores and restaurants should be obliged to sell and promote misshapen and 'ugly' fruit and vegetables in order to reduce food waste.	C
Combatting food fraud	EU body on food sustainability	An EU body should be established, certifying sustainability of food products.	C

Just Transition

The listed actions positively reinforced the Just Transition in the following directions:

- Pricing – environmentally sustainable and healthy products must be affordable for everyone. People coming from with lower economic means should not be barred from access to healthy and environmentally sourced food.

- Legislation on food advertising – there must be more stringent legislation regulating what food components qualify a product to be advertised as sustainable, avoiding greenwashing. This will ensure that small-scale food producers still have a fair chance in placing their sustainable products on the market.

- Support measures for small-scale farmers – small-scale and local farmers should be technically and financially supported in transitioning to organic production and advertising their products in order not to be sidelined by newer, more agile market actors.

6.7.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[176] in Denmark that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the

[176] A meeting took place on 23 August 2022 and involved a representative from the local government.

thematic expert appointed by the European Commission[177]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

In Denmark, transport accounts for just under a third of all emissions, and road transport the vast bulk of this. The national government has adopted a raft of measures to decarbonise the sector[178], focusing on:

- Changing purchase taxes to make the purchase of a low-emission vehicle much more attractive and of a large fossil-fuel vehicle less attractive.
- More EV charging stations.
- Introducing CO2-emissions differentiated lorry charging per kilometre.
- Boosts to public transport and cycling investment.
- Research and development of low-carbon (bio-)fuels.

In addition, the country is now spending a further EUR 239m of Recovery Funds on stimulating the use of electric bikes by building improved cycle path infrastructure. It is also reforming vehicle taxation so that purchasing low-emission vehicles will become much more attractive[179].

There was, in general, a low level of knowledge about the national policy and EGD's specific proposals concerning mobility among citizens and the stakeholder consulted. They were not aware of changes in taxation, nor of proposals for lorry road user charging. Citizens in particular were also in favour of restraints on car use (toll rings, parking management) and taxation on airline travel that are not part of national policy. A summary of the points they made is provided below.

- ***Citizens*** saw the reorganisation and improvement of public transport (and making it cheaper, in some cases) as key to reducing emissions from private transport, along with improved EV purchase incentives, charging infrastructure, and other low-emission fuels like hydrogen. There were, however, some doubts about the sustainability of battery production. Some participants expressed willingness to restrict car use in cities (toll rings) to be able to deliver better conditions for cycling and other slow modes of transport (congestion on bike paths was seen as a problem needing more investment), and there was also support for shared mobility as a means of reducing car ownership. Park and ride (car parks where travellers can park and continue their journey by public transport), and parking space management, were both seen as means to reduce car use. However, there was uncertainty as to whether it was fair or reasonable to focus on changing citizens' travel behaviour to reduce emissions or whether a higher priority

[177] Prof Tom Rye, Molde University College, Norway.
[178] Danish Ministry of Climate Energy and Utilities (2020). Climate Programme 2020. Available at: https://unfccc.int/sites/default/files/resource/ClimateProgramme2020-Denmarks-LTS-under-the%20ParisAgreement_December2020_.pdf (Accessed on 25 November 2022).
[179] European Commission (2022). Denmark's recovery and resilience plan . Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/denmarks-recovery-and-resilience-plan_en (Accessed on 16 November 2022).

should be put on industry and commerce, particularly airline companies. There was support to route income from higher taxation on air travel into low-emission transport, and for changes to existing tax reliefs for driving to work so that there is more incentive to use low-emission modes.

- The single ***stakeholder*** consulted (from a local authority) had somewhat different views from those expressed at the citizen workshop. He was not in favour of improving public transport in rural areas due to the high cost and low fuel efficiency per passenger of running on average quite empty vehicles in these areas; instead, he was more in favour of car-sharing. He did, however, place considerable emphasis on creating the 15-minute city, improved cycling infrastructure, low- or zero-carbon fuels (including for freight and maritime transport), and funding for all of this. He saw the EU as a significant source of potential funding.

General overview of actions by theme

The national stakeholder did not provide detailed information on activities that could form the basis of a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholder.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Clean vehicles	EV purchase incentives
	Environmental impact analysis of EV production
	Clean fuels for freight and shipping
Better public transport (PT)	Better PT vehicles
	Free PT
	More integrated PT system
Spatial planning and city development	More bike paths
	Parking management
	Park and ride
	15-minute city
Pricing and charges for transport	Taxation on air transport
	More disincentives to use polluting vehicles
	Tax deduction for working from home
	Restraint of private motor vehicle traffic entering cities
Planning and operation of transport networks	PT network improvement
	Car sharing schemes
Governance	Coordination of local and national government on transport
Greening transport, in general	*No measures identified*

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. The stakeholder, in contrast, highlighted a small number of barriers. These, do not in the main relate directly to the implementation of mobility-related aspects of the EGD (for example, he did not speak about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nor about specific proposals in the Urban Mobility Framework (COM(2021) 811 final). Rather, these barriers relate to the difficulty of implementing what the stakeholder believed to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

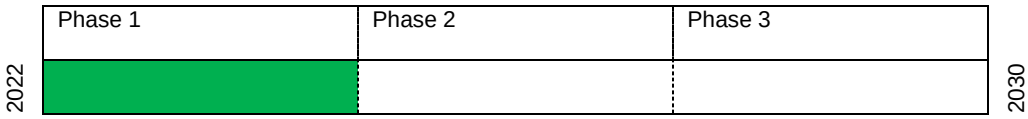
Theme	Barrier	Idea Source[180]
Governance	Lack of political will and shifting political agendas at the national and local level in Denmark make it problematic to implement 'tougher' policies to reduce carbon emissions.	S
Governance	Lack of a national coordinating strategy on public transport.	S
Clean vehicles	Some local regulations make it difficult to install charging infrastructure for EVs.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



No actions were identified in this category.

[180] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.

Instruments of implementation: subsidies, investments and taxes

Most of the measures suggested by citizens and the stakeholder fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source[181]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles	C&S
	Environmental impact analysis of EV production	At the same time, in response to their concerns that perhaps EVs are not as environmentally friendly as they are portrayed (particularly concerning battery production), citizens wanted more detailed research on this and, if necessary, measures to reduce this environmental impact.	C
	Clean fuels for freight and shipping	Without giving any details, the stakeholder suggested that this should be a priority for national and EU-level action.	S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public vehicles	C&S
	Free PT	Citizens did not agree unanimously on this point and strongly believed that the cost of using PT should be reduced, and some were in favour of eliminating fares.	C
Spatial planning and city development	More bike paths	It was noted that bike paths are increasingly congested, but at the same time, rural bike infrastructure can be lacking. More investment in these infrastructures was requested.	C
	Parking management	It was argued that reduced parking availability in urban areas would reduce driving into and within those areas.	C
	Park and ride	There was support for the park-and-ride sites along major roads to promote carpooling.	C
	15-minute city	Few details were provided, but the stakeholder felt that regulatory and investment policies should be changed to encourage the development of a city of short distances.	S
Pricing, taxes and charges for	Taxation on air transport	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	C

[181] C – Citizens; S – Expert stakeholders

transport	Taxation of heavily polluting industries	Citizens felt that major polluters (industries) should be taxed more heavily than citizens for their emissions, and the proceeds channelled back into low-emission transport. In this sense, there is support for the EGD proposal to extend the ETS to surface transport (fuel companies).	C
	Tax deduction for working from home	This was suggested as an alternative to the current Danish personal taxation policy, which gives tax breaks for commuting (more if you commute further).	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local, regional, national, and international levels. No specific examples were, however, provided of modes or areas of special priority.	C&S
	Car sharing schemes	Both citizens and stakeholders supported the further roll-out of these schemes to provide an alternative to car ownership.	C&S
Governance	Coordination of local and national government on transport	At the regional level, cooperation between municipalities in implementing sustainable urban mobility plans (SUMPs) (for example, the development of bicycle infrastructure connecting municipalities).	S

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus and thus have the longest implementation period. In addition, relatively few were identified. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Danish citizens and the stakeholder require policy changes and regulations to be implemented. Some of the proposals, depending on how they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea Source[182]
Clean	No action in this category	/	

[182] C – citizens; S – expert stakeholders

vehicles			
Better public transport	More integrated PT system	Better planning and coordination of public transport routes to provide an improved service in the countryside, in particular, was suggested by citizens, but the stakeholder was less in favour, pointing out that buses running at low occupancies are not very carbon friendly.	C
Spatial planning and city development	No action in this category	/	/
Pricing and charges for transport	Restraint of private motor vehicle traffic	Citizens favoured limiting car access to urban areas, especially city centres. They did not give more detail beyond this, so they did not specify, for example, whether they preferred a permit-based system or one based on charging.	C
Planning and operation of transport networks	No action in this category	/	/
Governance	No action in this category	/	/

Just Transition

There was very little discussion of the Just Transition by either citizens or the stakeholder. Citizens were concerned about what they perceived to be already high tax levels. The stakeholder was worried both by possible new taxes, and that and additional costs could hurt energy-intensive industries. Other than that, nothing was discussed.

6.7.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Denmark[183] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[184]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[183] A stakeholder meeting took place on 23 August 2022 and involved three local authorities.
[184] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

According to R*enovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?,* commissioned by the Renovate Europe campaign[185], Denmark's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €1.6bn. This can be broken down according to the European Green Deal (EGD) priorities as follows:

Increasing renewable energy in buildings	€87m is available for replacing oil and gas boilers with heat pumps or district heating systems. The target will be to replace 10 100 residential gas or oil boilers.
Improving energy efficiency in buildings	Target to renovate 6 125 private households and improve the energy rating for 40% of municipal and public buildings with a current 'D' to 'G' rating.
Tax system for energy products aligned to the green transition	Not mentioned
Provide funding for renovation of buildings	€160m provided for energy efficiency improvements; €76m for energy efficiency in households, and €42m for energy renovations in public buildings. However, the subsidy programme does not focus on whole building renovations with instead a focus on specific elements.
Renovate at least 3% of the total floor area of public buildings annually	In 2019 it was estimated that for residential buildings in Denmark, only 0.6% undertook medium retrofit, and there was a negligible amount of deep retrofit projects. In non-residential buildings, it was estimated that there were 1.2% medium renovations and 0.2% of deep renovations[186].
Create world-leading companies	The NRRP highlights that its construction projects potentially support SMEs and local jobs. However, it does not include additional funding or support for other upskilling or training programmes for building energy professionals.
Raise global ambition to tackle climate change	Not mentioned
Improve health and well-being	Not mentioned
Address inequality and energy poverty	Energy-poor or low-income households are not explicitly targeted.
Ensure a Just Transition that is fair, competitive, and green	Not mentioned
Mobilising industry for a clean and circular economy	Not mentioned

Denmark's NRRP focuses on renovating the existing building stock and replacing gas and oil boilers with heat pumps and district heating systems, which are considered renewable energy measures. There is no mention of other building-integrated renewables, such as solar photovoltaics (PV). As was highlighted in citizens' discussion, there had been

[185] Ivanova, V. et al. (2021), see note 30, page 61.
[186] European Commission (2019), see note 31, page 61.

subsidies that incentivised the adoption of solar PV in the past. However, these subsidies were abolished, leaving buildings/homeowners having to pay off their investments without any additional government incentive. This raised an issue in the trust of policies and incentive schemes coming from the government level. Further, national stakeholders mentioned a barrier relating to housing units where you cannot invest in solar PV as the occupants are not in control of where their electricity supply comes from.

Concerning energy efficiency measures, citizens felt that EU targets were not ambitious enough and that Denmark was leading the way beyond the EU; this was consolidated by the national stakeholders, who also mentioned many different local campaigns which were surpassing EU targets.

Citizens are aware that renovation is not an affordable affair. Both citizens and stakeholders mentioned the need for increased renovation subsidies and that most private homeowners could not afford to renovate without increased support. According to Denmark's Long-Term Renovation Strategy (LTRS), the estimated investment needed for renovation in 2021-2050 is between €5.5 and €10.2bn[1873]. This is significantly higher than the €160m allocated from the NRRP and would suggest that the majority of the financial burden for the renovation of buildings will fall to the private building owners and the public bodies finding their own funding sources. This is further consolidated by the fact that subsidy rates are set at 27.5% of estimated market prices. Citizens also felt that the authorities needed to provide more trust that renovation would result in the benefits that are promoted, e.g. lower energy cost, lower carbon emissions etc.

National stakeholders felt that the municipalities know the best about their territories and should be empowered to set up their own location-specific programmes with funding coming from national and EU sources. However, there is a barrier to municipalities leading the way with their own buildings due to a lack of funding, as outlined in the NRRP and confirmed by the national stakeholder and citizen reports.

Concerning the overall green transition, the national stakeholders mentioned that in the Planning Act institutional actors are responsible for the transition. This goes against the need for citizens to be part of the solution and the goal of the NRRP, which subsidises citizens to enable them to renovate their own buildings. Some of the messaging at the national level was found to be confusing.

There is no plan in the NRRP to measure the depth of renovation achieved, even though 30% primary energy savings are expected. Furthermore, energy labelling is only mandated for state-owned properties but not municipal or private buildings. Citizens also mentioned that the use of digital technologies should be promoted. Potentially, digital technologies could be used for measurement and verification.

National stakeholders mentioned the skills shortage and requirement for further training for energy and construction professionals, consolidated by the Renovate2Recover report on Denmark's NRRP.

Concerning the circular economy, citizens suggested that there should be subsidies for renovation if materials in the project come from recycled materials. The NRRP does not mention anything about mobilising industry for a clean and circular economy. Perhaps this

[187] See note 129, page 165.

would encourage more interaction with stakeholders if they knew the overall renovation was holistically sustainable.

General overview of actions per the theme

The following is a summary of the actions proposed by the national stakeholders during the workshops. There were no direct actions suggested by the citizens. Overall, there were not a significant number of actions suggested; the majority focused on energy efficiency improvements or how to increase funding for private home/building owners or how to create an increased skilled workforce.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	None mentioned
Improving energy efficiency in buildings	Change the narrative from 'Not in my backyard' to 'Yes in my backyard.' Citizen collaboration networks Regulate wording used in marketing campaigns related to sustainability to avoid greenwashing. Improved metrics for labelling and monitoring energy use One-stop shop Energy performance certificates for all Policies surrounding abandoned buildings
Tax system for energy products aligned to the green transition	None mentioned
Provide funding for renovation of buildings	State-supported loan scheme Financial lending schemes Guarantee loans
Renovate at least 3% of the total floor area of public buildings annually	None mentioned
Create world-leading companies	Training for artisans and SMEs ESCO Alternatives
Raise global ambition to tackle climate change	None mentioned
Improve health and well-being	None mentioned
Address inequality and energy poverty	None mentioned
Ensure a Just Transition that is fair, competitive and green	
Mobilising industry for a clean and circular economy	Subsidies for the use of recycled materials for renovation projects

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers mentioned explicitly by each of the citizen and stakeholder groupings

Theme	Barrier	Idea Source[188]
Increasing renewable energy in buildings	Those who may want to invest in solar PV may not have control of where they purchase their electricity supply.	S
	Lack of long-term commitment in subsidies for building integrated renewables such as solar PV. Provide assurance that subsidies will not be abolished.	C&S
Improving energy efficiency in buildings	Authorities need to provide trust in the benefit of renovation.	C
Tax system for energy products aligned to the green transition	Not mentioned	/
Provide funding for renovation of buildings	Renovation is not affordable.	C
Renovate at least 3% of the total floor area of public buildings annually	The municipalities have many buildings that they should renovate, but due to the construction ceiling ('Anlægsloftet'), they cannot be.	S
Create world-leading companies	Labour shortage; not enough people with the right profile and knowledge.	S
Raise global ambition to tackle climate change	Not mentioned	/
Improve health and well-being	Not mentioned	/
Address inequality and energy poverty	Energy labelling is only required for state-owned properties; municipal and privately owned buildings should have it too.	S
Ensure a Just Transition that is fair, competitive and green	The Planning Act stipulates that institutional actors are responsible for the transition. This goes against the need to involve citizens in the green transition and give them ownership and financial incentives.	S
Mobilising industry for a clean and circular economy	Not mentioned	/

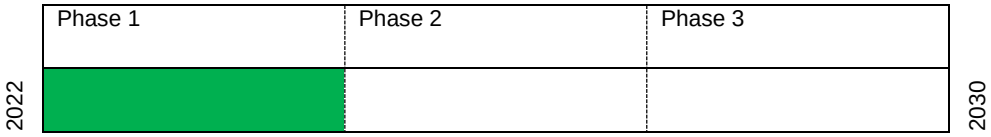
[188] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Theme	Action name	Description	Idea Source [189]
Improving energy efficiency in buildings	Change the narrative from 'Not in my back yard' to 'Yes in my back yard.'	The current public narrative on energy efficiency based on the negative consequences of not upgrading buildings needs to be shifted to a more positive one centred on the collective benefits of living a more sustainable and climate-conscious life. It is a joint effort. Introduce awareness-raising campaigns centred on the 'good climate life' instead of the harmful elements of not-retrofitting	S
	Citizen collaboration networks	Create experience exchange networks for energy-efficiency operators	S
	Regulate wording used in marketing campaigns related to sustainability to avoid greenwashing	Many marketers take advantage of the grey area surrounding sustainability and use vague, potentially misleading wording such as 'good for the environment', 'sustainable' or '99% biodegradable' to sell their products. This type of wording should be regulated and standardised.	C
Create world-leading companies	Training for artisans and SMEs	More training for artisans and SMEs. More dialogue with the educational institutions for the creation of suitable profiles.	S
	ESCO alternatives	Create an alternative to ESCO for the private sector	S

Main policy instruments of implementation: education and training

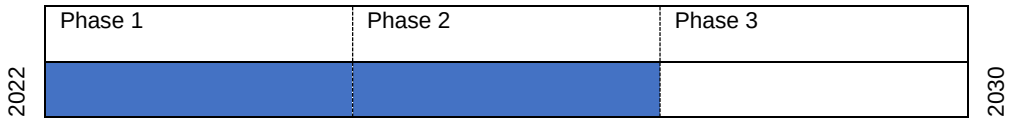
[189] C – Citizens; S – expert stakeholders

The following actions were determined as ‘quick wins’ (low impact, low difficulty) or ‘best bets’ (high impact, low difficulty) that could be carried out quickly and with minimal support. They focus on education campaigns and training for professionals.

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: energy labelling metrics, platforms to encourage the uptake of EGD, access to finance

The following actions would require grants, incentives, or government support but have also been identified by the national stakeholders to be best bets or quick wins. This point focused on metrics for energy labelling along with platforms to encourage and enable the adoption of the EGD, such as one-stop-shop platforms and greater access to finance.

Theme	Action name	Description	Idea Source [190]
Improving energy efficiency in buildings	Improved metrics for labelling and monitoring energy use	There is a need to follow up on the initiative for all buildings to be energy labelled and implement the cost-effective renovation proposals in the energy label.	S
	One-stop shop	The properties that are poorly running need process support. It is citizens and small businesses that need it. Advisors need to be there every step of the way. An EU one-stop shop for energy efficiency is required.	S
	Property owner incentives	Incentives for property owners to renovate leased buildings.	C
Provide funding for renovation of buildings	State-supported loan scheme	Introduce a state-supported loan scheme (which no longer depends on the municipalities’ financial capacity).	S
	Financial lending schemes	Banks and mortgage institutions would like to, as a new product, lend money for energy renovation to private homeowners. This is not currently possible.	S
	Guarantee loans	A solution to support a fairer transition for all would be for the governments to introduce guarantee loans (which would allow everyone to have the finances to renovate).	S

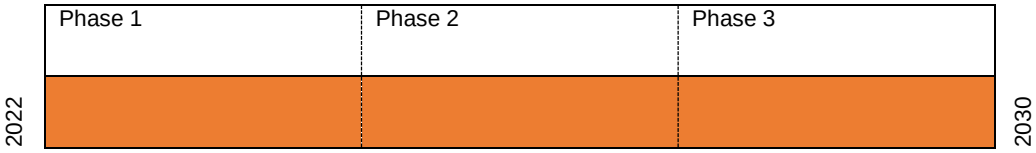
[190] C – Citizens; S – expert stakeholders

Mobilising industry for a clean and circular economy	Subsidies for the use of recycled materials for renovation projects	Provide subsidies if materials in a new project come from recycled materials.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

The following reactions were identified by national stakeholders that would involve policy implementation

Theme	Action name	Description	Initiator
Improving energy efficiency in buildings	Energy performance certificates for all	Ensure by law that all buildings perform with Energy label C before they can be rented out/sold.	S
	Policies surrounding abandoned buildings	Make it illegal to abandon an older building.	C

Just Transition

Citizens were wary that renovated buildings could result in increased rent from property owners and as such, this would impact poorer people living in older buildings. However, they also felt there should be incentives for property owners to undertake renovations.

Citizens agreed that renovation is not always possible depending on each situation, for example, a tenant or an owner in a multi-tenanted building. Stakeholders consolidated this view stating that renovation schemes should include people from all walks of life and living arrangements.

Due to a lack of skilled labour force, the higher quality experts tend to charge more. Therefore, only those on higher salaries can afford the expert level required for energy efficiency projects. These high-quality experts should be available to all.

Both citizens and stakeholders mentioned the need for an improved application process to access funding so that all diversities and demographics can understand them. Both also emphasised the need for awareness campaigns and education for all, not just the young.

National stakeholders also highlighted the need for fairness between municipalities, with all cities being able to access the same level of funding.

6.8 Estonia

6.8.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[191] in Estonia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[192]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Estonia's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Estonia did not point out any existing policies affecting the sustainable food system transition.

The overview of the national R&I food investment landscape carried out by the European Commission points to the following policy as a key piece of food policy in Estonia.

- The Estonian Rural Development Programmes governed national food policy from 2007-2020. These were financed primarily through the European Agricultural Fund for Rural Development (the EAFRD). The latest (2014-2020) Rural Development Plan (Ministry of Rural Affairs, 2014)193. The overall objective was to increase agriculture's competitiveness, including sustainable management of natural resources and improved climate mitigation and adaptation. Key priorities regarding food systems are: improving knowledge transfer and innovation between key stakeholders (Priority 1); promoting resource efficiency and supporting the transition to climate resilient food sector (Priority 5); and promoting social inclusion, poverty reduction and rural economic development (Priority 6).

General overview of actions per theme

The actions proposed by Estonian citizens and stakeholders on transforming the current food system in Estonia consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system. Generally, the proposed actions focus on implementation tools such as communication, education and interaction, which can take place immediately.

[191] A stakeholder meeting took place on 21 September 2022 and involved 1 research and academia community member, 2 national authorities and 1 civil society representative
[192] Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[193] Ministry of Rural Affairs (2014). Rural Development Plan 2014 -2020. Available at: https://www.agri.ee/en/estonian-rural-development-plan-erdp-2014-2020. Accessed on 14. November 2022.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production (5)	Awareness campaigns on the use of organic and community gardens between houses
	Introduction of circular economy principles in the food production process
	Incentives for farmers to take up organic farming
	Research on vertical farming
	Subsidies for the production of sustainable food products
Sustainable food processing, distribution & retail (7)	Food labels in original languages should be kept next to Estonian translations
	Awareness campaigns to promote consumer understanding of food labelling
	Subsidies for small shops with culinary products
	Incentivise supermarket chains to make local food more available on store shelves
	Research on the development of new types of reusable packaging
	Introduction of taxes on food packaging
	Legislation to keep food shops open six days a week
Sustainable food consumption (7)	Awareness campaigns on the environmental impact of food products
	Awareness campaigns on healthy diets for consumers
	Promotional campaigns on the consumption of local food products
	Promotion of direct food sales from farmers to consumers
	Educational campaigns for the general population on food systems to enable them to make more conscious consumer decisions
	Subsidies for schools to introduce sustainable and healthy food meals and connect them with food education
	Introduction of additional taxes on meat and other foods with a high carbon footprint
Food loss and waste reduction (5)	Establishment of cooperation between caterers and youth centres, and social restaurants to give leftover food
	Establishment of a database on food waste sources
	Food labels should emphasise key information on food waste
	Development of a web platform for reducing food waste
	Promotion of consuming food products with aesthetic defects
Ensuring food security (0)	
Combating food fraud (0)	
Across the entire food cycle (0)	

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

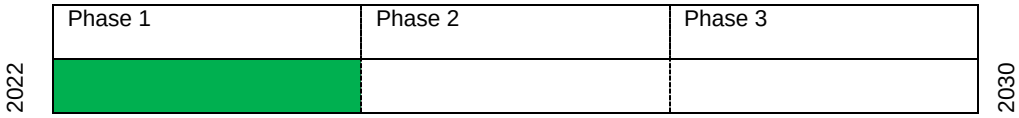
Theme	Barrier	Idea Source[194]
Sustainable food processing, distribution & retail	There are too many labels on food products, confusing consumers.	S
	Stores often present deep-frozen food as fresh.	C
Sustainable food consumption	'Consumer traps' and misleading marketing (e.g. advertisements for unhealthy food or meat at low prices) are hindering sustainable food consumption.	C
	Low meat taxes make it unrealistically cheap compared to its environmental effect.	C
	Stores do not take an active role in presenting healthy food products but are instead focused on profit-driving products.	C
Across the entire food cycle	There is a general lack of campaigns to promote a healthy diet, reduce food waste, and raise consumer awareness.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Estonia. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as awareness campaigns on food labels in original languages, are easy to implement (low-hanging fruit). However, they also have a limited potential to contribute to the food system transformation. Others, such as the extension of neighbourhood gardens, may be more difficult to implement successfully but can produce knock-on effects in changing the consumption patterns of citizens.

[194] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [195]
Sustainable food production	Awareness campaigns on the use of shared organic and community gardens	Awareness campaigns should be organised on the benefits of maintaining existing and starting new vegetable gardens.	C
	Introduction of circular economy principles in the food production process	Circular principles in food production should be promoted by facilitating cooperation between the different food stakeholders.	C
Sustainable food processing, distribution & retail	Food labels in original languages should be kept next to Estonian translations	Food product labels should keep the original language labels visible since the Estonian translations are mostly superimposed on the original text and often lack detailed information about the original.	C
	Awareness campaigns to promote consumer understanding of food labelling	Awareness campaigns should be organised on the importance of understanding food labelling. They should be based on examples and stories to make them more engaging.	C
Sustainable food consumption	Awareness campaigns on the environmental impact of food products	Awareness campaigns should be organised for the general population on the environmental effects of food products (e.g. food imported from large distances).	C
	Awareness campaigns on healthy diets for consumers.	Awareness campaigns should be organised on the importance of maintaining healthy diets to deal with growing obesity in the country.	S
	Promotional campaigns on the consumption of local food products	Campaigns should be organised to promote the consumption of locally produced and sustainable food to reduce the carbon effects of food transport.	C
	Promotion of direct food sales from farmers to consumers	Farmers should have more opportunities to sell their products to consumers on markets directly, on their farms, and at events.	C
	Educational campaigns for the general population on food systems to enable them to make more conscious consumer decisions	Educational campaigns should be organised on the food system to promote more informed consumer choices regarding food products.	C
Food loss and waste reduction	Establishment of cooperation between caterers and youth centres, and social restaurants to give leftover food	Channels of cooperation should be established between caterers and youth centres, social restaurants, and other organisations. This would allow the caterers to donate leftover food more effectively.	C

[195] C – Citizens; S – expert stakeholders

	Establishment of a database on food waste sources	Data should be collected on a national scale to understand where the most food waste is generated and gain insight into how to address it.	S
	Food labels should emphasise key information on food waste	Food labels should emphasise precise expiration dates, portions, and storage instructions to help consumers reduce food waste.	C
	Development of a web platform for reducing food waste	A web platform should be developed to facilitate the exchange of good practices and promote awareness of food waste reduction.	S
	Promotion of consuming food products with aesthetic defects	Promotion of food produced with aesthetic defects through adverts to reduce food waste.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.

2022	Phase 1	Phase 2	Phase 3	2030

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions deemed unaffordable and unlikely to occur without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through incentives for farmers and local food producers and support for small-scale food retailers. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[196]
Sustainable food production	Incentives for farmers to take up organic farming	Farmers should be financially incentivised to adopt organic farming methods to increase the total amount of land used for organic farming in Estonia.	S
	Research on vertical farming	Research investments should be made in vertical farming projects.	C
	Subsidies for the production of sustainable food products	Subsidies should be provided to produce sustainable food products, ultimately making them more affordable for consumers.	C

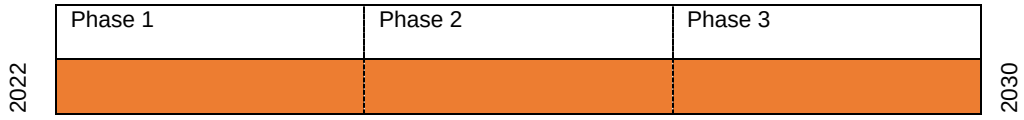
[196] C – Citizens; S – expert stakeholders

Sustainable food processing, distribution & retail	Incentivise supermarket chains to make local food more available on store shelves	Incentives should be provided for supermarkets to carry local products on their shelves to reduce the carbon emissions associated with long-distance food transport.	S
	Subsidies for small shops with culinary products	Small shops with culinary and local food products should be financially supported.	S
	Research on the development of new types of reusable packaging	Investments should be made in research on new types of reusable food packaging to enable more circular food retail processes.	C
Sustainable food consumption	Subsidies for schools to introduce sustainable and healthy food meals and connect them with food education.	Schools should receive subsidies to promote local, healthy, and sustainable food in their meals and education for students.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulation of food markets and the introduction of new taxes.

Theme	Action name	Description	Idea Source [197]
Sustainable food processing, distribution & retail	Introduction of taxes on food packaging	New taxes should be introduced on excessive food packaging to reduce the end costs for consumers and the environmental benefits.	C
	Legislation to keep food shops open six days a week	Food shops should work up to six days a week to make healthy food more accessible.	C
Sustainable food consumption	Introduction of additional taxes on meat and other foods with a high carbon footprint	New taxes should be introduced on the consumption of carbon-intensive foods such as meat to reduce consumption.	S

[197] C – Citizens; S – expert stakeholders

Just Transition

The sustainable food system transition comes with the danger of increased prices of sustainable and healthy food products. Without compensating financial measures, healthy and sustainable food could become too unaffordable to most socio-economically vulnerable groups, resulting in them getting left behind in the transformation of food systems.

6.8.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[198] in Estonia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[199]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

In 2019, transport represented 17% of the average 8.4 tonnes of CO2 emitted annually per capita in Estonia. Absolute and percentage emissions from transport have risen over the period 2005-2019, whilst total emissions from all sectors have fallen by about 20%[200]. In terms of the national policy context, in order to achieve carbon reduction in transport, Estonia was, prior to the EGD, already:

- Developing a hydrogen roadmap to explore how to use this technology in the future.
- Introducing regulations banning diesel cars.
- Providing support for electric cars and developing a charging installation network all over Estonia.
- Providing support for private sector initiatives, such as BOLT (scooter sharing) and services for car-sharing and e-scooters.
- Implementing a bicycle usage allowance. In addition, Estonia is spending EUR 96m of Recovery Funds on public transport service and ticketing integration in the Tallinn capital region, new rail and tram infrastructure, and improved walking and cycling infrastructure[201].

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[198] A stakeholder meeting took place on 21 September 2022 and involved one national authority
[199] Prof Tom Rye, Molde University College, Norway.
[200] European Parliament (2021). Climate Action in Estonia: latest State of Play. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690684/EPRS_BRI(2021)690684_EN.pdf (Accessed on 10 january 2023).
[201] European Commission (2022). Estonia's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/estonias-recovery-and-resilience-plan_en (Accessed on 16 November 2022).

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The workshops with citizens and stakeholders were unusual in that there was very little discussion of one key pillar of the EGD, electric vehicle charging infrastructure and EV purchase and use incentives. Otherwise, the stakeholder and citizens were supportive of national policy to reduce carbon emissions from transport. In more detail, the workshops revealed the following:

Citizens strongly believed that public transport should be better integrated, with more opportunities for easy interchange and through ticketing, with information to support that. Cycling infrastructure should be improved to make it a safe and easy alternative. Restrictions on using cars in urban areas and city centres were discussed positively, as was the 15-minute city, to reduce travel distances. They also wished to see encouragement for other alternative modes of transport in urban areas, such as car-sharing and electric scooters. They were concerned about problems of accessibility in rural areas for those without cars.

The ***stakeholder*** generally agreed with the citizens' suggestions but also had several more strategic recommendations. He spoke in favour of traffic restraint measures in cities, additional taxation to disincentivise the use of polluting vehicles, and measures to make alternative modes of transport more attractive.

General overview of actions per theme

The national stakeholder did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholder, and the experts' opinions.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**	**Idea source[202]**
Clean vehicles	Energy needs planning	S
	More charging infrastructure for EVs	S
Better public transport	Better and cleaner PT vehicles	C&S
	PT integration	C
Spatial planning and city development	More and improved bike paths	C&S
	15-minute city	C
Pricing and charges for transport	Taxation of polluting vehicles	S
	Restraint of private motor vehicle traffic	C&S
Planning and operation of transport networks	PT network improvement	C&S
	Car- and e-scooter-sharing systems	S
Governance	Coordination between levels of government on public transport	S
	Development and encouragement of SUMPs	S
	Permitting more working from home	S
Greening transport in	Education and training of relevant staff	S

[202] C – Citizens; S – expert stakeholders

general	Exchange of experience with other Member States	S
	Capacity building in public administrations	S
	Public awareness raising about green mobility	S

Barriers to each theme

Citizens did not mention barriers to EGD implementation. The stakeholder, however, made several points. These do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, he did not appear to be aware of proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nor did he mention specific proposals in the Urban Mobility Framework (COM(2021) 811 final); nor those in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholder believes to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea Source[203]
Clean vehicles	No barrier identified	/
Better public transport	Poor integration of local and national public transport systems.	S
Spatial planning and city development	Spatial planning and locational decisions (for example, of health facilities) that do not consider transport impacts.	S
	National policy, for example, on road construction, is running against the imperative to reduce private vehicle use.	S
Pricing and charges for transport	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport (including fear of experimenting, for example, with new street layouts).	S
Planning and operation of transport networks	No barrier identified.]	/
Governance	Lack of clear guidance on how to implement European goals on the local level.	

[203] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Estonia. These mainly comprise of communication and education activities. All these actions can be implemented straight away.

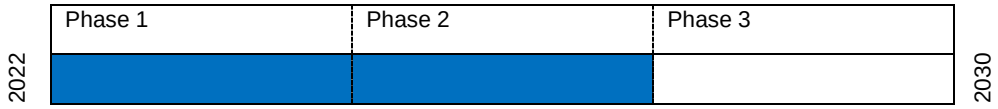
Theme	Action name	Description	Idea source[204]
Greening transport in general	Education and training of relevant staff	Related to the point on capacity building, the stakeholder identified a need to train staff in new ways of working and thinking to support EGD delivery. He noted, for example, that it is typical to use data and design standards that are 20 years old or more.	S
	Exchange of experience with other Member States	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S
	Capacity building in public administrations	The stakeholder mentioned several times that public administrations, especially local ones, lack the knowledge on sustainable mobility. This could be addressed with, for example, a panel of experts to provide them with tailored on-site advice and support; and also advice on to assist public administration in acquiring the skills and knowledge to be more capable of delivering EGD objectives.	S
	Public awareness raising about green mobility	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution. Encouraging people to eliminate or shorten trips, substitute shorter trips for longer ones, combine trips, share vehicles and use e-commerce and e-working more.	S

[204] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

Theme	Action name	Description	Idea source[205]
Clean vehicles	EV charging infrastructure	No details were provided, but an expansion of the existing infrastructure was judged to be necessary.	C&S
Better public transport	Better and cleaner PT vehicles	Investing in new, electric/hydrogen and more comfortable public transport vehicles.	C&S
Spatial planning and city development	More and safer bike paths	Better bike and scooter infrastructure was positive for both rural and urban areas. Special measures such as electric heating to melt snow in winter were suggested. This investment would complement private sector scooter and bike hire schemes.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local, regional and national levels.	
	Car- and e-scooter-sharing systems	These were spoken of warmly by stakeholders and citizens and noted as an opportunity for private and public sector investment.	C&S
Governance	No measures suggested	/	

[205] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Estonian citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may not require regulation in some circumstances, but they are included here for completeness.

Theme	Action name	Description	Idea source[206]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles. In addition, the stakeholder was concerned about the need to phase out coal-fired power stations and develop other energy forms, such as hydrogen.	S
Better public transport	PT integration	Better planning and coordination of public transport routes are required. This was identified as a considerable deficiency by citizens in particular. They felt this was particularly necessary if accessibility is guaranteed in rural areas in the green transition.	C&S
Spatial planning and city development	15-minute city	According to citizens, all the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrain personal car use, such as increased taxation and/or pricing. However, the stakeholder did not provide further details.	S
Planning and operation of transport networks	No suggestions in this category		S
Governance	Coordination between levels of government on public transport	The stakeholder noted that this is a barrier to improving public transport. Local public transport does not connect to regional or national-level public transport. The rail system	S

[206] C – Citizens; S – expert stakeholders

		operates independently of other public transport modes.	
	Development and encouragement of SUMPs	The stakeholder mentioned a need to develop more sustainable transport strategies locally but did not provide more details.	S
	Permitting more working from home	The stakeholder again supported this idea but gave few details of how it might be implemented.	S

Just Transition

One stakeholder expressed some concern about the equity impacts of a mobility transition if it leaves those in rural areas with higher costs and fewer transport options. Besides this, his main concern was equity between the EU and low and middle-income countries, where much carbon-intensive production is focused. Amongst citizens, the Just Transition was not mentioned.

6.8.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens or stakeholders in Estonia[207] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[208]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Estonia's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Estonia in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[209], was not available for Estonia. As a result, the following table compares the priorities of the EGD with Estonia's national energy and climate plan (NECP) with information taken from the

[207] A stakeholder meeting took place on 21 September 2022 involving one representative from the national government, one representative from the local government and one representative from academia.
[208] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[209] Ivanova, V. et al. (2021), see note 30, page 61.

Commission staff working document assessing the final NECP[210], as well as the Estonia's Long Term Renovation Strategy (LTRS)[211].

Increasing renewable energy in buildings	Estonia's renewable energy contribution to the 2030 EU-level target is 42% of gross final energy consumption in 2030 which is considered as sufficiently ambitious.
Improving energy efficiency in buildings	For energy efficiency, Estonia's contributions to the 2030 EU target are of modest ambition for primary energy consumption, amounting to 5.4 Mtoe, and of very low ambition for final energy consumption, amounting to 2.9 Mtoe. The plan does not indicate how the energy efficiency first principle has been considered.
Tax system for energy products aligned to the green transition	According to the LTRS, natural persons may deduct from their income the interest on a loan or a lease taken out for the purposes of insulating a residential building or apartment used for their own housing. There are also tax incentives for business investing in renovation of their buildings.
Provide funding for renovation of buildings	The estimated amount of investment for meeting Estonia's energy and climate goals between 2021 and 2030 amounts to public expenditure of around €347m in the energy sector. Just over €1m is allocated for the renovation of the building stock. According to Estonia's LTRS, support ranging from 15% to 50% of the renovation works of apartment buildings is provided depending on the level of complexity of the project. There is also a loan guarantee scheme for apartment buildings. For residential buildings, there is support available up to €15,000 but it cannot exceed 30% of the total eligible costs.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.7% of residential sector renovations were medium depth and 0.2% deep renovations. For non-residential there was 0.6% medium, and 0.2% deep energy savings[212]. The LTRS outlines that local authorities or public sector buildings are obligated to reconstruct 3% of the surface area of their buildings each year, however the level of funding available to achieve this goal is not mentioned. €12.1m has also been allocated to the funding of preschool buildings and €10.4m for welfare institutions.
Create world-leading companies	National objectives and funding targets related to research, innovation and competitiveness are not set specifically for the energy sector. The NECP mentions specific initiatives to boost start-ups and bring to market new products, services and technologies that reduce

[210] European Commission (2022). Assessment of the final national energy and climate plan for Estonia. Available at: https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_estonia_en_0.pdf (Accessed on 16 November 2022).
[211] See note 129, page 165.
[212] European Commission (2019), see note 31, page 61.

	greenhouse gas emissions.
Raise global ambition to tackle climate change	Plans for society, awareness and cooperation are mentioned.
Improve health and well-being	The plan provides information on the interactions with air quality and air emissions policy by presenting the projected emissions of the five air pollutants regulated by the EU National Emission Ceilings Directive in the main emitting sectors.
Address inequality and energy poverty	On energy poverty, Estonia reports the number of households affected, recognising the relation between energy poverty and energy efficiency in buildings, and refers to ongoing preparatory work to better define objectives and corresponding policies and measures.
Ensure a Just Transition that is fair, competitive, and green	The final plan does not sufficiently consider the just and fair transition aspects, and more information would be needed on the social, employment and skills impacts of the transition to a carbon neutral economy.
Mobilising industry for a clean and circular economy	There is mention that Estonia's circular economy strategy and action plan will be completed by the end of 2021.

As a general statement, the national stakeholders felt that 2030 was a too ambitious target to achieve the goals set out, particularly due to the conservative nature of the construction sector. This is perhaps something that could be addressed at the EU level. They mentioned that many renovation activities had already been implemented and great attention has been given to education and upskilling, however, broader communication and dissemination of these activities would help accelerate and maximise their impact. Some of the existing policies include:

- Subsidies for boilers or other energy-efficient heating systems are provided by KIK and KredEx[213];
- There are subsidies available for those on low incomes based on their financial needs and eligibility criteria;
- There is a State Shared Service Centre for the renovation of hospitals and municipal;
- There is an Environmental Board that organises training and raises awareness on energy consumption.

Increasing renewable energy in buildings: Citizens mentioned the need for government subsidies for renewable energy schemes to encourage the promotion and adoption of renewable technologies in buildings.

[213] Respectively the Keskkonnainvesteeringute keskus (KIK), Estonian Environmental Investment Centre, and KredEX, a foundation set up by the Ministry of Economic Affairs and Communications in 2001 which offers private individuals grants for purchasing dwellings and improving their energy efficiency.

Improving energy efficiency in buildings: Citizens mentioned that there is difficulty finding information with respect to building energy renovation and renewable schemes. They also felt there should be a focus on insulating and optimisation of buildings. National stakeholders mentioned a number of schemes that exist and the suggestion of a unified portal where the information on all such initiatives is shared. This could potentially help citizens find the information they need.

Provide funding for renovation of buildings: Citizens mentioned that grant applications need to be simplified. They suggested a one-stop-shop approach where all information is available on a single platform nationally. This could be coupled with the idea from the national stakeholders on a unified platform with information on all energy efficiency initiatives.

Renovate at least 3% of the total floor area of public buildings annually: The national stakeholders and citizens both agreed that public buildings should lead the way. The national stakeholders felt this was already happening and gave an example of 'Superministry' building which complies with the latest energy efficiency standards. It was not clear, however, if this was only for new buildings or also for renovation projects and a good example of how public buildings undergo renovation.

Create world-leading companies: National stakeholders mentioned several existing initiatives that are in place to create a skilled workforce for the green transition. These include training programmes on energy-efficient construction and applied research projects focussing on the solar photovoltaic and hydrogen energy sectors. There are also educational courses for the education of private builders and accelerator programmes for private companies funded through Climate-KIC. They mentioned that an increase in these programmes would aid the green transition.

Raise global ambition to tackle climate change: The national stakeholders mentioned a number of initiatives that were already in place with respect to the promotion of the green transition. This included:

- The Green Tiger Academy, which supports companies towards environmentally conscious development in cooperation with universities;
- KOV's (Local government service offices - Kohalik omavalitsus) quarterly coffee mornings;
- Research conducted by the State Chancellery and Environmental Agency on the economic impact of the green revolution.

They felt, however that there was a need for more events to raise awareness.

Improve health and well-being: Citizens mentioned that energy efficiency should be connected to personal measures, for example, link to improved air quality.

Mobilising industry for a clean and circular economy: National stakeholders mentioned the need for sustainable materials such as wood to be promoted for construction projects.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption

of the EGD. There is a wide variety of actions suggested which have come from both citizens and national stakeholders, however a number of the EGD themes have not been addressed, i.e. tax system for energy products aligned to the green transition, addressing inequality and energy poverty, ensuring a Just Transition and mobilising industry for a clean and circular economy.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Subsidies for renewables Long-term commitment from government on renewable energy plans
Improving energy efficiency in buildings	One-stop shop Solutions for optimisation of internal heating temperatures Simplify the process for sustainable energy building programmes Ensure that 22% of all buildings comply with energy efficiency standards Demolish buildings that cannot be renovated to the required standard
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Advance existing initiatives for energy efficient buildings Make funding schemes more accessible for applicants
Renovate at least 3% of the total floor area of public buildings annually	Use public buildings to show examples of renovation Increase the framework for the renovation of public buildings
Create world-leading companies	Create mechanisms for regular updates of professional standards Enable innovation of new materials and technologies through investments in applied research
Raise global ambition to tackle climate change	Create a media plan to share success stories of successful energy efficiency projects Involve young speakers and influencers in social media campaigns Organise training events for building owners and occupants to understand how they can save energy Develop existing training programmes further to accelerate the upskilling of professionals Develop new programmes for the education of private builders
Improve health and well-being	Create education and awareness campaigns on the benefits of energy efficiency measures in relation to improved air quality
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source**[214]
Increasing renewable energy in buildings	Obtaining building permissions for installing solar panels is a lengthy process requiring up to one to two years.	S
Improving energy efficiency in buildings	It is difficult to find information with respect to building energy renovation and renewables.	C
	The frequent changes in the public sector organisation make implementing renovation programmes more complicated.	S
	Concerns are raised about the long-term obligations to maintain the devices for at least five years after the installation.	S
	The members of larger apartment cooperatives cannot apply for renovation support when most residents are not in favour.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Grant applications need to be simplified as applications to renovation funding programmes is considered a complex process.	C&S
Renovate at least 3% of the total floor area of public buildings annually	Public tendering has become challenging for 'green' construction.	S
	Public tenders have been stopped because of the instability and prices increase due to inflation.	S
Create world-leading companies	The lack of raw materials and their increasing price resulting from the war in Ukraine has caused delays in the renovation and construction schedule. Organising procurement has become challenging because of the lack of providers.	S
Raise global ambition to tackle climate change	No barriers mentioned	/
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	There is a lack of information about the investments made to support people with lower income, lower education, and the older generation.	S
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

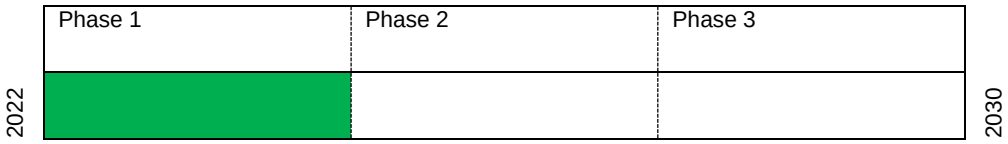
[214] C – Citizens; S – Expert Stakeholders

Categorized actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. These focused largely on education and awareness-raising campaigns as well as training programmes. Other suggestions included increased subsidies and advancements on existing initiatives and the introduction of a one-stop-shop platform.

Theme	**Action name**	**Description**	**Idea Source** [215]
Increasing renewable energy in buildings	Subsidies for renewables	There should be subsidies available for renewable energy technologies.	C
Improving energy efficiency in buildings	One-stop shop	There should be a national information portal where all information relating to renovation and renewables should be in one place. This should also increase the coordination activities to maintain the focus of the energy efficiency initiatives.	C&S
Provide funding for renovation of buildings	Advance existing initiatives for energy efficient buildings	KredEx (Enterprise Estonia) initiatives for renovating energy-efficient buildings will be further developed.	S
Renovate at least 3% of the total floor area of public buildings annually	Use public buildings to show examples of renovation	Public buildings should be exemplary in the field of energy efficiency, and all new public buildings have already been built following the latest energy efficiency requirements. This should now be continued for renovation projects and could include, for example, the promotion of State Shared Services Centre Activities for renovating hospitals and local municipalities building is ongoing.	S

[215] C – Citizens; S – Expert Stakeholders

Create world-leading companies	Create mechanisms for regular updates of professional standards	Professional standards should be updated as necessary.	S
Raise global ambition to tackle climate change	Create a media plan to share success stories of successful energy efficiency projects	A comprehensive media plan should be created to share success stories about energy savings through radio shows on Radio KuKu[216], TV shows on energy efficiency, and the Green Turn Podcast ('Novaator').	S
	Involve young speakers and influencers in social media campaigns	Young speakers and influencers should address energy efficiency issues on social media.	S
	Organise training events for building owners and occupants to understand how they can save energy	The Environmental Agency should organise training events on how to save energy.	S
	Develop existing training programmes further to accelerate the upskilling of professionals	Further development of existing training programmes on energy-efficient construction at TalTech (master's degree in heating energy, master's degree in the green economy, master's degree in structures engineering, master's degree in zero-energy buildings) and applied research projects at TalTech as well as the University of Tartu focusing on photovoltaic and hydrogen energy fields.	S
Improve health and well-being	Create education and awareness campaigns on the benefits of energy efficiency measures in relation to improved air quality	Promote energy efficiency measures with respect to improved air quality.	C

[216] Radio Kuku is an Estonian radio station. It was the first politically independent privately owned radio station in post-occupation Estonia, established in 1992 by a media businessman and later politician Rein Lang and a founder of the first politically independent newspaper Eesti Ekspress, Hans H. Luik.

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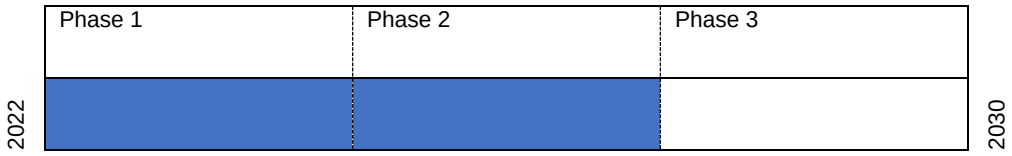
Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government support. These advance the previous suggestions for short-term actions, building on training programmes and simplifying the process for access to funding further, as well as suggestions for long-term commitments for renewable energy and new solutions for optimisation of heating in buildings.

Theme	Action name	Description	Idea Source [217]
Increasing renewable energy in buildings	Long-term commitment from government on renewable energy plans	Government should commit to long-term renewable energy plans.	S
Improving energy efficiency in buildings	Solutions for optimisation of internal heating temperatures	Housing heating infrastructures should allow easy internal temperature regulation.	S
	Simplify the process for sustainable energy building programmes	Bureaucracy and administrative processes for sustainable energy-building programmes should be simplified.	S
Provide funding for renovation of buildings	Make funding schemes more accessible for applicants	Funding schemes should be more accessible for applicants, and local governments should receive support in managing renovation programmes.	S
Renovate at least 3% of the total floor area of public buildings annually	Increase the framework for the renovation of public buildings	More attention should be paid to renovating buildings belonging to national heritage sites, which require specific and non-conventional interventions. So far, public support has been provided for the renovation of manor schools, but a systemic solution is expected to be found at the national level.	S

[217] C – Citizens; S – Expert Stakeholders

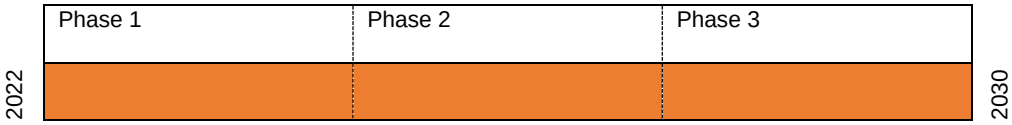
Raise global ambition to tackle climate change	Develop new programmes for the education of private builders	Development of new micro degree & nano degree programmes for the education of private builders – e.g. Viljandi Culture College education programme for heritage construction.	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. There were only a few actions suggested for this timeline. It is not clear if the suggestion that 22% of buildings should comply with the energy efficiency standards by 2022 has been suggested as the national stakeholders feel that the current targets are too ambitious or whether this goal will help meet the EGD targets. In addition, suggestions to demolish buildings that cannot be renovated may go against a circular economy approach and as such, perhaps other solutions to this barrier should be investigated.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source [218]
Improving energy efficiency in buildings	Ensure that 22% of all buildings comply with energy efficiency standards	22% of all buildings should comply with energy efficiency standards according to the EU directives.	S
	Demolish buildings that cannot be renovated to the required standard	Over 5000 buildings built during the 1950s that cannot be renovated up to the energy-efficient regulation standards should be demolished. It will be necessary to change the current legislation to demolish older buildings.	S
Create world-leading companies	Enable innovation of new materials and technologies through investments in applied research	New materials and technologies should be adopted in the building sector due to significant investments in applied research.	S

[218] C – Citizens; S – Expert Stakeholders

Just Transition

The citizens' discussions highlighted inequalities in the provision of financial support, however, the national stakeholders mentioned that several concerns of the citizens, for example renovation support for smaller houses and renovation support for disadvantaged areas had already been implemented, suggesting further work on education and awareness campaigns is needed.

National stakeholders felt that other suggestions from the citizens including greater subsidies for those on lower incomes, renovation subsidies for tenants or 100% financial support for renovation, could not be implemented due to administration complexity. This should be investigated further to identify how these administration barriers could be removed to ensure a Just Transition.

6.9 Finland

6.9.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[219] in Finland that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[220]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Finland's policies on the EGD and Citizen and National Stakeholder Reports

The following policies were pointed out by the participants of the stakeholder meeting in Finland. It is not an exhaustive list but rather serves as an indication of the more visible policies to the stakeholders present.

- The stakeholders pointed out the 'Ilmastoruokaohjelma'[221] (Climate Friendly Food Programme) (Government of Finland, 2022) and the 'Maatalouden ilmastotiekartta' (Agricultural Roadmap) (Government of Finland, 2020)[222] and voluntary measures and commitments are the most relevant existing policies affecting the transformation of the food system.

[219] A stakeholder meeting took place on 24 August 2022 and involved four research and education community members and one national authority.
[220] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[221] Government of Finland (2022). Climate Friendly Food Programme. Available at https://mmm.fi/en/climate-friendlyfoodprogramme (Accessed on 10 November 2022).
[222] Government of Finland (2020). Agricultural Roadmap. Available at https://www.mtk.fi/ilmastotiekartta (Accessed on 10 November 2022).

- Other relevant regulations mentioned by the stakeholders were: the regulations governing food procurement for school meals, the Nordic-wide nutrition recommendations, and the waste directives.

Additionally, the overview of the national R&I food investment landscape carried out by the European Commission points to the following strategy as a critical piece of food policy in Finland.

- The Ministry of Agriculture and Forestry published a report on food policy in 2017 called Finland 2030, Finland Feeds Us and the World, outlining the vision for 2030 and setting out key priorities and policy objectives. These include: a focus on food and public health, circularity and resource efficiency, the adaptation of the food system to climate change, and the importance of consumer communities to continually change the food culture (Government of Finland, 2017)[223].

General overview of actions per theme

The actions proposed by the Finnish citizens and stakeholders on transforming the current food system in Finland consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production. Generally, the proposed actions mainly focus on implementation tools such as subsidies and financial incentives.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (9)	Promoting urban farming
	Awareness campaigns on food production in Finland
	Incentives for renewable energy and energy efficiency in food production
	Research on vertical and indoor farming
	Technical support for local food producers to place their produce on the market
	Support for the development of cell culture technologies in food production
	Support for diversification of crops grown on individual farms
	Support for urban farming by municipal regulation
	Reduction in the production of red meat
Sustainable food processing, distribution & retail (4)	Assistance for small-scale farmers to distribute their products
	Introduction of plant-based proteins appropriately processed for large kitchens and

[223] Government of Finland (2017). Food 2030. Finland Feeds Us and the World. Available at: https://mmm.fi/documents/1410837/1923148/lopullinen03032017ruoka2030_en.pdf/d7e44e69-7993-4d47-a5ba-58c393bbac28 (Accessed on 10 November 2022).

	the food industry
	Shortening the supply chain
	Developing more understandable food labels
Sustainable food consumption (2)	Support for local food consumption
	Changing food culture
Food loss and waste reduction (1)	Use of big data to guide production quantities of food
Ensuring food security (0)	
Combating food fraud (0)	
Across the entire food cycle (5)	Social dialogue around food production
	Research funds on enabling food system transition
	Support for Finnish involvement in international research projects on food system transformation
	Make decision-making processes on food policy more inclusive
	Dialogue-informed legislation around the preservation and use of peatlands

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source**[224]
Sustainable food production	Numerical targets currently set out by the EU can cause unintended environmental harm. For instance, the objective of the 30% conservation of the land encourages producers to use the rest of the land more intensively.	C
	Significant regional differences in food production make it challenging to apply agricultural subsidies and rules to the whole country under the current CAP framework.	C
	CAP is a barrier to sustainable food system transformation.	S
Sustainable food processing, distribution & retail	The current legislation inhibits the introduction of new innovative foods into the market, even when they have the potential to provide sustainable solutions.	S
	VAT directives can be complicated for small-scale farmers to follow.	S
	Packaging labels on food products are unclear for many people.	S
	Two big supermarket chains dominate the food offer in Finland, creating a de facto duopoly position.	C
Sustainable food consumption	Inflation drives the prices of all food products, making proper nutrition difficult for many people.	S
Across the entire food cycle	The existing political dynamics in Finland make adopting more radical policies to support food system transformation, such as taxation tools, challenging.	C
	Insufficient funds are allocated for research on food systems.	C

[224] C – Citizens; S – expert stakeholders

	The free market is currently valued above food sustainability by the EU and Finnish governments, and the two often are not compatible in practice.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can primarily be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Finland. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All these actions can be implemented straight away. Some, such as awareness campaigns on food production in Finland, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as making the policy-making processes more inclusive by engaging diverse food stakeholders, may be more difficult to implement successfully but can produce knock-on effects in getting a broad societal consensus on food policy.

Theme	Action name	Description	Idea Source [225]
Sustainable food production	Promoting urban farming	Promotional campaigns on the benefits of urban farming.	C
	Awareness campaigns on food production in Finland	Awareness campaigns should be organised to help citizens understand how food production works in Finland.	C
Sustainable food processing, distribution & retail	Assistance for small-scale farmers to distribute their products	Mediators should be organised to help local, and small-scale farmers sell their produce.	C
Sustainable food consumption	Support for local food consumption	Promotional campaigns should be organised on the importance of local food consumption.	C
	Changing food culture	Awareness campaigns should be organised on the importance of changing food habits to be healthier and more sustainable (e.g., a campaign on eating less red meat).	C

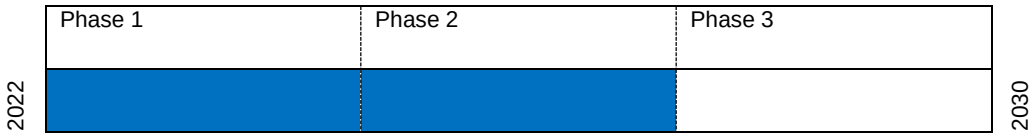
[225] C – Citizens; S – expert stakeholders

Across the entire food cycle	Social dialogue around food production	When making new food products, there should be a social dialogue between the government, food producers and distributors, and workers.	C
	Make decision-making processes on food policy more inclusive	Decision-making on food policy should become more inclusive, including food producers, NGOs and consumer organisations.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mainly affect increasing the sustainability of food production through means such as subsidies for renewable energy use, investments in technology use in food systems, and investing in research on all components of food system transformation. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [226]
Sustainable food production	Incentives for renewable energy and energy efficiency in food production	Incentives should be provided for food producers to switch to renewable energy sources and make food production more energy efficient overall.	C
	Research on vertical and indoor farming	More research should be done on the potential of vertical and indoor farming. The Finnish Environment Institute should develop new methods and make them available.	C&S
	Technical support for local food producers to place their produce on the market	Logistical and negotiation support for small-scale local producers to place their products on the market (e.g. via supermarkets, food markets, fairs etc.)	C
	Support for the development of cell culture technologies in food production	More research should be done into the applications of cell culture technology in the food industry.	C&S

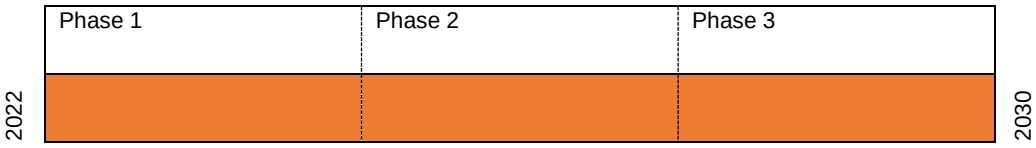
[226] C – Citizens; S – expert stakeholders

	Support for diversification of crops grown on individual farms	Incentives for farmers to diversify the crops they grow on their farms.	C
Sustainable food processing, distribution & retail	Introduction of plant-based proteins appropriately processed for large kitchens and the food industry	Investments in plant protein processing techniques to make them more easily applicable in the food industry and large kitchens.	C
	Shortening the supply chain	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g., reducing shipping routes, food processors and others).	
Food loss and waste reduction	Use of big data to guide production quantities of food	Investments in big data applications in managing the food production quantities (e.g. on farm, shop, and restaurant levels).	C
Across the entire food cycle	Support for Finnish involvement in international research projects on food system transformation	More investments should be made in international research on food system transformation to give Finland more ownership in how the change takes place.	S
	Research funds on enabling food system transition	More research funds should be made available to researchers exploring food system transition.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: new regulatory frameworks

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulation of novel food production methods such as urban farming and changes in how policies on all elements of food systems are made.

Theme	Action name	Description	Idea Source [227]
Sustainable food production	Support for urban farming by municipal regulation	New regulations streamlining the opening of new urban farms and running of the existing ones.	S
	Reduction in the production of red meat	National policy should be introduced on the production quantities of red meat.	C
Sustainable food processing, distribution & retail	Developing more understandable food labels	Regulations should be developed for the food labels to be clearly understandable by customers, including children. They should include information on the origin, ethical production and carbon footprint.	S
Across the entire food cycle	Dialogue-informed legislation around the preservation and use of peatlands	Wide-ranging societal dialogues should define new legislation on the use of peatlands in Finland.	C

Just Transition

The food system transition has the highest potential to financially affect those in a weaker socio-economic position. Due to a complex set of factors (such as the war in Ukraine and increasing droughts), food, in general, is becoming more expensive, and not everyone can afford it. The higher comparative prices of sustainably produced food run the risk of those people being excluded from healthy and sustainable food.

Small-scale farmers in Finland can find it difficult to cultivate their crops and place them on the market, making it difficult for them to compete with large-scale companies, especially when attempting to produce organic and sustainable produce, which can be more time-consuming to cultivate.

6.9.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens or stakeholders[228] in Finland that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[229]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[227] C – Citizens; S – expert stakeholders
[228] A stakeholder meeting took place on 24 August 2022 and involved one national authority, one local authority and one regional authority.
[229] Prof Tom Rye, Molde University College, Norway.

Summary of Finland's policies on the EGD and Citizen and National Stakeholder Reports

In terms of domestic policies that help to support the achievement of EGD goals in mobility, Finland can point to the new Climate Change Act[230] and the Government Roadmap to fossil-free transport in Finland[231]. There are also provincial climate strategies, urban and regional carbon neutrality targets, strategies, and programmes of measures. With reference to transport are the city level deals on housing and transport which are a collaboration between local, regional, and national government[232]. In addition, several cities are pursuing Sustainable Urban Mobility Plans. Finland is also spending EUR 125m of Recovery Funds on stimulating the uptake of EVs and bio fuelled vehicles through taxation reform and the provision of new charging and fuelling infrastructure, either directly, or by providing incentives to the private sector. It is also digitalising the communications systems on its rail system[233].

The workshops with citizens and stakeholders showed general support for EU and national government policy, but also more willingness to charge polluting vehicles and travellers more to cover their external costs. There was also some scepticism about investing so much in EVs and instead both groups thought that conversion of existing vehicles to low-emission fuels could be more cost-effective. In more detail:

- ***Citizens*** were supportive of options like improved public transport, better cycling infrastructure, city planning for reduced travel distances, and flexible working e.g., working from home to reduce the need to travel. They also wanted to see higher taxes on air travel and the proceeds used to subsidise cleaner surface transport options, particularly for more vulnerable people like old people living in rural areas. They were concerned that a big emphasis on public transport might leave rural areas poorly connected, and they were also worried about the environmental impact of battery production for EVs. They were concerned about the costs of the green transition and how these would be distributed, about increased regulation, and about electricity supply planning. They also suggested retrofitting older vehicles to use bioethanol or LPG to cut emissions, given that EVs are expensive.

- ***Stakeholders*** generally agreed with the suggestions from citizens, but also had several more strategic recommendations, to do with energy planning and security (for EVs especially) and for the delivery of sustainable urban mobility plans. They were also aware of the EGD's plans to extend emissions trading (ETS) to the surface transport sector and, whilst supportive, were also concerned that this could increase costs for consumers. They were very concerned about the Just Transition but seemed unaware of the Climate Social Fund as they wanted the EU to create something similar. They were also concerned about governance, lack of match funding at national level, and lack of technological convergence creating uncertainties for private investors. They were

[230] Finnish Government (2022). New Climate Change Act into force in July. Available at https://valtioneuvosto.fi/en/-//1410903/new-climate-change-act-into-force-in-july (Accessed on 26 November 2022).
[231] Finnish Government (2021). Government Roadmap to Fossil-free transport in Finland. Available at https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163260/LVM_2021_19.pdf?sequence=1&isAllowed=y (Accessed on 26 November 2022).
[232] Ministry of Environment (2020). Agreements on land use, housing and transport. Available at https://ym.fi/en/agreements-on-land-use-housing-and-transport (Accessed on 26 November 2022).
[233] European Commission (2022). Finland's recovery and resilience plans. Available at https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/finlands-recovery-and-resilience-plan_en (Accessed on 26 November 2022).

very keen therefore that the EU should create international standards for smart ticketing and information (something which the EU is already proposing) and achieve convergence in EV charging technology, including on-road charging.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action	Idea source[234]
Clean vehicles	EV purchase incentives for larger EVs	S
	Energy needs planning	C&S
	Retrofitting of vehicles to use biofuels	S
Better public transport	Better PT for rural areas (including demand responsive)	C&S
	Cheaper or free PT	C&S
	PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	C&S
	Planning location of services e.g., health to cut need to travel	C&S
Pricing and charges for transport	Taxation of polluting vehicles	S
	Taxation of air travel and use of revenues for sustainable mobility	C
	Restraint of private motor vehicle traffic	S
Planning and operation of transport networks	PT network improvement, including rail	C&S
	Better set of indicators to measure progress on EGD achievement	S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	S
	Legislation in Finland to permit road user charging	S
	EU wide standards on smart ticketing and Mobility as a Service (MAAS)	S
	Support more remote working	C
Greening transport in general	There were no suggestions in this category	

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation apart from their concerns about the environmental impacts of battery production. Stakeholders, however, made several points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example nobody spoke about proposed changes to

[234] C – Citizens; S – expert stakeholders

legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). The only exception to this is that stakeholders were aware of the proposal in the EGD to extend emissions trading to the road transport sector (although they did not see this as a barrier *per se*). In the main, though, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified included:

Theme	**Barrier**	**Idea Source**[235]
Planning and operation of transport networks	EU requirements to improve the Trans-European Road network may work against a shift to sustainable transport, since these improvements also benefit local and regional trips and make car use more attractive.	S
Pricing and charges for transport	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport, and to cut subsidies to domestic air routes.	S
Governance	Lack of coordination mechanisms to ensure horizontal and vertical coherent implementation of EGD goals on the national and local levels. In general, fragmented governance.	S
Governance	The lengthy periods required to pass legislation at the national level to implement new EU regulations slows EGD implementation.	S
Clean vehicles	Disruptive impact of increasing use of e-vehicles on energy demand and supply.	S
Planning and operation of transport networks	Uncertainty about which low-emission technology(s) will ultimately be adopted in the transport sector, thus slowing private sector investment.	S

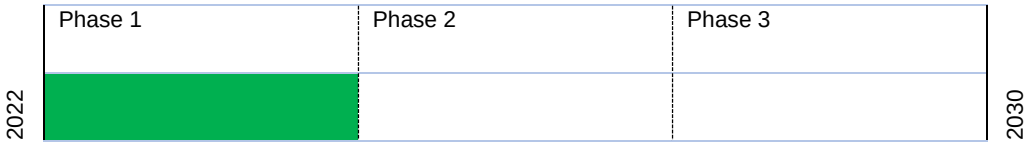
[235] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



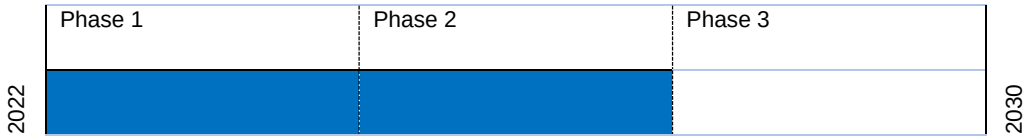
Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders. However, there were no suggestions in this category from either stakeholders or citizens in Finland, in contrast to in other countries.

Actions that can be carried out now with minimal support

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments, and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column 'action name'.

Theme	Action name	Description	Idea Source[236]
Clean vehicles	EV purchase incentives	At the national level, it was argued that the lack of EV purchase incentives for larger EVs made it difficult for families to acquire them (vehicles costing more than €50 000).	S
	Retrofit old vehicles for LPG or bioethanol	Few details were given but the general view was that given the cost of EV technology and uncertainty over battery supply, it could also be sensible to pursue the use of cleaner fuels in existing vehicles. This would also be an option	C

[236] C – Citizens; S – expert stakeholders

		for those unable to afford an EV.	
Better public transport	Better PT for rural areas	The quality of PT in urban and suburban areas was not criticised (although more integration was seen as desirable) but there was concern about how to improve things in rural areas. The possibility of demand responsive options and mobility as a service (MAAS) was discussed.	C&S
	Free PT	Cheaper and free public transport was discussed. There was concern that free PT would be so expensive to provide that it could not be afforded for rural areas in particular.	C
Spatial planning, city developmen t	More bike paths	Participants wanted to see improved cycling infrastructure within and between cities but gave no further details.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	Taxation of air travel and use of revenues for sustainable mobility	Citizens were supportive of taxing air travel to pay for sustainable transport. Stakeholders pointed to highly subsidised air routes within Finland cost a great deal financially and in environmental terms but that there is no political will to change this.	C&S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local, regional and national level. However, stakeholders pointed out that this would be costly for the Finnish rail network given the size of the country, and that an improved network alone would not generate more passengers or modal shift from car.	C&S
Governance	No measures suggested		

Actions that can be carried out now with minimal support

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Finland citizens and experts require policy changes and regulation to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea Source[237]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles.	C&S
Better public transport	PT integration	Better planning and coordination of public transport routes, including across borders (to e.g. Tallinn). This was also discussed in relation to the capacity of the organisations in charge of integration (see below).	S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport. Stakeholders pointed out that this principle is already incorporated into planning in Finland's largest cities, those subject to national/regional/local city deals.	C&S
	Planning location of services e.g., health services, to reduce need to travel	An extension of the above, but citizens pointed out that many services are centralised, and this increases travel distances and causes problems for those without a car. They therefore wanted accessibility to be considered when planning these facilities.	
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to limit personal car use, such as low emission zones in cities (which often include an element of pricing).	S

[237] C – Citizens; S – expert stakeholders

Planning and operation of transport networks	Better set of indicators to measure progress on EGD achievement	Stakeholders felt that there is a lack of specific and comparable measurement and impact assessment and a detailed implementation programme for EGD-related measures at the national level. More precision (in monitoring but also in implementation timetables) should be achieved to make the EGD more effective.	S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	In general, fragmented governance (local, regional, national) was identified as a barrier to more sustainable transport in Finland. It is difficult for neighbouring city regions to collaborate. Better structures for collaboration are required.	S
	Legislation in Finland to permit road user charging	Stakeholders were aware of the potential strength of road charging as a tool to reduce emissions but there is no enabling legislation for road user charging (the charging of vehicles per km or per trip to travel on existing roads) in Finland at present, so they argued that it is required.	S
	EU wide standards on smart ticketing and Mobility as a Service (MAAS)	Finland is to an extent the home of MAAS, with a global operator, Whim, based there. Participants were aware of the problems it has faced in terms of incompatibility of data systems and lack of data sharing across the passenger transport sector and wanted to see the EU act to address this. This showed that they were not aware of the proposals in the EGD (Urban Mobility Framework) for strengthened legislation in this area.	S
	Support more remote working	Citizens noted that remote working had been successful during the pandemic and wanted more of it, and it to be formalised in working contracts, because of its beneficial impacts on the environment, cost and time savings, and family life.	C

Just Transition

The Just Transition in mobility was clearly a concern to the Finnish participants. They were particularly concerned about people in rural areas and whether the shift to lower-emission transport would leave them isolated and unable to afford to travel; and also, about the cost of EVs and fuels as a result of emissions trading in the surface transport sector. Their solution was that the EU should set up a social fund to help less well-off people with the costs of the transition. This implies that they are unaware of the existence of the EU's Climate Social Fund and/or of how that money will be distributed and to whom.

6.9.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens or stakeholders[238] in Finland that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[239]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Finland's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Finland in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[240], was not available for Finland. As a result, the following table compares the priorities of the EGD with Finland's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP[241], Finland's Integrated NECP[242] and Finland's long-term renovation strategy[243].

Increasing renewable energy in buildings	Finland's renewable energy contribution to the European Union's 2030 target is 51% of gross final energy consumption in 2030.
Improving energy efficiency in buildings	For energy efficiency, Finland's contribution to the EU target amounts to 25 Mtoe of final energy consumption, translating into 34.8 Mtoe of primary energy consumption.
Tax system for energy products aligned to the green transition	There is mention of taxation for different energy efficiency schemes, however there is no clear guidance on a tax system for energy products aligned to the green transition.

[238] A stakeholder meeting took place on 24 August 2022 and involved two regional authorities.
239 Prof Tom Rye, Molde University College, Norway.
[240] Ivanova, V. et al. (2021), see note 30, page 61.
[241] European Commission (2022). Assessment of the final national energy and climate plan for Finland. Available at: https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_finland_en_0.pdf (Accessed on 16 November 2022).
[242] Ministry of Economic Affairs and Employment, Republic of Finland (2019). Finland's Integrated Energy and Climate Plan. Available at: https://energy.ec.europa.eu/system/files/2020-01/fi_final_necp_main_en_0.pdf (Accessed on 2 November 2022).
[243] European Commission (2020). Long-term renovation strategy 2020-2050. Finland. Available at: https://energy.ec.europa.eu/system/files/2020-04/fi_2020_ltrs_en_0.pdf (Accessed on 2 November 2022).

Provide funding for the renovation of buildings	There is information on funding allocated for the renovation of buildings back for 2016-2018, however, it is difficult to understand the complete extent of the level of funding or where it will be distributed beyond that date. Finland's long term renovation strategy makes reference to €100m allocated to non-residential homes and other measures as follows: A subsidy for detached and semi- detached houses abandoning oil heating is being planned for 2021 Companies that have joined the energy efficiency agreement for business premises have the opportunity to receive an investment subsidy amounting to a maximum of 20% of the investment value for regular energy efficiency investments Subsidies for renovating the building envelope or technical systems Households with poor financial status can apply for a government subsidy for their housing costs through the Social Insurance Institution of Finland (Kela) A subsidy amounting to a maximum of 50% of the renovation costs is eligible for improving the living conditions of elderly or disabled people The municipalities that have joined the energy efficiency agreement for municipalities have the opportunity to receive an investment subsidy amounting to a maximum of 20% of the investment value for regular energy efficiency investments (25% if the project is realised as an ESCO service) An ESCO subsidy can be granted to any company or corporation for an investment in regular technology. The subsidy is 25% for companies and corporations included in the scope of the energy agreement scheme and a maximum of 15% for other companies and corporations.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.3% of residential sector renovations were medium depth and 0% deep renovations. For non-residential there was 1.4% medium, and 0.2% deep energy savings[244].
Create world-leading companies	On research, innovation and competitiveness, the NECP mentions a general objective of raising investment in research, development and innovation to 4% of GDP.
Raise global ambition to tackle climate change	The NECP makes reference to education and training to raise global ambition to tackle climate change but it is difficult to understand the full extent of the plan.

[244] European Commission, Directorate-General for Energy, Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU: final report, Publications Office, 2019, https://data.europa.eu/doi/10.2833/14675 (Accessed: 2 November 2022).

Improve health and well-being	The final plan includes a mostly qualitative evaluation of the impacts of change in fuel use on air quality and air emissions.
Address inequality and energy poverty	On energy poverty, Finland considers that few households suffer from energy poverty. This is why the country does not have related national objectives.
Ensure a Just Transition that is fair, competitive, and green	The just and fair transition dimension is mentioned as a 'guiding theme of climate policy', and the NECP provides some estimates of the impact of economic growth and employment.
Mobilising industry for a clean and circular economy	Finland has its own roadmap for the creation of a circular economy. The roadmap describes the concrete actions that can accelerate the transition to a competitive circular economy in Finland.

In general, the national stakeholders from Finland were very positive about the EGD. They felt that having a shared vision coming from the top down makes the conversation about implementation easier and ensures that all stakeholders involved in the green transition are following one common guidance. Having a shared vision and showing that it works in different situations also creates trust between stakeholders.

The participants mentioned the main actors of energy saving in Finland are building associations, public ownership, institutional developers and promoters-contractors, construction and renovation cards (Rakennustieto), training and certification bodies, and the Finnish Real Estate Federation. Regarding energy advice, the actors mentioned were Motiva, which is the national/regional advice funded by the Energy Agency, building agencies of cities and municipalities, and private actors such as Valonia or Ekokumppanit.

Increasing renewable energy in buildings: Citizens felt there should be more support for renewable energy solutions such as geothermal. They also mentioned that private housing companies should be supported to build solar fields across rooftops. National stakeholders mentioned that utility companies should be more involved in training residents and stimulating proactivity for energy efficiency solutions.

Improving energy efficiency in buildings: Citizens stated that older buildings and their occupants do not have the means to renovate their buildings and the same regulations will not work in all buildings. They also mentioned restrictions to renovate when the houses are owned by private companies. They were positive however about energy efficiency in general and the creation of more carbon-neutral buildings but felt there should be more facilities to make it possible to monitor and understand energy consumption.

Citizens also felt that people should live in smaller spaces, designed for energy efficiency and that smart living should be enabled through technology such as the Internet of Things and automation. However, they also mentioned a potential unintended consequence in that smart houses may become expensive to fix and require experts that do not currently exist or are hard to come by.

National stakeholders mentioned that there is funding available for the renovation of homes, but it varies depending on the energy efficiency rating of the home and it can be difficult for the homeowner to understand which subsidy is available to them. Citizens agreed with this view stating that information on energy efficiency should be more available and transparent.

Provide funding for the renovation of buildings: Citizens mentioned there should be financial support to enable a move away from oil heating to other renewable energy sources. They also suggested subsidies for electricity in winter when utility bills are higher and there is less energy available from renewable energy sources. They also mentioned that different supports need to be provided depending on urban versus rural locations, as after renovation, the home is less likely to increase in value in a rural setting compared to an urban one.

Citizens felt that renovation should be 100% financed, however the national stakeholders did not agree, instead they felt the existing models could be improved to be more predictable, reliable and easier to understand, which would encourage citizens to invest.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt the public should lead the way. National stakeholders agreed however they mentioned a number of complications. For example, there are conflicts between the preservation of heritage buildings and renovation measures. There should also be common people between construction projects and sustainability as often these are two different departments that do not communicate effectively with each other. Citizens also need to be involved in any changes that might impact them. The renovation rates between 2012 and 2016 for residential buildings are low (only 0.3% medium retrofit and 0% deep retrofit) as for non-residential buildings (only 1.4% medium retrofit and 0.2% retrofit), even though these figures are a few years old it would suggest that public buildings have more work to do to show the way.

Create world-leading companies: National stakeholders mentioned that there is no mandatory training for contractors and there is a need for citizens to have information available that is reliable and consistent from all companies offering energy efficiency solutions. They suggested the following improvements: certificates to show they are complying with a particular standard, identification of the qualifications of the solution provider from the start of the project, and standard data to guide the implementation of energy renovation projects.

Raise global ambition to tackle climate change: Citizens mentioned the need to invest in education programmes.

Address inequality and energy poverty: National stakeholders were of the view that the EGD objectives and directives should be equal for all, it should not be possible to avoid them and the methods to measure results should be regulated. They also felt that the most educated and financially capable would benefit more from renovation initiatives compared to others. However, the NECP does not provide provision for energy poverty as the view is that '*few households suffer from energy poverty*'.

Mobilising industry for a clean and circular economy: Citizens felt that more sustainable materials such as wood should be used more in construction and renovation projects, however, there also needs to be more training for those working with sustainable materials.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There were a good number of actions suggested, the majority of which fell into the category of actions which could be carried out now with minimal support or those that

require changes in regulation and hence would take longer to implement. For the former, the focus was on education and awareness and for the latter the focus was on actions that would require policy changes and time to investigate the solution. No actions were suggested for the EGD goals aligned to the tax system for energy products aligned to the green transition, improving health and well-being, addressing inequality and energy poverty or ensuring the Just Transition.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Enable solar farms on rooftops Enabling a more dynamic permit process to ensure EGD goals are being encouraged at all times Innovative business models to enable energy efficiency Mandate that there can be no negative financial consequence to moving to cleaner energy Enabling energy communities
Improving energy efficiency in buildings	Monitoring energy consumption in buildings solutions Standard templates for renovation contracts to enable comparison between offers Mandate that 3D models are required before a building permit can be issues Simplifying the E-figure calculation For large projects, mandate a level of certification for those carrying out the project Provide better information concerning the legislation and possibilities of cohabitation Standardised data available nationwide regarding best practice Create a co-ownership model for renovation Advisory group for public construction Education for planners Mandate lower rents if the tenant actively reduces their energy consumption
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Subsidies for electricity in winter Funding schemes to move away from oil heating 100% funding for renovation
Renovate at least 3% of the total floor area of public buildings annually	Examples of public buildings leading the way
Create world-leading companies	Investment and funding for smart building technologies Cross learning between companies to accelerate the green transition Determining the possible role of maintenance companies

Raise global ambition to tackle climate change	Education programmes for energy efficiency Education and awareness regarding the positive impacts of energy renovation Energy champions Energy advisory network Elementary school education Training for working with sustainable materials Increased educational and awareness campaigns
Improve health and well-being	No actions suggested
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	Increasing waste heat opportunities Apply the 'no harm' principle to renovation projects

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source**[245]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	It is difficult to renovate older buildings.	C
	The same regulations will not work for all buildings, e.g. rural versus urban as the cost of the house will not increase as much in a rural setting compared to an urban one.	C
	It is difficult to renovate buildings that are owned by private companies.	C
	Smart houses may become expensive to fix and require experts who are limited in availability.	C
	Many people are still afraid of the building mistakes made after the energy crisis in the 70s, even though the awareness and education of building professionals have greatly improved.	S
	The project designer often makes choices on behalf of the buyer without them knowing (it is a problem if one kind of solution is more known to the designer, they tend to recommend that instead of offering unbiased advice or proven facts).	S
	Many house owners do not understand the logic of energy investments, so they do not know how to compare the costs. They fear the initial cost and cannot see the long-term benefits.	S
	For many house or apartment owners, the long-term	S

[245] C – Citizens; S – Expert Stakeholders

	investment is also a question of timing. They often base their decision on the possibility of living in a specific house long enough to see the energy renovation paying them off personally.	
	Obtaining building permits and completing bureaucratic processes is time-consuming and often slows down comprehensive renovation planning.	S
	The trend to move to more spacious houses has become more prominent due to the COVID-19 pandemic.	S
	There are many different styles of living and owning houses, so the same solutions cannot be applied to all. In the Finnish housing association model, decision-making is time-consuming, and it is difficult for single apartment owners to make choices because they have to decide together. For example, it is well known that shareholders' opposition is the biggest obstacle to using geothermal energy in house renovation. If the financing were more long-term and reliable, more housing associations could dare to make decisions.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	The energy advisories and the collaboration between different organisations are often funded by various projects. Therefore, the funding is not stable. The amount and direction of state financing depend on the government and may change quickly. However, energy refurbishments are costly, and planning is time-consuming.	S
	The calculation mechanism for financial support for energy renovations must be precise. Loopholes can water down the whole project by creating experiences of unfairness and preventing action.	S
	Lack of resources in advisory organisations: Motiva, the national/regional advice funded by the Energy Agency, offers counselling nationwide, but they can spend only 20 minutes with one caller. The Kymenlaakso area has only one energy advisor, who cannot possibly have time to advise every house owner.	S
	The energy renovation advisory at the moment is in the municipality's budget, and the resources are limited. It might be beneficial if the government would budget it.	S
Renovate at least 3% of the total floor area of public buildings annually	The public officers or other authorities might not have time to learn about all the matters that should be considered when planning an energy renovation, especially concerning prominent public buildings.	S
	There is internal competition concerning the strategy and regulations of a city: e.g., in Helsinki, the rules protecting the historical appearance of the buildings conflict with installing solar panels or adding floors to the facilities.	S
	The public buildings should lead the way and show examples, but at the same time, there is a strong acceptability challenge. The citizens may not accept changes in public spaces so easily.	S
Create world-leading companies	Value discussion is not taking place at the national level. For example, how much should an investor	S

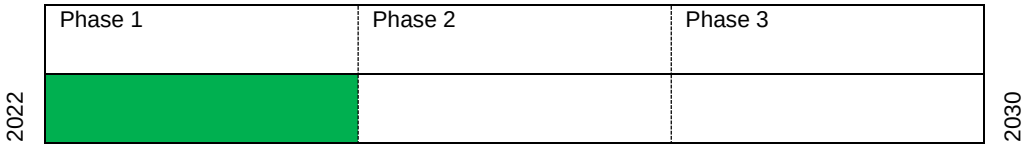
	earn by/contributing to the energy renovation of buildings?	
Raise global ambition to tackle climate change	In the state budget, there is no calculation method to count the savings caused by energy renovations, not to mention measuring the positive or negative budget impact of the climate effect on buildings and housing.	S
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. The majority of these actions focused on education and awareness campaigns and networking and collaboration between companies. There were a few other interesting suggestions regarding enabling solar rooftop farms, increasing subsidies for electricity costs in the winter, enabling comparison between renovation offers and investing in smart technologies.

Theme	Action name	Description	Idea Source [246]
Increasing renewable energy in buildings	Enable solar farms on rooftops	Enable social housing companies to build solar farms on rooftops.	C
Improving energy efficiency in buildings	Monitoring energy consumption in buildings solutions	Create solutions for monitoring energy consumption of buildings.	C
	Standard templates for renovation contracts to enable comparison between	The advisory network should make a standard offer request template to make it easier for house owners to ask and compare offers from different service	S

[246] C – Citizens; S – Expert Stakeholders

	offers	and technology providers when considering an energy renovation.	
Provide funding for renovation of buildings	Subsidies for electricity in winter	Provide subsidies for electricity in winter when there is less potential of energy from renewables.	C
	Funding schemes to move away from oil heating	Provide funding to enable building owners to move away from oil heating.	C
Create world-leading companies	Investment and funding for smart building technologies	Invest in companies offering solutions for smart buildings using IoT and automation technology.	C
	Cross learning between companies to accelerate the green transition	Commercial companies should also be included in sharing what has been learned about energy renovations.	S
Raise global ambition to tackle climate change	Education programmes for energy efficiency	Invest in education programmes for energy efficiency in buildings.	C
	Education and awareness regarding the positive impacts of energy renovation	More information on the positive effects of energy renovation: even if you do a little bit of something, it is better than doing nothing. The Ministry of the Environment is about to start a campaign, and the promotion should be continued every day.	S
	Energy champions	Promoting and facilitating peer support - people need more information and peer support when considering which solutions to choose.	S
	Energy advisory network	Strong cooperation between local energy advisories and an advisory network should be activated to start lobbying for the stabilisation of energy advice financing and look for trendsetters who could be used in the popularisation of energy refurbishments. This should be coordinated nationally. The Energy Agency should be the responsible party, and Motiva, local energy companies and municipal funding decision-makers should be included.	S
	Elementary school education	Through education to elementary school and vocational and higher education institutions - not on the shoulders of individual teachers.	S
Mobilising industry for a clean and circular economy	Training for working with sustainable materials	Provide training for companies working with sustainable materials	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.

Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There were only a small number of suggested actions in this category. These focused on mandates from government level.

Theme	Action name	Description	Idea Source [247]
Increasing renewable energy in buildings	Enabling a more dynamic permit process to ensure EGD goals are being encouraged at all times	Rendering the urban building permit processes more dynamic. Helsinki city is an example: acquiring geothermal energy from consultation to final inspection on a one-stop basis is already being designed.	S
Improving energy efficiency in buildings	Mandate that 3D models are required before a building permit can be issues	It should be mandated that building permits are issued based on 3D models	S
	Simplifying the E-figure calculation	The E-figure calculation mechanism has not been reformed for a long time. It is complicated and time-consuming. Based on E-figure, financial support is granted for energy renovations. If the calculation of the E-figure were more straightforward, owners of single-family houses, in particular, could make faster and easier cost estimates and decisions about energy refurbishment. According to the original drawings, there could be an E-number calculation in the municipal building control. For example, all oil-heated buildings built in the 1960s could automatically receive a certain E-number, based on which the subsidy is calculated. It could start with municipal building control, even though	S

[247] C – Citizens; S – Expert Stakeholders

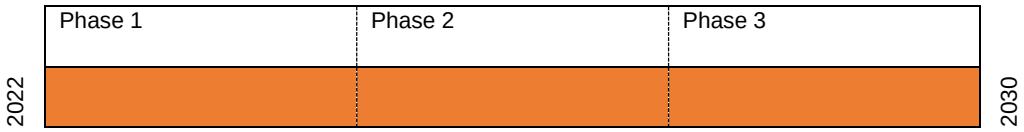
		municipalities are independent decision-makers.	

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. There were quite a number of actions suggested in this category. This included harder-to-implement measures or measures that need more time for development such as innovative business models to enable energy efficiency such as leasing heating technology instead of purchasing it or enabling energy communities with requires legislative changes.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source [248]
Increasing renewable energy in buildings	Innovative business models to enable energy efficiency	At the EU level, a paradigm change could be introduced, e.g. the heating system could be leased, not owned.	S
	Mandate that there can be no negative financial consequence to moving to cleaner energy	There have been cases where district heating companies have fined house owners who decided to give up district heating and transfer to geothermal heating. It should not be allowed.	S
	Enabling energy communities	Establishing national bottom-up networks: a public actor may not be able to install but can try (the network should consist of regional and local actors).	S
Improving energy efficiency in buildings	For large projects, mandate a level of certification for those carrying out the project	In large implementations, more importance should be given to the designer's qualifications.	S
	Provide better information concerning the legislation and	At a local and national level: better information should be provided about the legislation and possibilities of cohabitation, e.g. municipal housing	S

[248] C – Citizens; S – Expert Stakeholders

	possibilities of cohabitation	production, grandmother cohousing, adult cohousing, etc.	
	Standardised data available nationwide regarding best practice	More research data, statistics and well-founded experience should be available for advice nationwide, rather than the consumer relying only on information from individual planners or companies, maybe based on best practice, not legislation.	S
	Create a co-ownership model for renovation	Clarify the co-ownership model, e.g., joint ownership of condominiums and raise awareness about the investment logic of energy refurbishments, primarily for building associations: refurbishment costs a lot, but it pays for itself. If the housing association's responsibility distribution table allowed shareholders to make energy renovations to specific properties, they could receive a household deduction.	S
	Advisory group for public construction	There should be a broader or wider group to make decisions about public construction and energy refurbishments of buildings.	S
	Education for planners	For the planner level, there should be more comprehension of different energy solutions and their calculation models.	S
	Mandate lower rents if the tenant actively reduces their energy consumption	Amendment of the Act on Residential Leases. Currently, a condition can be written into the lease contract: the lease will increase if housing costs rise. But it should also be possible to write in the lease contract: the lease goes down if housing costs go down if the lessee saves energy. Money is often a clear motivation for energy saving, and influencing with advice is also more effective.	S
Provide funding for the renovation of buildings	100% funding for renovation	Renovation projects must be 100% financed.	S
Renovate at least 3% of the total floor area of public buildings annually	Examples of public buildings leading the way	Public buildings should set an example.	S
Create world-leading companies	Determining the possible role of maintenance companies	Maintenance companies would have great opportunities to observe everyday life, raise awareness, and help residents to be proactive.	S
Raise global ambition to tackle climate change	Increased educational and awareness campaigns	Better communication about the legislation and possibilities of cohabitation and removing financial barriers.	S
Mobilising industry for a clean and circular economy	Increasing waste heat opportunities	Increasing the use of waste heat should be a priority.	S
	Apply the 'no harm' principle to renovation projects	In planning new buildings and refurbishments, the 'no harm' principle and life cycle thinking shall also apply to recycling construction waste.	S

Just Transition

The split incentive between the owner of the property and the tenant is a significant problem in Finland as according to the national stakeholder as rental rates in Finland are quite high. There are concerns over who invests in the renovation and who benefits and that real estate investors will seek profit solutions, however energy renovation is funded from EU and national subsidies and hence they should not gain profit from such schemes. They mentioned the need for education and awareness at all levels from citizens to professionals, especially regarding the longer-term benefits of a renovation.

6.10 France

6.10.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[249] in France that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[250]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of France's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in France pointed out the following policies. These are not an exhaustive list but rather serve as an indication of the more visible policies to the stakeholders present:

Law for the balance of commercial relations in the agricultural and food sector and a healthy, sustainable and accessible food for all (Government of France, 2018)[251]. The law came into force in January 2022, outlining three segments: 1) ensuring France's food sovereignty, 2) promoting food choices favourable to health and the environment, and 3) reducing inequalities in access to quality and sustainable food.

[249] A stakeholder meeting took place on 8 September 2022 and involved one civil society representative and two research and academia community members.
[250] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[251] Government of France (2018). LOI n° 2018-938 du 30 octobre 2018 pour l'équilibre des relations commerciales dans le secteur agricole et alimentaire et une alimentation saine, durable et accessible à tous. Available at: https://www.legifrance.gouv.fr/dossierlegislatif/JORFDOLE000036562265/ (Accessed on 16 November 2022).

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Law against food waste and for a circular economy (Government of France, 2022)[252]. The law aims to accelerate the change in the food production and consumption model to limit waste and preserve natural resources, biodiversity and the climate.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following Programme as a key piece of food policy in France:

- National Programme on Food and Nutrition (Government of France, 2019)[253]The Programme sets the policy course for food and nutrition for five years until 2023. It focuses on three segments: 1) social justice (improving the nutritional quality and diversity of the food offered, fighting food insecurity, and strengthening consumer information); 2) fight against food waste, and 3) food education (nutrition education amongst the younger population and promotion of national food heritage).

General overview of actions per theme

The actions proposed by the French citizens and stakeholders on transforming the current food system in France consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food processing, distribution & retail. Overall, the proposed actions can mostly be implemented straight away with implementation tools such as communication, education and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (6)	Awareness campaigns on urban agriculture
	Development of urban farms on rooftops
	Subsidies for urban agriculture
	Agricultural subsidies focusing on fair wages for agricultural workers
	Investments in research of crops resilient to extreme weather
	Regulation limiting the transformation of agricultural areas into urban areas
Sustainable food processing, distribution & retail (8)	Awareness campaign on the meaning of food labels
	Expansion of waste-free sections in shops
	Making food market working hours more accessible

[252] Ministry of Ecological Transition, Government of France (2021). La loi anti-gaspillage pour une économie circulaire. Available at: https://www.ecologie.gouv.fr/loi-anti-gaspillage-economie-circulaire (Accessed on 16 November 2022).
[253] Government of France (2019). France's National Food Programme. The Regions in Action. Available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiInJPDr738AhVygP0HHT9cCrQQFnoECA0QAQ&url=https%3A%2F%2Fagriculture.gouv.fr%2Ftelecharger%2F108904%3Ftoken%3D3f9e45da2753232d4d6553c263ce52d9f07f0497525102410e04e1ef47fb8f59&usg=AOvVaw2oSKaE7E4fqhGJxrQAqpGi (Accessed on 10 January 2023).

	Workshops on reading food product labels with understanding
	Shortening supply chains
	Investments in research on sustainable food packaging
	Regulation on the reduction of prices for soon-to-expire food products
	Regulation limiting food packaging
Sustainable food consumption (5)	Awareness campaign on 'ugly' vegetables and fruit
	Development of green public procurement contracts
	Awareness campaign on the importance of reducing meat and dairy consumption
	School programmes on developing sustainable and healthy diets
	Subsidies for socio-economically vulnerable citizens to get access to healthy and sustainable food
Food loss and waste reduction (1)	Awareness campaign promoting alternative uses for food leftovers
Ensuring food security (0)	
Combating food fraud (0)	
Across the entire food cycle (1)	Skills training and education for public servants coordinating food system transformation projects

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source**[254]
Sustainable food production	The current CAP subsidies are not oriented towards promoting a shift toward sustainable production.	S
	The Ecophyto 2018++[255] plan has contributed to increased pesticide use since it was implemented.	S
	The current CAP promotes large-scale agro-industry rather than local food producers.	S
	In the first year of receiving agricultural subsidies, farmers get a reimbursement instead of an up-front payment. This makes it difficult for small-scale and new farmers to apply for subsidies.	S
	Less and less land is available for agriculture due to soil degradation.	S
	The agro-industrial lobby is so powerful that it prevents a significant sustainable food transformation.	S
Sustainable food processing, distribution and retail	Food product labels are currently not standardised and often unclear to most people.	S
Sustainable food consumption	Public contracts do not benefit local products because local preferential is prohibited. This makes it difficult for municipalities to support the agricultural transition.	S

[254] C – Citizens; S – expert stakeholders
[255] Ministry of Agriculture and Fishery, Government of France (2008). Ecophyto plan 2018. Available at: https://food.ec.europa.eu/system/files/2019-03/pesticides_sup_nap_fra-ecophyto-2018_en.pdf (Accessed on 16 November 2022).

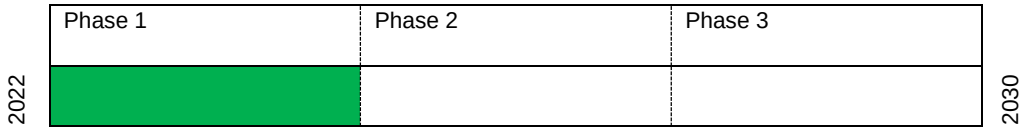
	International agreements make it very easy to import food products whose standards do not always meet sustainability norms.	S
Ensuring food security	Increasing extreme weather events will most likely reduce crop yields, making it difficult to focus on (often lower-yield) sustainable production.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in France. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as awareness campaigns on urban agriculture, are easy to implement (low-hanging fruit). However, they also have a limited potential to contribute to the food system transformation. Others, such as the development of green public procurement food contracts, may be more difficult to implement successfully but can produce knock-on effects in changing consumption patterns.

Theme	Action name	Description	Idea Source [256]
Sustainable food production	Awareness campaigns on urban agriculture	Awareness campaigns should be organised to promote urban agriculture.	C
	Development of urban farms on rooftops	Residents of buildings should organise to develop rooftop farms.	C
Sustainable food processing, distribution & retail	Awareness campaign on the meaning of food labels	Awareness campaigns should be organised explaining the meaning of food labels (e.g. on video screens in supermarkets).	C

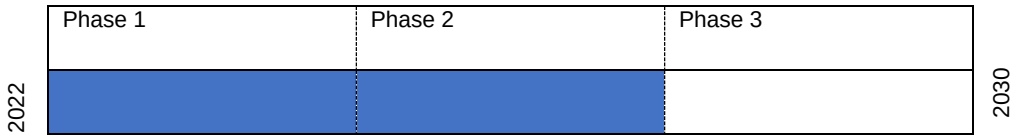
[256] C – Citizens; S – expert stakeholders

	Expansion of waste-free sections in shops	Supermarkets and food shops should expand the choice of food products that can be purchased without packaging (e.g., customers bringing their own packaging).	S
	Making food market working hours more accessible	Municipalities should work on adjusting food markets' working hours to be more accessible for people with diverse work schedules.	S
	Workshops on reading and understanding food product labels	Municipalities should organise workshops on reading and understanding food labels.	C
	Shortening supply chains	Supply chains should be shortened through various activities (e.g. farmers directly delivering produce when possible, development of cooperative shops for sustainable food producers, development of online sale platforms for small-scale sustainable food producers, and pick-up systems).	C
Sustainable food consumption	Awareness campaign on 'ugly' vegetables and fruit	Awareness campaigns should be organised on the safety of consuming aesthetically 'ugly' produce.	C
	Development of green public procurement contracts	Green public procurement should be expanded, emphasising sustainability, local origin and healthiness of food products.	S
	Awareness campaign on the importance of reducing meat and dairy consumption	An awareness campaign on the importance of reducing meat and dairy consumption in individual diets should be organised.	S
	School programmes on developing sustainable and healthy diets	School programmes should be developed to teach young people how to maintain sustainable and healthy diets.	C
Food loss and waste reduction	Awareness campaign promoting alternative uses for food leftovers	Awareness campaigns should be organised, presenting alternative uses for food scraps to reduce the amount of household food waste.	C
Across the entire food cycle	Skills training and education for public servants coordinating food system transformation projects	Public servants coordinating different actions on sustainable food system transformation should receive skills-based training and education.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions deemed unaffordable and unlikely to occur without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through subsidies for farmers and local food producers and technical support for sustainable food production. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

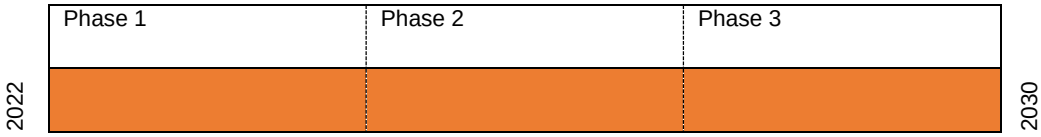
Theme	Action name	Description	Idea Source [257]
Sustainable food production	Subsidies for urban agriculture	New urban farmers should receive financial subsidies and technical support (e.g. tools, exchange of know-how).	C
	Agricultural subsidies focusing on fair wages for agricultural workers	Agricultural subsidies should be directed towards improving agricultural workers' working conditions and wages.	C
	Investments in research of crops resilient to extreme weather	New investments should be made in researching crops resilient to extreme drought, floods, and heat.	S
Sustainable food processing, distribution & retail	Investments in research on sustainable food packaging	New investments should be made in researching new sustainable food product packaging types.	C
Sustainable food consumption	Subsidies for socio-economically vulnerable citizens to get access to healthy and sustainable food	Socio-economically vulnerable citizens should be subsidised to access healthy and sustainable food (e.g. through food vouchers).	C

[257] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulation of sustainable food production, price structuring, and labels on food products.

Theme	Action name	Description	Idea Source[258]
Sustainable food production	Regulation limiting the transformation of agricultural areas into urban areas	New regulations should be developed with strict conditions on the transformation of agricultural land to residential land.	C
Sustainable food processing, distribution & retail	Regulation on the reduction of prices for soon-to-expire food products	New regulations should be introduced on obligatory price reduction for soon-to-expire products in supermarkets and food stores.	C
	Regulation limiting food packaging	New regulations should be introduced limiting difficult-to-recycle materials in food packaging and prohibiting unnecessary packaging.	C

Just Transition

The switch to sustainable and healthy production carries a risk of high-quality food becoming unaffordable to most socio-economically vulnerable groups and them losing access to these food products. Compensatory measures need to develop to address this.

Small-scale food producers face higher costs in switching to sustainable production than large food corporations. This means there is a need for specialised subsidies targeting small-scale food producers.

[258] C – Citizens; S – expert stakeholders

6.10.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[259] in France that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[260]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of France's policies on the EGD and Citizen and National Stakeholder Reports

Due to the high use of renewable electricity in other sectors, transport accounts for 31% of carbon emissions in France, and total transport emissions have not fallen in line with those from other sectors[261]. Some 90% of these emissions come from road transport. During the 2010s, two main policies were introduced to tackle this problem: a carbon tax (introduced at €7/tonne in 2014, increased to €44/tonne by 2018, but then frozen in response to the 'yellow vests' protests); and a new (sustainable) mobility law *Loi mobilités, LOM*, adopted in 2019, which puts EUR 13.4 billion of investment into sustainable transport alternatives for the period 2018-2022[262]. In addition, France is spending EUR 6.9 billion of Recovery Funds on stimulating the uptake of EVs and hydrogen vehicles by private individuals, the public sector and businesses through purchase subsidies; investing heavily in regional and national rail lines; investing in new public transport projects, especially in the Paris Region; and extending the network of charging stations across the country[263].

The workshops with citizens and stakeholders showed their general support for existing government policy on reducing emissions from transport, although they had strong reservations about EVs (as opposed to low-emission vehicles in general) and wanted more land use planning measures to increase and encourage dense and diversified (businesses, services, leisure, etc.) development. In contrast to national policy, there was also no mention of carbon taxes or pricing amongst either group. In more detail:

- ***Citizens*** wanted to see better public transport, particularly in rural areas, using hybrid modes such as carsharing and carpooling if necessary. Cycling infrastructure should be improved to make it a safe and easy alternative. There was also an emphasis in this group on land use: they suggested effectively denser and mixed-use development (including businesses and leisure uses) to reduce the need to travel and make public transport, walking and cycling more viable. The group was also in favour of subsidies for

[259] A stakeholder meeting took place on 8 September 2022 and involved 1 local authority and 1 civil society representative.
[260] Prof Tom Rye, Molde University College, Norway.
[261] Savolainem A., Climate Scorecard (2019), France News Brief and Action Alert. Available at https://www.climatescorecard.org/2019/12/transport-sector-policies-in-france/ (Accessed on 26 November 2022).
[262] See note 253, page 290.
[263] European Commission (2022). Recovery and Resilience Scoreboard: Transport. Available at https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html?country=France (Accessed on 26 November 2022).

low-carbon vehicles (although not necessarily EVs), and alongside this, there was some scepticism about the environmental-friendliness of battery production. They were willing to reduce air travel and give up car ownership if alternatives were improved, particularly if public transport offered greater personal security, especially to women.

- ***Stakeholders*** generally agreed with the suggestions from citizens but also spoke in favour of improved rail infrastructure, and they placed even more stress on land-use solutions than did the citizens. They were also keen on information and education: IT solutions should be used to provide information on pricing, supply, and ability to access intermodality; network communities should be created at the EU level to share experience and inspiration on decarbonising transport, and education and awareness raising on all aspects of the topic are required - not just about electric cars.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[264]**
Clean vehicles	Low-emission vehicle (not just EV) purchase incentives	C&S
	Investment in charging infrastructure for LEVs	S
Better public transport	General improvements to quality, speed, price, integration and coverage of public transport	C&S
Spatial planning and city development	More bike paths	C&S
	15-minute city, mixed-use developments and city of short distances	C
Pricing and charges for transport	There were no suggestions in this category	
Planning and operation of transport networks	Carpooling schemes, especially for rural areas	C&S
	IT solutions should be used to provide information on pricing, supply, and ability to access intermodality.	C
Governance	There were no suggestions in this category	
Greening transport in general	Education and awareness raising	S

Barriers to EGD implementation

Citizens were highly sceptical about the benefits of EVs and the equity impacts of incentivising their uptake. Stakeholders made that and several points in addition. These do not, however, relate directly to the implementation of mobility-related aspects of the EGD

[264] C – Citizens; S – expert stakeholders

(for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

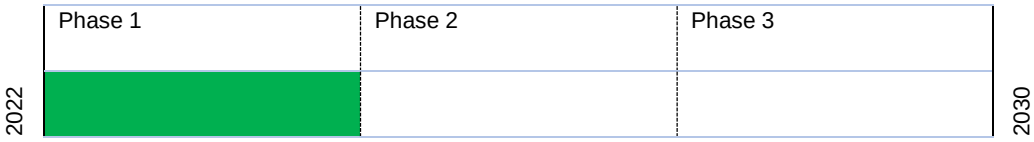
Theme	Barrier	Idea Source[265]
Governance	Lack of political will to implement 'difficult' measures like Low Emission Zones due to their (perceived) low public acceptability.	S
Governance	EU may be perceived to be too distant from the local and regional level.	S
Clean vehicles	EU focuses too much on electromobility to the exclusion of other low-carbon fuels and to the exclusion of reducing travel overall. Many households cannot afford an EV. EVs will not resolve problems related to congestion or using public space in cities by cars. Environmental impacts of battery production are not included in the debate about the benefits of shifting to EVs.	C&S
Greening in general	Lack of willingness to discuss or accept the changes in lifestyle that a true shift to low-carbon transport represents	S

Categorised actions with descriptions

Actions requiring changes in regulation and legislation

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in France. These mainly comprise communication and education activities. All these actions can be implemented immediately.

Theme	Action name	Description	Idea Source[266]

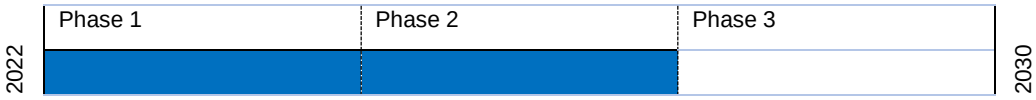
[265] C – Citizens; S – Expert Stakeholders
[266] C – Citizens; S – Expert Stakeholders

Greening transport in general	Education and awareness raising	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution. Use IT and social media to spread the message.	C&S

Actions requiring changes in regulation and legislation

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source [267]
Clean vehicles	LEV purchase incentives	At the national level, setting price caps, reducing VAT for alternatively fuelled vehicles to increase their accessibility and appeal, and providing financial incentives to buy them.	C
	More charging infrastructure for LEVs	Charging infrastructure for different low-emission vehicle technologies	C&S
Better public transport	PT improved	General improvements to quality, speed, price, integration and coverage of public transport, including in rural areas.	C&S
Spatial planning, city develop ment	More bike paths	Current infrastructure is seen as insufficient and unsafe, but that bikes – including electric bikes – have a huge potential to cover short to medium-distance trips.	C&S
Pricing and charges for transport	No suggestions in this category	/	/
Planning and operatio n of transport networks	IT solutions to improve network operation and information	IT solutions (open data sharing, apps, for example) should be used to provide information on pricing, supply, ability to access intermodality, levels of road congestion, and costs of different transport options.	S
Governa nce	No measures suggested	/	/

[267] C – Citizens; S – Expert Stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from French citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source[268]
Clean vehicles	No suggestions in this category	/	/
Better public transport	No suggestions in this category	/	/
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	No suggestions in this category	/	/
Planning and operation of tspt networks	Carpooling schemes	It was felt that there was a significant market for carsharing or carpooling, especially to boost accessibility in rural areas. The regulation and encouragement of this market were considered important.	C&S
Governance	No suggestions in this category	/	/

[268] C – Citizens; S – Expert Stakeholders

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Just Transition

Citizens and stakeholders expressed some concern that the existing inequality between urban and rural areas in terms of transport and accessibility must be considered in implementing EGD policies. The stakeholder expressed the view that, at local and national levels, the difference between socio-economic groups should be considered for sustainable mobility by implementing either progressive price ranges for energy consumption or an individual emission quota. Other than a few more vague suggestions regarding making public transport more available in rural areas and concerns about the equity impacts of EV subsidies, there were no more concrete points on the Just Transition made by stakeholders or citizens.

6.10.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[269] in France to support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[270]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary France's on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[271], France's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €93.4bn. This can be broken down as follows for the EGD priorities:

Increasing renewable energy in buildings	There is funding available for the installation of heat pumps.
Improving energy efficiency in buildings	There is a 30% energy savings target on all measures funded by the NRRP. There are plans to ban oil-fired boilers initially in new buildings and later in existing buildings.
Tax system for energy products aligned to the green transition	There is a tax credit mechanism for small and medium-sized enterprises.
Provide funding for the renovation of buildings	€6.7bn is allocated to building renovation within the 'France Relance' package, of which €5.8bn is financed through the NRRP. €4bn is allocated to schools and public administration, €2bn to private housing, €0.5bn to social housing and €0.2bn to business. For private individuals, funding is open to all with different levels (i.e. the % funded) of aid intensity depending on income levels.

[269] A stakeholder meeting took place on 8 September 2022 and involved one representative from the academia and two representatives from two municipalities.
[270] Dr. Ruth Kerrigan, COO of Integrated Environmental Solutions Ltd.
[271] Ivanova, V. et al. (2021), see note 30, page 61.

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Renovate at least 3% of the total floor area of public buildings annually	A study for the EC estimates that only 1% of residential renovations were medium depth and 0.2% deep; in non-residential only 1.4% were medium and 0.2% deep[272].
Create world-leading companies	The plan does not mention the upskilling of energy and construction professionals or the potential to encourage digitalisation tools in the construction sector.
Raise global ambition to tackle climate change	Not specifically mentioned
Improve health and well-being	Not specifically mentioned
Address inequality and energy poverty	Energy poverty is addressed through the renovation of social housing and higher aid intensity for low-income households.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned
Mobilising industry for a clean and circular economy	The report mentions that climate change adaptation, use of sustainable resources for construction or circularity are not systemically addressed.

The following compares the views of the citizens and the national stakeholders along with France's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Increasing renewable energy in buildings: While funding is available as part of the NRRP for installing heat pumps, there is no high focus on building integrated renewables. Both citizens and national stakeholders felt this should be addressed, with national stakeholders suggesting that citizens and civil society should start to think about how they can produce renewables locally and citizens suggesting that self-consumption should be promoted, particularly for heating.

Improving energy efficiency in buildings: The NRRP targets 30% savings from renovation or other energy efficiency measures and proposes a ban on oil-fired boilers, first in new buildings and later in existing buildings. However, citizens felt there were barriers to achieving these goals, including the following:

- In co-ownership buildings, it is not easy to get agreement between owners on the measures to be taken;
- The regulations on energy consumption in buildings do not go far enough;
- There is no stability on the energy price for those who renovate their buildings and hence no assurance of the payback time on the renovation cost if energy prices change.

Citizens made some suggestions for how energy efficiency uptake could be improved. They suggested the promotion of living in smaller spaces that consume less energy. National stakeholders agreed with this view, stating that people living in smaller housing should

[272] European Commission (2019), see note 31, page 61.

receive better incentives. They also suggested that property owners should be mandated to renovate their buildings if renting. National stakeholders agreed with this view that there should be a ban on renting any property with a rating of less than an E. National stakeholders felt tenants should also benefit from the renovation of the apartment. In addition, they mentioned that various policies have made renovation mandatory for buildings with an energy efficiency rating of G.

Tax system for energy products aligned to the green transition: Citizens suggested that there should be higher carbon taxes for polluting companies which should go back into funding the building energy renovation.

Provide funding for the renovation of buildings: There is significant funding allocated to the renovation of buildings, from which a high percentage (~30%) is attributed to private housing. However, citizens mention that renovation costs are not affordable, especially with increasing energy prices. National stakeholders agreed with this and believed renovation should be 100% funded and that governments should be committed to long-term renovation programmes. National stakeholders also mentioned that third-party financing schemes are being developed so that an institution other than a household covers the costs of the renovation, which could have a positive impact. The France Renov renovation programme seems to be the core programme for renovation funded by the NRRP. However, national stakeholders mentioned that this should be easier for citizens to understand.

Renovate at least 3% of the total floor area of public buildings annually: National stakeholders mentioned that minimal renovation had been implemented so far. There are several obstacles to overcome, some of which are mentioned in the barriers section. Still, they specifically mentioned accessibility and quality of information as two core barriers.

National stakeholders spoke about the Décret Tertiaire[273] (tertiary decree), which will provide an additional budget for state and community buildings for renovation. However, this decree is still to be implemented and could take time. This will provide funds to 30 pilot areas.

Create world-leading companies: National stakeholders mentioned a lack of skilled workers, and renovations are also generally carried out using non-certified devices. However, the NRRP does not plan for initiatives for upskilling of construction and energy professionals. National stakeholders also mentioned barriers to accelerating innovation as construction companies wanting to develop innovative solutions could not do so without incurring high costs for validation and certification of the solution.

Citizens believed that tradespeople doing renovation should be certified. That information on the quality of the renovation by the company carrying it out should be made available when choosing your contractor. Citizens suggested that those providing renovation and energy efficiency solutions should also be educated on tax measures and subsidy schemes and provide advice on renewable energy schemes. National stakeholders agreed there should be recognised labels for qualified and component experts, which could help increase citizens' trust in renovation companies.

Raise global ambition to tackle climate change: Citizens suggested campaigns to change the culture and encourage citizens to lower the temperature and put on an extra jumper or promote physical activity to warm up the individual instead of turning the heat on.

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[273] More information available on https://www.decret-tertiaire.fr/#/.

Mobilising industry for a clean and circular economy: National stakeholders mentioned that the carbon footprint of materials used in renovation should be tracked and that combining the circular economy with the development of energy labels would be essential.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens for what could be carried out to encourage and enable greater adoption of the EGD. As can be seen, there are no longer-term actions suggested. However, there are actions across most of the EGD themes except for improving health and well-being and ensuring the Just Transition.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	A ban on increasing rental rates where a heating system is below a certain grade Promotion of local renewable energy production Promotion of self-consumption as a result of renewables National-level commitment to renewable energy programmes
Improving energy efficiency in buildings	Promote measurement and verification of renovation works Campaign to promote behavioural changes to improve energy efficiency Mandate measurement and verification of renovation works Develop framework documents at the local level adapted to the local circumstances Promote living in smaller spaces to use less energy
Tax system for energy products aligned to the green transition	Introduce taxes for companies with high energy use
Provide funding for the renovation of buildings	Improve the process for applying for renovation subsidies Renovation investment programmes that last for several years
Renovate at least 3% of the total floor area of public buildings annually	Use public buildings as an example of successful renovation for others Introduction of one-stop shops to simplify the process of renovation Training for community agents carrying out renovation
Create world-leading companies	Develop a European label for renovation experts Quality assurance of the contractor providing the works Upskilling and training courses for a wide diversity of tradespeople that could move into energy renovation
Raise global ambition to tackle climate change	Education and awareness-raising campaigns Better communication between the state and local communities Awareness campaigns on energy sobriety
Improve health and well-being	No specific actions suggested
Address inequality and energy poverty	Mobilise local support groups to address energy poverty
Ensure a Just Transition that is fair, competitive and green	No specific actions suggested
Mobilising industry for a clean and circular economy	Introduce recovery and ecological transition contracts coupled with renovation investments to ensure a clean and circular economy

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[274]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	Urban planning and development are not connected to climate issues.	S
	Energy policy is based too much on the quantity of renovation rather than environmental performance.	S
	Residential stock is a significant part of buildings, and it is not ea sy to have an impact on it.	S
	It is difficult to identify the tools necessary for renovation, as demonstrated by a survey conducted on the households' perception of energy renovation tools.	S
	Participants mentioned the hurdles caused by the multiple renovation scams (such as 'renovation at 1 €.'[275]), which reduces citizens' trust in renovation projects.	S
	Co-ownership causes a barrier to renovation.	C
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for the renovation of buildings	Applying renovation schemes is too complex, and the process needs to be simplified.	S
	There are multiple funding schemes, and citizens get confused as to which is the correct one to apply for.	S
	Cost of renovation is not affordable.	C
Renovate at least 3% of the total floor area of public buildings annually	Multi-level governance is a major obstacle.	S
	The Regions are responsible for the energy policies, but the inter-municipalities oversee the operations, and they should benefit directly from the financial aid.	S
	The financial issues of public renovation services should be tackled.	S
	There are challenges related to the administrative and political organisation of the energy transition and the establishment of a network of actors involved for the local and national authorities.	S
Create world-leading companies	There is a lack of education in the building sector.	S
	Construction companies that want to develop innovative solutions must pay high costs for validation and certification.	S
Raise global ambition to tackle climate change	There is a lack of visibility and connection between actions taken; the Parisian climate agency gives support at the local level, but it is not common all over the country.	S
Improve health and well-being	No barriers mentioned	/

[274] C – Citizens; S – expert stakeholders
[275] Brent T., Connexionfrance.com (2022). Is the €1 roof and attic insulation offer still available in France. Available at: https://www.connexionfrance.com/article/Practical/Your-Questions/Property/Is-the-1-roof-and-attic-insulation-offer-still-available-in-France (Accessed on 10 January 2023).

Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	There should be more control over materials and resources, for example, tracking the materials' carbon emissions to combine circular economy and energy labels.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as being able to be carried out in the short term with minimal support. These focused mainly on education and awareness campaigns and promoting the measures that citizens can avail of. The use of public buildings as examples of successful renovation was also proposed, along with quality labels for experts.

Theme	**Action name**	**Description**	**Idea Source[276]**
Increasing renewable energy in buildings	A ban on increasing rental rates where a heating system is below a certain grade	Currently, when the energy label of a building is below E, there is a ban on the rental increase if the renovation work is not done. Similar regulations should be implemented concerning the building heating systems within the climate legislation framework.	S
	Promotion of local renewable energy production	Local renewable energy production should be promoted, such as in Marseille, according to the Climate Pact.	S
	Promotion of self-consumption as a result of renewables	Self-consumption should be promoted, particularly in heating.	C
Improving energy efficiency in buildings	Promote measurement and verification of renovation works	At a local and national level: grant programmes should be conditional on assessing the energy efficiency of the renovated buildings.	S
	Campaign to promote behavioural changes	Promote behavioural change such as wearing more clothing or carrying out	C

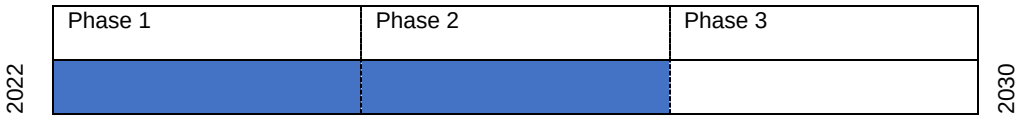
[276] C – Citizens; S – expert stakeholders

	to improve energy efficiency	physical activity to warm up instead of turning the heating on.	
Provide funding for the renovation of buildings	Improve the process for applying for renovation subsidies	Renovation plans should be easy to understand. Clear information should be provided on how to improve energy efficiency and the available public aid and tax credits.	S
	Renovation programmes that last several years	Renovation investment programmes should last several years to benefit the green transition without political barriers such as change in government who subsequently change the programmes.	S
Renovate at least 3% of the total floor area of public buildings annually	Use public buildings as an example of successful renovation for others	The renovation of public buildings should be set as an example and advertised to build trust in citizens.	S
Create world-leading companies	Develop a European label for renovation experts	A European label for renovation experts should be created at the EU level.	C&S
	Quality assurance of the contractor providing the works	Information on the quality of renovation should be provided.	C
Raise global ambition to tackle climate change	Education and awareness-raising campaigns	Communication must be strengthened and deployed through large-scale campaigns conducted by the State. The participants emphasised the importance of this action, which is inexpensive and effective.	
	Better communication between the state and local communities	The State and the communities should implement better communication.	S

Actions that can be carried out now with minimal support

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and may require government support. These focused more on mandates and obligations for different groups, for example, commitments at the national level for renewable energy projects, mandates for measurement and verification of renovation works, framework documents at the local level, taxes for companies using too

much energy etc. Actions for upskilling and training programmes and education and awareness campaigns were also suggested, as the introduction of one-stop shops.

Theme	Action name	Description	Idea Source[277]
Increasing renewable energy in buildings	National-level commitment to renewable energy programmes	At the national level, the government should commit to renewable energy programmes.	S
Improving energy efficiency in buildings	Mandate measurement and verification of renovation works	At a local level: the energy retrofit regulations and their constraints should be strengthened. In particular, an obligation should be put in place to verify the results of renovation in terms of energy performance by making a qualitative and not quantitative evaluation.	S
	Develop framework documents at the local level adapted to the local circumstances	Renovation must be able to rely on local framework documents (local urban plans, in particular) adapted to the challenges of the energy transition and climate action. An evolution of these regulations is, therefore, necessary.	S
	Promote living in smaller spaces to use less energy	Change the culture to promote living in smaller spaces that consume less energy.	S
Tax system for energy products aligned to the green transition	Introduce taxes for companies with high energy use	Polluting companies should have to pay higher taxes.	C
Renovate at least 3% of the total floor area of public buildings annually	Introduction of one-stop shops to simplify the process of renovation	The system for accessing public subsidies should be simplified, and a 'one-stop shop' should be created for renovation projects.	S
	Training for community agents carrying out renovation	At the local, regional, and national levels: training programmes should be introduced for community agents. It is also necessary to train the municipalities' agents on the questions that are currently insufficiently addressed by the administrations.	C&S
Create world-leading companies	Upskilling and training courses for a wide diversity of tradespeople that could move into energy renovation	Artisans have a central role and must advise their customers/citizens, but often they do not have the necessary knowledge to do so. It is, therefore, essential to train the whole private sector and companies on the requirements of energy renovation because they are the first interlocutors of the citizens.	S
Raise global ambition to tackle climate change	Awareness campaigns on energy sobriety	Awareness should be raised among the population on energy sobriety. Energy renovation alone is insufficient to reduce CO2 emissions and achieve climate neutrality objectives if consumption does not change.	S

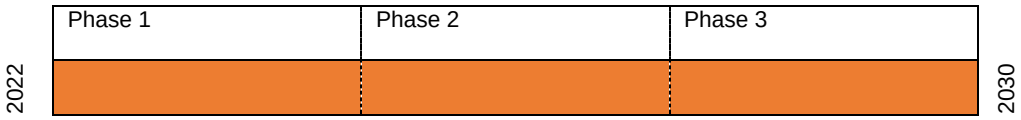
[277] C – Citizens; S – expert stakeholders

Address inequality and energy poverty	Mobilise local support groups to address energy poverty	At the local level: groups such as the ESS (Chambre française de l'Économie Sociale et Solidaire) should be mobilised at the local level to support the most vulnerable groups of citizens (previously Ulysses – SIC coopératives).	S
Mobilising industry for a clean and circular economy	Introduce recovery and ecological transition contracts coupled with renovation investments to ensure a clean and circular economy	At the regional level: recovery and ecological transition contracts should be implemented for programming renovation investments.	S

Actions that can be carried out now with minimal support

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



There were no actions suggested by citizens and stakeholders that would take longer to implement and could need greater government support.

Just Transition

National stakeholders acknowledged that a Just Transition was important for France and that renovation is not currently affordable for all, and only wealthy people can access high-quality experts. They also mentioned that the professional company responsible for the renovation should provide a contractually binding performance guarantee. This will allow users to plan their energy renovation if there is a guarantee of consumption.

6.11 Germany

6.11.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[278] in Germany that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this

[278] A stakeholder meeting took place on 13 October 2022 with one representative from the national government.

document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[279]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Germany pointed out the following policies. While they are not an exhaustive list, they rather serve as an indication of the more visible policies to the stakeholders present.

- The Green German Organic Label, called Grünes Deutsches Bio-Siegel (BMEL.de, 2001)[280]. In addition, different stakeholders have introduced standards to uphold a certain set of environmental and social provisions (e.g. the *Demeter* label[281]). The stakeholders perceived the food labelling system in Germany as confusing for citizens.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key regarding food policy in Germany.

- The Strategy for the Future: organic farming (BMEL.de, 2017)[282] (*Zukunftsstrategie ökologischer Landbau*) is in force since 2017, published by the BMEL (Federal Ministry of Food and Agriculture), clearly states the need for the BMEL's R&I funding to be set within the frame of improving the sustainability of agriculture.

- The Legumes-strategy (BMEL.de, 2020)[283] (*Eiweißpflanzenstrategie*), published in January 2020, seeks to strengthen German competitiveness in the production of legumes and close gaps in research. The legumes strategy includes funding for research and innovation into the production and using legumes.

- The National Strategy for Food Waste Reduction (BMEL.de, 2019)[284] (*Nationale Strategie zur Reduzierung der Lebensmittelverschwendung*) was published by BMEL in 2019. Key actions outlined include supporting the promotion of research and development to reduce food waste, especially using digital transformation's potential.

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[279] Dr Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[280] Federal Ministry of Food and Agriculture, Federal Government of Germany (2001) Bio-Siegel. Available at: https://www.bmel.de/DE/themen/landwirtschaft/oekologischer-landbau/bio-siegel.html (Accessed on 14 November 2022).
[281] Botanic-Organic.com (2022) Demeter. Available at: https://botanic-organic.com/en/143-demeter-germany (Accessed on 14 November 2022).
[282] Federal Ministry of Food and Agriculture, Federal Government of Germany (2017) Zukunftsstrategie ökologischer Landbau. Available at: https://www.bmel.de/SharedDocs/Downloads/DE/_Landwirtschaft/Biologischer-Landbau/zoel-sachstand.html (Accessed on 14 November 2022).
[283] Federal Ministry of Food and Agriculture, Federal Government of Germany (2022). Eiweisspflanzenstrategie. Available at: https://www.bmel.de/DE/themen/landwirtschaft/pflanzenbau/ackerbau/eiweisspflanzenstrategie.html#doc10544bodyText4 (Accessed on 14 November 2022).
[284] Federal Ministry of Food and Agriculture, Federal Government of Germany (2019). Nationale Strategie zur Reduzierung der Lebensmittelverschwendung. Available at: https://www.bmel.de/SharedDocs/Downloads/DE/_Ernaehrung/Lebensmittelverschwendung/Nationale_Strategie_Lebensmittelverschwendung_2019.pdf?__blob=publicationFile&v= (Accessed on 14 November 2022).

General overview of actions per theme

The actions proposed by the German citizens and stakeholders on transforming the current food system in Germany consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production. Finally, the proposed actions are equally distributed regarding implementation period lengths.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement	

Theme	**Action**
Sustainable food production (9)	Education programmes for farmers on protecting humus in agriculture
	Investments in research on innovative methods in sustainable agriculture
	Investments in research on possibilities of using agricultural production for CO2 storage
	Subsidies for sustainable food production
	Investments to make sustainable food production more economically viable
	Investments in carbon-neutral food production
	Incentives for citizens to take up urban farming
	Legislation improving animal welfare at farms
	Development of stricter regulation on the conservation of nature and preservation of soil in agriculture
Sustainable food processing, distribution & retail (3)	Support for farmers to cooperate in regional marketing and join sales cooperatives
	Legislation expanding the labelling system to new aspects of food production
	Development of a taxation system that makes food product prices reflect their environmental costs more closely.
Sustainable food consumption (4)	Education campaigns on sustainable food consumption habits
	Awareness campaigns promoting regional produce and cuisines
	Development of educational workshops for kindergarten and primary school children on healthy and sustainable diets
	Subsidies for schools to introduce organic food in meals
Food loss and waste reduction (3)	Promotional campaigns on ideas to deal with leftover foods in the household
	Legislation on the reduction of food waste
	Regulation obliging food-based businesses to develop plans for the management of leftover food
Ensuring food security (0)	
Combating food fraud (1)	Stricter controls on imports of foods to make sure they fit sustainability standards
Across the entire food cycle (2)	Comprehensive school education on sustainable food systems
	Investments in biodiversity promotion in all components of the food system

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Barrier	Idea Source[285]
Sustainable food production	Food producers face high costs in making their food production processes more sustainable.	C
Across the entire food cycle	Current strategies for food system transformation are too universal and not adjusted to regional specificities within Germany.	S
	Implementation of current policies on food sustainability is cost-intensive and time-consuming for state governments. The coordination process of different levels of government is also more intense compared to other policies.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Germany. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as educational campaigns on sustainable food consumption, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as establishing farmers' cooperatives, may be more difficult to implement but can produce knock-on effects, such as making farmers more powerful negotiators in produce retail.

Theme	Action name	Description	Idea Source[286]

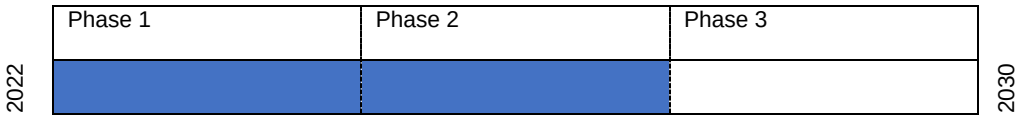
[285] C – Citizens; S – expert stakeholders
[286] C – Citizens; S – expert stakeholders

Sustainable food production	Education programmes for farmers on protecting humus in agriculture	Educational programmes should be organised for farmers to use agricultural methods promoting humus protection and regeneration.	C
Sustainable food processing, distribution & retail	Support for farmers to cooperate in regional marketing and join sales cooperatives	Platforms should be developed to facilitate farmers working together on advertising their products and forming sales cooperatives.	C
Sustainable food consumption	Education campaigns on sustainable food consumption habits	Educational campaigns should be organised to promote positive habits on sustainable and healthy food consumption.	C
	Awareness campaigns promoting regional produce and cuisines	Awareness campaigns should be organised to promote regional food products (e.g., through markets, recipes, and cooperation with chefs in promoting meals with local produce).	C
	Development of educational workshops for kindergarten and primary school children on healthy and sustainable diets	Educational workshops should be developed for young children in kindergartens and primary schools to adopt healthy and sustainable dietary habits.	C
Food loss and waste reduction	Promotional campaigns on ideas to deal with leftover foods in the household	Promotional campaigns should be organised to present ideas on utilising food leftovers to reduce food waste.	C
Combating food fraud	Stricter controls on imports of foods to make sure they fit sustainability standards	Imported foods should be subjected to stricter product quality controls to conform to German sustainability standards.	C
Across the entire food cycle	Comprehensive school education on sustainable food systems	Schools should introduce comprehensive education on food systems (e.g., food sources, cooking, reducing food waste and others).	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through subsidies for farmers and local food producers, as well as research on various aspects of the food system. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[287]
Sustainable food production	Investments in research on innovative methods in sustainable agriculture	Investments should be made in research on new innovative methods that could be used to enable more sustainable agriculture.	C
	Investments in research on possibilities of using agricultural production for CO2 storage	Investments should be made in research on using agriculture to sequester CO2.	S
	Subsidies for sustainable food production	Subsidies should be made more widely available for farmers taking up sustainable food production methods.	C
	Investments to make sustainable food production more economically viable	Through subsidies and streamlining processes, investments should be made to make sustainable production more viable.	S
	Investments in carbon-neutral food production	Investments should be made in transforming food production into a carbon-neutral process (e.g., through investments in renewable energy production and energy efficiency).	S
	Incentives for citizens to take up urban farming	Citizens should be incentivised to take up urban farming (through tools, financial subsidies, and workshops).	C
Sustainable food consumption	Subsidies for schools to introduce organic food in meals	Schools should be subsidised in introducing organic, healthy, and sustainable meals.	C

[287] C – Citizens; S – expert stakeholders

Across the entire food cycle	Investments in biodiversity promotion in all components of the food system	Investments should be made to preserve and improve biodiversity in all food system components.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulation of sustainable food production, price structuring, labels on food products and the welfare of farm animals.

Theme	Action name	Description	Idea Source[288]
Sustainable food production	Legislation improving animal welfare at farms	New legislation should be introduced to guarantee the welfare of farm animals and improve their living conditions.	C
	Development of stricter regulation on the conservation of nature and preservation of soil in agriculture	New legislation should be introduced to ensure the conservation of nature and soil in agricultural processes (e.g., restrictions on fertilisers, erosion control, limitation on monoculture practices, ensuring soil rest periods).	C
Sustainable food processing, distribution & retail	Legislation expanding the labelling system to new aspects of food production	The food labelling system should be expanded to include animal welfare and climate protection labels.	C&S

[288] C – Citizens; S – expert stakeholders

	Development of a taxation system that makes food product prices reflect their environmental costs more closely.	Food taxes should make carbon-intensive food products (e.g., red meat) much more expensive and make sustainable (organic, local) products more affordable.	S
Food loss and waste reduction	Legislation on the reduction of food waste	New legislation should be introduced with ambitious targets for reducing food waste and new food waste management methods.	C
	Regulation obliging food-based businesses to develop plans for the management of leftover food	Food-based businesses like restaurants and bakeries should be obliged to develop plans to manage the regular leftover food to prevent excessive food waste.	C

Just Transition

Citizens pointed out that the expected increase in prices of sustainable and healthy food products to follow the sustainable food transition will make it difficult for citizens with more vulnerable socio-economic backgrounds to afford healthy, high-quality food.

Furthermore, the gradual abandonment of meat consumption will come as a difficult cultural change, especially for the communities engaged in meat production who perceive meat production as a part of their cultural identity and a source of economic independence.

6.11.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[289] in Germany that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[290]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[289] A stakeholder meeting took place on 13 October 2022 and involved a representative from the national government, an academic, a representative from an NGO and a representative from a municipality.
[290] Prof Tom Rye, Molde University College, Norway.

Summary of Germany's policies on the EGD and Citizen and National Stakeholder Reports

In the recent past, Germany has introduced several policies to reduce emissions from the transport sector. In January 2021, it introduced its own national emissions trading and carbon pricing scheme, which has increased the price of fossil fuels in transport[291]. It has a strong programme for electrification of the transport sector but is also investing heavily in the broadband rollout to promote the ubiquitous access to sources of information and digital services which reduces the need to travel and allows the development of intelligent mobility. The Environment Ministry has, for the past ten years, been part-funding projects around the country to reduce carbon emissions from the transport sector at the local and regional level, including vehicle electrification and the funding of sustainable urban mobility plans (SUMPs)[292]. Recently, the tax on rail fares was reduced, the tax on domestic airfares increased, subsidies for regional and local public transport increased and fares have been reduced, and there is a EUR 86 billion investment programme for the rail network to 2030[293]. Germany is spending EUR 5.5 billion of Recovery Funds on stimulating the uptake of EVs and hydrogen vehicles by private individuals, the public sector and businesses, replacing polluting public transport vehicles, and extending the network of charging stations across the country[294]. In addition, EV owners enjoy a new 10-year tax exemption[295].

The workshops with citizens and stakeholders revealed that they support most of the measures being taken at the national and EU level, except for the view that there is too much emphasis on electric vehicles – citizens doubted their environmental benefits and were concerned about the impacts of battery manufacture. In general, citizens were also willing to see more restraint on and taxation of polluting modes of transport, such as air travel, and reductions in car access to urban areas. In more detail:

- ***Citizens*** strongly believed that public transport should be improved, reorganised, and made accessible and affordable in both urban and rural areas (they were concerned about the exclusion of rural residents in a green transport transition). Cycling infrastructure should be improved to make it a safe and easy alternative; one way to do this, which was met with support among the citizens' group, was argued to be restrictions on the use of cars in urban areas and city centres. The group was also in favour of purchase subsidies for EVs and improved charging infrastructure, although there was some scepticism about the environmental-friendliness of battery production.

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[291] Cf. the German Environment Agency's website at https://www.dehst.de/EN/national-emissions-trading/national-emissions-trading_node.html.

[292] The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) contributed to the development of a Sustainable Urban Mobility Plan (SUMP) within the framework of the MobiliseYourCity partnership,
cf. AFD, MobiliseYourCity Secretariat (2020). MobiliseYourCity – Sustainable Urban Mobility Plan (SUMP) Model Terms of Reference (2020). Available at: https://www.mobiliseyourcity.net/sites/default/files/2020-03/MobiliseYourCity_SUMP_Model_ToR-Final.pdf (Accessed on 27 November 2022).

[293] Federal Ministry of Transport and Infrastructure, Federal Government of Germany (2020). Logistics 2030 Innovation Programme. Available at: https://bmdv.bund.de/SharedDocs/EN/Documents/G/logistics-2030-innovations-programme.pdf?__blob=publicationFile (Accessed on 27 November 2022).

[294] European Commission (2021). Deutscher Aufbau- und Resilienz-plan (DARP). Available at: https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Europa/DARP/deutscher-aufbau-und-resilienzplan.html (Accessed on 27 November 2022).

[295] On German tax incentives on electromobility and funding programs, cf. Verband der Automobilindustrie's (VDA) website at https://www.vda.de/en/topics/economic-policy/taxes/ev-tax and the Federal Office for Economic Affairs and Export Control' website at
https://www.bafa.de/DE/Energie/Energieeffizienz/Elektromobilitaet/elektromobilitaet_node.html and
https://www.bafa.de/DE/Energie/Energieeffizienz/Elektromobilitaet/elektromobilitaet_node.html.

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They were willing to reduce air travel and give up car ownership if alternatives were improved, particularly if public transport offered greater personal security.

- ***Stakeholders*** generally agreed with the suggestions from citizens and added a few other points, although it debated the benefit of lower prices on, or even free, public transport.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue: to implement further	Actions requiring grants and incentives that need government support
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	**Action**	**Idea source**[296]
Clean vehicles	EV purchase incentives, income-related	C&S
	Purchase incentives for electric bikes	S
	Energy supply planning	S
Better public transport	Faster, cheaper and more extensive PT network	C&S
Spatial planning and city development	More bike paths	C&S
	15-minute city	C
Pricing and charges for transport	Make all grants and subsidies income-related	C&S
	Taxation of polluting transport modes	C
Planning and operation of transport networks	Restraint of private motor vehicle traffic in cities	
Governance	*No suggestions in this category*	
Greening transport in general	Education and awareness raising on green mobility by the EU	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made a small number of points. These do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

[296] C – Citizens; S – Expert Stakeholders

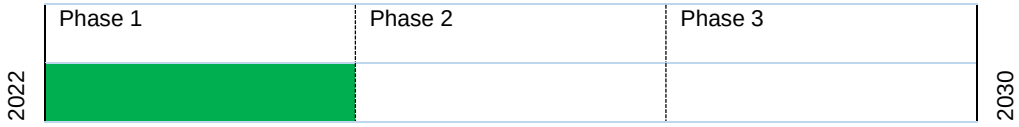
Theme	Barrier	Idea Source[297]
Planning and operation of transport networks	The long time for improving and expanding rail infrastructure.	S
Governance	An excessive focus by the EU on economic issues to the exclusion of environmental/ecological priorities.	S
Pricing and charges for transport	EU policies considered to work against the EGD, such as an unwillingness to tax aircraft fuel (the ETS for the airline sector was not mentioned).	S
Greening transport in general	The lack of alternative fuels for the air and maritime sectors and the 'lock-in' effect of the reliance on these fuels.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Germany. The one action suggested is a communication and education activity, which can be implemented immediately.

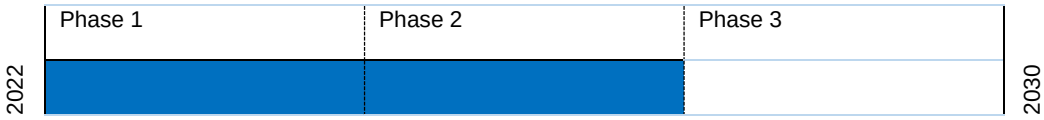
Theme	Action name	Description	Idea Source[298]
Greening transport in general	Education and awareness-raising	Changing people's habits through education and awareness raising about the need for low-carbon mobility behaviour. Few details were provided, but stakeholders stressed that they saw this as an EU responsibility.	S

[297] C – Citizens; S – Expert Stakeholders
[298] C – Citizens; S – Expert Stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer-term are written in italics in the 'action name' column.

Theme	Action name	Description	Idea source [299]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
Better public transport	Better, faster, more secure public transport	Investment in improved public transport capacity and speeds, at the local, regional and national level, with lower carbon-emitting vehicles. The need to make the public transport system secure (from a personal security point of view) was stressed.	C&S
Spatial planning, city developmen t	More bike paths	Few details were provided, but there was a desire to see more people cycling. However, this will only happen if a safer infrastructure is provided.	S
Pricing and charges for transport	Taxation of polluting transport modes	Polluting road vehicles were not specifically mentioned, but there was a desire to see higher rates of tax on aircraft fuel and the proceeds put back into sustainable transport.	S
Planning and operation of transport networks	*No measures suggested*	/	/
Governance	*No measures suggested*	/	/

[299] C – Citizens; S – Expert Stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Some of the proposals from German citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform.

Theme	Action name	Description	Idea source [300]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles.	S
Better public transport	*No suggestions in this category*	/	/
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	Make all grants and subsidies income-related	Regarding a Just Transition, citizens and stakeholders were concerned that subsidies and grants should not disadvantage the poor nor privilege the rich.	C&S
Planning and operation of transport networks	Restraint of private motor vehicle traffic	There should be measures to limit personal car use, such as low-emission zones in cities (which often include an element of pricing).	C
Governance	*No suggestions in this category*	/	/

[300] C – Citizens; S – Expert Stakeholders

Just Transition

Citizens and stakeholders expressed some concern about the possible equality impacts of the transition in mobility, particularly the distributional impacts of subsidies and additional charges and the risk of exclusion of poor people, especially those living in rural areas. Both cited the lack of private-sector investment in EV charging stations in rural areas as an example of the exclusion of these areas. They did provide some suggestions on how to address this:

- Through meaningful participation and consultation, all citizens should be involved and have a voice in the transition process.
- More grants for adaptation to a clean mobility future are required, and they should also be available at a regional and local level. In addition, grants should be shaped as income related.
- Climate-damaging subsidies and privileges should be reduced (the tax break on fuel for air travel, tax breaks for company cars), whilst taxes should incentivise low-emission mobility.
- With income-related subsidies, it should be possible for low-income groups to afford a vehicle powered by electricity or hydrogen. The same applies to bicycles and e-bikes.

6.11.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens or stakeholders in Germany[301] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[302]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Germany's policies on the EGD and Citizen and National Stakeholder Reports

According to the study *Renovate2Recover: How transformational are the National Recovery Plans for Buildings Renovation?* commissioned by the Renovate Europe campaign[303], Germany's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €26bn[304]. In total, Germany plans to invest €140bn in recovery measures, which will come from new and existing grants. The

[301] A stakeholder meeting took place on 13 October 2022 involving three participants, one from the national government, and two from research and education communities.
[302] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[303] Ivanova, V. et al. (2021), see note 30, page 61
[304] European Commission (2021). Deutscher Aufbau- und Resilienzplan (DARP). Documents available at: https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Europa/DARP/deutscher-aufbau-und-resilienzplan.html (Accessed on 28 November 2022).

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funding allocated to the NRRP can be broken down as follows with respect to the EGD priorities:

Increasing renewable energy in buildings	The aim is to achieve additional savings on top of an expected 45% of primary end demand to achieve up to 70% in total through bonuses for renewable energy and energy efficiency.
Improving energy efficiency in buildings	Germany's NRRP plans to reduce emissions by 55% by 2030 which is in line with the EGD goals. The plan is to achieve a deep renovation of 40 000 dwellings by 2026, corresponding to a renovated area of 3 676 000 m². The expectation is that projects will deliver, on average, a minimum of 45% of primary energy demand savings.
Tax system for energy products aligned to the green transition	Not specifically mentioned.
Provide funding for renovation of buildings	€2.6bn is allocated to renovation, which exclusively covers the residential sector. Other funding schemes outside the NRRP cover other building sectors. €57m is allocated to municipal living labs, which are conducting research on the energy transition until 2026. €500m is allocated toward childcare expansion including new buildings and renovation of old buildings.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC based on data collected between 2012 and 2016 estimated that only 0.9% of residential sector renovations in Germany were medium depth and 0.1% deep renovations. For non-residential buildings it is estimated that only 1.3% of energy renovations were medium depth, and 0.2% deep[305].
Create world-leading companies	The plan includes measures for knowledge transfer and training, designed to build knowledge clusters in timber construction methods. There is no further capacity mentioned for other training for the energy and construction professionals.
Raise global ambition to tackle climate change	Not specifically mentioned.
Improve health and well-being	Not specifically mentioned.
Address inequality and energy poverty	It is not clear if the NRRP will target those in energy poverty or low-income households.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned.
Mobilising industry for a clean and circular economy	€20m will support the development of climate-friendly construction with timber.

The following compares the views of the citizens and the national stakeholders along with Germany's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

[305] European Commission (2019), see note 31, page 61.

Increasing renewable energy in buildings: National stakeholders mentioned potential unintended consequences of renewable energy integration in buildings, where the occupants use more energy than before, as now they have more energy available to them. Otherwise, renewable energy in buildings was not discussed at length by citizens or national stakeholders.

Improving energy efficiency in buildings: Citizens mentioned that one of the barriers to improving energy efficiency in buildings is that energy consumption is quite personal to everyone, for example perceived comfort is different for everyone. Citizens also asked if large buildings such as shopping malls and airport terminals are necessary or are they just large wasters of energy.

With respect to tenants and property owners, national stakeholders felt there needed to be a balance between what the owner pays and how the tenant benefits, for example if the tenant always gets the solution at no-cost, this could result in poor behaviour. Both property owners and tenants need to have incentives for successful energy efficiency measures to work.

National stakeholders felt it should be obligatory for a building that has been recently purchased to undergo mandatory renovation before the occupant moves in or an obligation for renovation when a tenant changes.

National stakeholders mentioned that having an inventory of energy efficient private buildings is only mandated in certain regions and should be mandated everywhere.

Provide funding for renovation of buildings: Citizens mentioned there is a need for more information and education on available subsidies. National stakeholders agreed with this view citing that the system for incentives is frayed; there are many different incentives for different technologies which can be difficult for the building owners to understand. There is also no overview at the national level of the available subsidy schemes, which are accessed at the local level.

One of the national stakeholders mentioned that subsidies should be available when the renovation costs are too high and cheaper solutions should be found regarding the supply of materials.

National stakeholders also suggested that the first consultation for energy efficiency measures should be free of charge and consulting services should be offered as a one-stop shop to offer continuous consultation from initial audit to execution.

Renovate at least 3% of the total floor area of public buildings annually: Both citizens and national stakeholders felt that public buildings should lead the way. National stakeholders identified that there is still a conservative nature amongst public administration officials and hence the mindset needs to be changed and climate change measures should be obligatory for municipal buildings.

Create world-leading companies: One of the national stakeholders discussed negative consequences of EGD policies such as social upheaval and the de-industrialisation of Europe, for example the migration of the photovoltaic and wind turbine industries to Asia. As such, there needs to be clear alignment between the policies and the delivery mechanism that is positive for all the EU.

National stakeholders mentioned that overall, there is a general lack of qualified workers to implement measures relating to the EGD, however there are private companies investing and training and existing schemes for upskilling including programmes such as the 'heat pump offensive' where consumers are encouraged to install heat pumps and crafts people are educated to install the technology. There are also existing regional labels for renovation experts. As such, the outlook is somewhat positive but would benefit from further educational and vocational training programmes along with an EU-wide energy expert label.

Address inequality and energy poverty: One of the national stakeholders commented on the negative impacts of the EGD policies, particularly with respect to people on low incomes who live in buildings that need to be renovated. This is not addressed by the NRRP and should be examined further.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	No actions suggested.
Improving energy efficiency in buildings	One-stop shop for energy efficiency projects. Promote the conversion of empty buildings. Public database on renovation activities in buildings. Mandate energy efficiency upgrades when a building is purchased. Advancement of the one-stop shop. Mandate which professional groups need to be engaged with for energy efficiency projects.
Tax system for energy products aligned to the green transition	No actions suggested.
Provide funding for renovation of buildings	Free energy audit consultations. Incentives for downsizing. Review of incentive schemes for different groups.
Renovate at least 3% of the total floor area of public buildings annually	Create case studies for public buildings. Mandate climate protection for municipalities. Adoption on a federal law on municipal heat planning akin to the Baden-Wüttenberg law (where the 103 biggest cities must develop their vision for a fossil-free heat supply by 2050). Municipal heat planning concerns the strategic and long-term vision for communal heating (opposed to individual heating) that determines what fuels to use for energy and heating, the grid structure, etc. Increase the number of qualified experts.
Create world-leading companies	Create an EU-Label for renovation experts. Investment in new technology that reduces the need for experts.

Raise global ambition to tackle climate change	No actions suggested.
Improve health and well-being	Education and awareness raising campaigns.
Address inequality and energy poverty	No actions suggested.
Ensure a Just Transition that is fair, competitive and green	No actions suggested.
Mobilising industry for a clean and circular economy	No actions suggested.

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source** [306]
Increasing renewable energy in buildings	No barriers mentioned.	/
Improving energy efficiency in buildings	Citizens have a different perception of comfort; therefore, it is difficult to find one solution that works for all.	C
	The issues of energy-efficient renovation are diverse and complex. From the perspective of private individuals, it is too much to consider the different aspects of renovation, such as heating, insulation, and power consumption at once. There should be better possibilities for consultation/advice.	S
Tax system for energy products aligned to the green transition	No barriers mentioned.	/
Provide funding for renovation of buildings	Not enough information on subsidies.	C
	It is difficult to find the right information, especially when decisions must be made at short notice, e.g., when it comes to replacing a broken heating system.	S
	Renovation is not affordable for all. Incentives and funding programmes are targeted at a 'typical' house owner, i.e., single-family house, average or high income, but there are many other types of house owners who cannot afford renovation, even when applying for funding.	S
	Continuous change in the financial amount and conditions of funding programmes makes it difficult for people to deal with them. The reason for changes depends on the changing governments. Stability is important. Funding should be long-term and reliable, and the duration of the programme should be communicated clearly. The administrative process for application to	S

[306] C – Citizens; S – expert stakeholders

	funding programmes should also be simplified.	
Renovate at least 3% of the total floor area of public buildings annually	Public sector needs to change its conservative nature with respect to adopting and accelerating measures related to climate change.	S
Create world-leading companies	There is a lack of upskilling and vocational programmes in energy efficiency.	S
Raise global ambition to tackle climate change	There is not enough information and education on sustainability measures.	S
Improve health and well-being	No barriers mentioned.	/
Address inequality and energy poverty	There are not solutions for those on low incomes.	S
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned.	/
Mobilising industry for a clean and circular economy	No barriers mentioned.	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. The suggested actions were diverse, covering topics from the creation of one-stop shops to mandates for energy efficiency upgrades, creating free energy audit consultations and incentives for downsizing, education and awareness campaigns and creating EU energy experts.

Theme	**Action name**	**Description**	**Idea Source** [307]
Improving energy efficiency in buildings	One-stop shop for energy efficiency projects	Consultants for energy efficiency should be responsible for networking, acting as an information hub. Only one institution/person should be the consulting reference for each user and	S

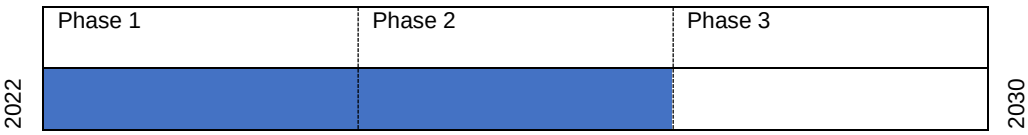
[307] C – Citizens; S – expert stakeholders

		should support them from the initial project to execution.	
	Promote the conversion of empty buildings	Conversion of empty buildings should be promoted, e.g., project 'obsolete city' which identifies obsolete buildings and uses them in different ways.	S
	Public database on renovation activities in buildings	Databases on buildings and renovation activities should be improved.	S
	Mandate energy-efficiency upgrades when a building is purchased	When a building/flat is bought or sold, it should be obligatory to include the duties of energy-efficient renovation in the contract. This could be done via the bank or notary.	S
Provide funding for the renovation of buildings	Free energy audit consultations	The first contact for consultation should be free of charge. The next steps could be charged.	S
	Incentives for downsizing	Incentives should be available for families who live in, or move to, smaller apartments.	S
	Review of incentive schemes for different groups	Funding/incentives should be adapted to different target groups, for example blocks of apartments should receive more funding than single houses.	S
Renovate at least 3% of the total floor area of public buildings annually	Create case studies for public buildings	Public buildings should be set as a model, especially those used by many, e.g., schools.	S
	Mandate climate protection for municipalities	Climate protection should be an obligatory task for municipalities, and relevant investments should be made.	S
Create world-leading companies	Create an EU-Label for renovation experts	EU-label should be introduced for renovation experts.	S
Improve health and well-being	Education and awareness-raising campaigns	More awareness-raising campaigns should be implemented to promote the benefits of renovation on health and comfort.	S

Actions that can be carried out now with minimal support

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government support. There were only

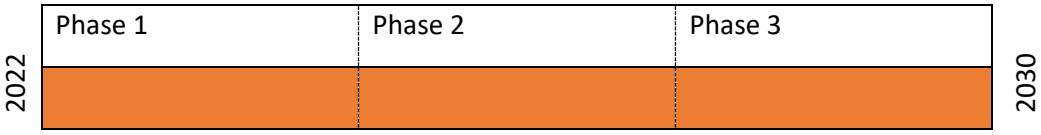
a small number of actions suggested, including advancements to the one-stop-shop approach and further mandates for the need for experts along with a suggestion to invest in technology to remove the need for experts.

Theme	Action name	Description	Idea Source [308]
Improving energy efficiency in buildings	Advancement of the one-stop shop	Consulting campaigns should be followed by implementation programmes.	S
	Mandate which professional groups need to be engaged with for energy efficiency projects	Consultation with certain professional groups should be obligatory, e.g., craftsmen.	S
Renovate at least 3% of the total floor area of public buildings annually	Introduction of municipal heat planning	'Municipal heat planning' developed by cities for achieving fossil-free heat supply by 2050 should be used to inform management decisions.	S
	Increase the number of qualified experts	More and better-qualified experts should be available.	S
Create world-leading companies	Investment in new technology that reduce the need for experts	Concepts that reduce the need for experts should be developed, e.g., industrial pre-processing, and more automatisation.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

There were no actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Just Transition

National stakeholders mentioned that small and medium enterprises could not develop the same level of environmental strategies as large transnational companies and as such more support should be provided. In addition, funding mechanisms do not target low-income groups and favour mid-high level income groups, which tend to also be the well-educated.

[308] C – Citizens; S – expert stakeholders

6.12 Greece

6.12.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens or stakeholders in Greece[309] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[310]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Greece's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Greece did not point to any key food policies on a national level. However, they pointed out the municipal Public Food Council programmes, filling the role of informing local populations on sustainable food production methods, maintaining healthy diets, and other local food initiatives. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of visible policies to the stakeholders present.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission describes the Greek food policy as consisting of interventions by the Ministry of Rural Development and Food to solve social, economic, environmental, and cultural issues in rural regions. The interventions focus on the primary production of safe quality food products, fair trade, and the sustainable use of resources.

General overview of actions per theme

The actions proposed by the Greek citizens and stakeholders on transforming the current food system in Greece consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food production. The proposed actions are mainly focused on short-term, immediate implementation tools such as communication, education, and interaction.

Theme	Action
Sustainable food production (10)	Awareness campaigns on harm of pesticide use
	Skills training for farmers on sustainable food production methods
	More stringent monitoring on use of pesticides and farm animal treatment
	Exchange platforms on sharing best practices in sustainable food production with farmers from other countries
	Subsidies for use of efficient technology in food production

[309] A stakeholder meeting took place on 25 October 2022 involving two representatives from academia.
[310] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.

	Subsidies for local and sustainable food production
	Investments in research on low-energy food production methods
	Subsidies for regenerative agriculture in peri-urban areas
	Development of a national strategy on agro-ecological farming
	Regulation introducing limits on use of harmful substances in food production
Sustainable food processing, distribution & retail (4)	Shortening food supply chains
	Legislation on fair purchase prices from sustainable food producers
	Regulation introducing mandatory information on environmental impact on food labels
	Development of a taxation system reflecting environmental impact of food products
Sustainable food consumption (4)	Awareness campaigns on sustainable and healthy diets
	Promotional campaigns on consumption of local food products
	School education on healthy and sustainable nutrition and meal preparation
	Subsidies for food procurement based on local and seasonal products
Food loss and waste reduction (1)	Awareness campaigns on 'ugly' fruit and vegetables
Ensuring food security (0)	
Combating food fraud (1)	Independent monitoring of food product quality
Across the entire food cycle (1)	Development of more participatory food policy-making processes

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source** [311]
Sustainable food production	Lack of financial support mechanisms for local and small-scale food producers.	S
	Lack of exchange on the know-how between food producers in various European countries.	S
	The current food production subsidies and legislation support food production in large quantities over small-scale quality food production operations.	S
Sustainable food consumption	Many customers find organic food products unaffordable.	S

[311] C – Citizens; S – expert stakeholder

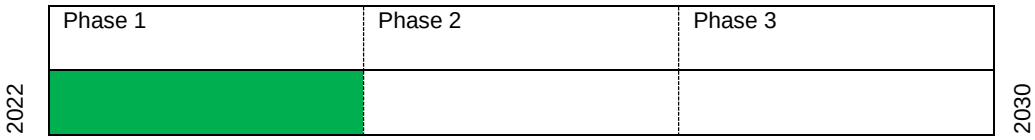
	Consumers are largely uneducated on the importance of healthy and sustainable nutrition.	S
Across the food chain	Current intensive food trade mechanisms favour short-term production and profit over environmental wellbeing and consumer health.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Greece. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as awareness campaigns on consumption of local products, are easy to implement (low-hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as more stringent food product quality monitoring, may be more difficult to implement successfully, but can produce knock-on effects in raising the overall food quality.

Theme	Action name	Description	Idea Source[312]
Sustainable food production	Awareness campaigns on harm of pesticide use	Awareness campaigns should be organised on the harm of pesticide use in food production.	C
	Skills training for farmers on sustainable food production methods	Skills-based training should be provided for farmers on sustainable methods of food production (e.g., permaculture, no-till agriculture).	C
	More stringent monitoring on use of pesticides and farm animal treatment	More stringent monitoring should be carried out on the use of pesticides and animal treatment in food production operations.	C

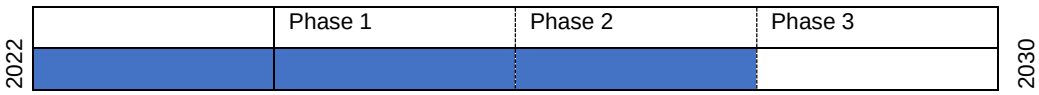
[312] C – Citizens; S – expert stakeholders

	Exchange platforms on sharing best practices in sustainable food production with farmers from other countries	Exchange platforms should be developed for farmers to share the best practices in sustainable food production with farmers from other countries.	C&S
Sustainable food consumption	Awareness campaigns on sustainable and healthy diets	Awareness campaigns should be organised on sustainable and healthy dietary habits through Public Food Councils (e.g., campaigns on addressing food overconsumption).	C
	Promotional campaigns on consumption of local food products	Promotional campaigns should be organised to encourage consumers to buy more locally produced food.	C
	School education on healthy and sustainable nutrition and meal preparation	School education should be organised for students to learn how to maintain healthy and sustainable nutrition, as well as how to cook healthy meals.	C
Food loss and waste reduction	Awareness campaigns on 'ugly' fruit and vegetables	Awareness campaigns should be organised on the safety of consuming 'ugly' produce to reduce unnecessary food waste.	C
Combating food fraud	Independent monitoring of food product quality	Independent monitoring mechanisms should be developed to ensure the quality of food products.	C
Across the entire food cycle	Development of more participatory food policy-making processes	Food policy should be made through more participatory mechanisms on all stages of the policy-making process, from goal setting to implementation.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

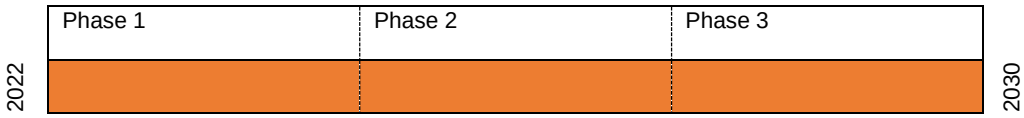
This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly scaled up with incentives.

Theme	Action name	Description	Idea Source [313]
Sustainable food production	Subsidies for use of efficient technology in food production	Subsidies should be provided for implementation of efficient technologies and machinery in food production.	C
	Subsidies for local and sustainable food production	Subsidies should be provided for local and sustainable food production.	C
	Investments in research on low-energy food production methods	Investments should be made in research on low-energy food production methods.	C&S
	Subsidies for regenerative agriculture in peri-urban areas	Subsidies should be provided for implementation of regenerative agriculture in peri-urban areas (e.g., to prevent desertification).	C&S
Sustainable food processing, distribution & retail	Shortening food supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g., reducing shipping routes, food processors and others) as well as reorient them towards sustainable methods.	C
Sustainable food consumption	Subsidies for food procurement based on local and seasonal products	Subsidies should be provided for procurement of food based on local and sustainable products (e.g., to be used in school meals).	C&S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus coming with the longest development period before they can be implemented. Accordingly, these actions depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include taxation tools as well as development of various regulatory tools.

[313] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [314]
Sustainable food production	Development of a national strategy on agroecological farming	A national agroecological farming strategy should be developed to support more sustainable food production (e.g., through promotion of biodiversity in food production).	C&S
	Regulation introducing limits on use of harmful substances in food production	Regulation should be developed, introducing mandatory limits on the use of harmful substances in food production (e.g., chemical fertilisers, pesticides, and antibiotics).	C&S
Sustainable food processing, distribution & retail	Legislation on fair purchase prices from sustainable food producers	Legislation should be introduced ensuring fair purchase prices by supermarkets of sustainable and local produce.	C
	Regulation introducing mandatory information on environmental impact on food labels	Regulation should be introduced making it mandatory for food product labels to include information on environmental impact of the product (e.g., carbon impact, shipping distances).	C&S
	Development of a taxation system reflecting environmental impact of food products	A taxation system should be developed, making food product prices correspond more closely to their environmental impact (e.g., through higher taxation of meat).	C&S

Just Transition

The transition to sustainable food production methods will impact small-scale food producers and traditional producers more severely than large companies. Therefore, compensatory measures should be ensured to support those groups in developing more sustainable food production processes.

6.12.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[315] in Greece that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[316]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[314] C – Citizens; S – expert stakeholders
[315] A stakeholder meeting took place on 25 October 2022 and involved one national authority.
[316] Prof Tom Rye, Molde University College, Norway.

Greece has had several policies in place to reduce its transport greenhouse gas emissions for some years. These are listed in the 2020 Fourth Biennial Report Under the United Nations Framework Convention on Climate Change (Greek Ministry of Environment, 2020) and include reference to major road construction; investment in over 300km of new regional long-distance rail lines; investment in local public transport such as two new Athens metro lines and another in Thessaloniki; sustainable urban mobility plans; electric vehicle incentives and charging infrastructure; and increasing the use of biofuels in transport[317]. In addition, national plans such as the National Climate Law[318], National Accessibility Plan[319], National Plan for Transportation[320] and National Strategy for Cycling[321] have already been initiated. Greece is spending EUR 618 million of Recovery Funds on stimulating the uptake of EVs and hydrogen vehicles by private individuals, the public sector and businesses; replacing polluting public transport vehicles; and putting in place 8 000 new EV charging stations across the country[322].

The workshops with citizens and stakeholders revealed general alignment with these national level policies, except for considerable scepticism about the affordability and environmental benefits of EVs. In more detail:

Citizens wanted improvement in public transport (metros in large cities, clean buses in small ones). There was some willingness to see additional environmental taxes (but not increases in fuel tax). Pedestrianisation, cycle lanes, restrictions on the use of cars in urban areas and city centres coupled with park and ride were all supported. The group was also in favour of purchase subsidies for EVs and improved charging infrastructure although there was quite some scepticism about the environment-friendliness of battery production, and whether EVs could ever be made affordable for the majority of citizens. There was support for information campaigns on the issues of sustainable mobility and for policy consultations with the involvement of all stakeholders to achieve inclusion. They also thought it would be necessary to enhance the regulatory and legal framework to support the implementation of the measures, as there was scepticism about the Greek government's ability to deliver schemes. In addition, participants wanted a legal framework for teleworking.

The single ***stakeholder*** generally agreed with the suggestions from citizens, but also wanted to see faster delivery of sustainable urban mobility plans (SUMPs). The development of multimodal public transportation, including new metro stations, trams, electric buses, railway systems etc., was considered essential, along with pedestrianisation

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[317] Ministry of Environment and Energy, Government of Greece (2020). Fourth Biennial Report under the United Nations. Framework Convention on Climate Change. Available at: https://unfccc.int/sites/default/files/resource/BR4_Greece.pdf (Accessed on 28 November 2022).
[318] Government of Greece (2022). ΝΟΜΟΣ ΥΠ' ΑΡΙΘΜ. 4964 [Law no. 4964/2022, National Climate Law – Transition to climate neutrality and adaptation to climate change, urgent provisions to address the energy crisis and protect the environment]. Available at: http://extwprlegs1.fao.org/docs/pdf/gre212045.pdf (Accessed on 28 November 2022).
[319] Ministry of Environment and Public Works, Government of Greece (2008). Greek Accessibility Guidelines from the Ministry of Environment and Public Works. Available at: https://www.accessibletourism.org/?i=enat.en.greece_public_authorities_and_tourist_boards.403 (Accessed on 28 November 2022).
[320] Ministry of Infrastructure and Transport, Government of Greece (2019). National Transport Plan for Greece. Available at: http://www.nationaltransportplan.gr/wp-content/uploads/2019/06/Final_NTPG_en_20190624.pdf (Accessed on 28 November 2022).
[321] The strategy was first initiated by the Greek Ministry of the Environment and announced in 2020, cf. https://ypen.gov.gr/to-podilato-apokta-ethniki-stratigiki/.
[322] European Commission (2022), see note 255, page 249.

schemes. Lastly, promoting electric cars should go together with an effective electric vehicle charging scheme. Additionally, the EU should promote all renewable energy sources, including geothermal energy, biogas, and hydrogen.

Both citizens and stakeholders were keen on what they called 'decentralisation' of towns and cities. It appears that this referred mainly to the idea of repopulating small towns, with less of a focus on Athens and Thessaloniki, and within those towns creating neighbourhoods of short distances where sustainable travel would be convenient.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[323]**
Clean vehicles	EV purchase incentives	C&S
	EV charging infrastructure	
Better public transport	Cleaner, newer, more comfortable PT vehicles	C&S
	Better PT information	C
	PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	C
Pricing and charges for transport	Taxation of polluting vehicles	S
	Restraint of private motor vehicle traffic in cities	S
Planning and operation of transport networks	PT network improvement	C&S
	Park and ride	S
Governance	More support for sustainable urban mobility plans (SUMPs)	S
	Encouraging and/or requiring teleworking	S
Greening transport in general	Information campaigns on the issues of sustainable mobility	S
	Large-scale policy consultations	S
	EU should further support intensive cooperation between cities to exchange best practices and know-how in the fields of green transition	S

Barriers to EGD implementation

Citizens mention barriers to EGD implementation such as their perception that national government is neither effective nor transparent, and also the cost of EVs. The stakeholder also made several points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example nobody spoke

[323] C – Citizens; S – expert stakeholder

about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Barrier	Idea Source[324]
Governance	General mistrust of government in terms of transparency of decision making and ability to spend money wisely; and ability to protect heritage and the environment.	C
Governance	Overlapping responsibilities between different government bodies, and an unnecessarily bureaucratic approach, that slow things down.	S
Governance	The difference between southern European and northern European states is not always well understood or appreciated in Brussels. There is a need for more country-specific policies.	S
Governance	The National Transportation Plan should become more flexible in promoting all sustainable means of transportation, rather than being heavily focused on roads and shipping.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Greece. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source[325]
Greening transport in general	Education	Changing people's habits through education and awareness raising about the need for and benefits of more low-carbon travel.	C&S

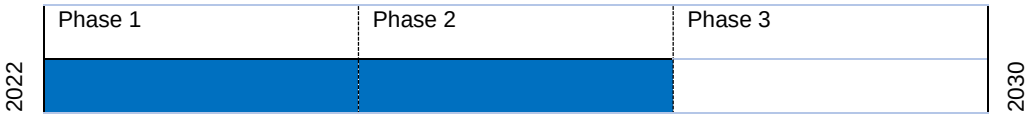
[324] C – Citizens; S – expert stakeholders
[325] C – Citizens; S – expert stakeholders

	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations to help reaching the mobility goals of the EGD.	S
	Consultation and participation	There is a perception that decisions in Greece about low-carbon transport policies and measures are made without reference to the views of the public. The stakeholder made a strong case for more participatory and inclusive planning methods.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have impact in the medium term.



Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column 'action name'.

Theme	Action name	Description	Idea source[326]
Clean vehicles	(L)EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles. However, there was concern that EVs would always be too expensive for most people and that subsidies should also address other technologies.	C&S
	EV charging infrastructure	There is currently very little of this in Greece, and this contributes to range anxiety.	C&S
Better public transport	Cleaner, newer, more comfortable PT vehicles	Investing in new, electric and more comfortable public transportation vehicles to reduce local air pollution and attract people to public transport.	C&S
	Better PT information	It was pointed out that IT could be deployed to better share and disseminate public transport information.	C
Spatial planning, city development	More bike paths	Cycle infrastructure is significantly lacking in Greece at the moment but could play an important role in urban mobility.	S

[326] C – Citizens; S – expert stakeholders

Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional and national level.	C&S
	Park and ride	Linked to the above, park and ride sites to reduce demand to drive into urban areas.	S
Governance	No measures suggested		

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Many of the proposals from Greek citizens and experts require policy changes and regulations in order to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [327]
Clean vehicles	No specific suggestions		
Better public transport	PT integration	Better planning and coordination of public transport routes and integration of ticketing to provide a joined-up service.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C

[327] C – Citizens; S – expert stakeholders

Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrain personal car use, such as low emission zones in cities (which often include an element of pricing). This would represent a further development and enhancement of some of the measures that Athens has already piloted.	S
Planning and operation of tspt networks	No specific suggestions		
Governance	More support for sustainable urban mobility plans (SUMPs)	Cooperation within and between municipalities in implementing sustainable urban mobility plans (SUMPs) (for example, the development of bicycle infrastructure connecting municipalities), can be encouraged with financial support and expertise from the national level.	S
	Encouraging and/or requiring teleworking	Citizens were keen to see the experience of home working in the pandemic maintained and formalised.	C&S

Just Transition

Regarding the Just Transition, citizens were concerned about the equity aspects of EV subsidies and the fact that most EVs are priced out of the reach of the vast majority of the population. The stakeholder was similarly concerned, but also made the following points.

- There seems to be no viable transport option for many citizens other than private vehicles, especially for those living in peri-urban and rural areas.
- There is a need to include special categories and underprivileged groups (such as poorer groups and disabled people) in all thinking and policy about the transition to low-carbon transport.
- Participatory planning should be at the core of every initiative, and all policy-making and effective monitoring mechanisms should be developed to ensure a fair transition.

6.12.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens or stakeholders in Greece[328] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission329. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[328] A stakeholder meeting took place on 25 October 2022 involving two National authorities.
[329] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.

Summary of Greece's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover: How transformational are the National Recovery Plans for Buildings Renovation?* commissioned by the Renovate Europe campaign[330] Greece's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €17.8bn in grants and €12.7bn in loans. This can be broken down as follows with respect to the EGD priorities:

Increasing renewable energy in buildings	Decarbonisation measures focus on renewable energy generation and electricity network resilience rather than deployment of building-level technologies.
Improving energy efficiency in buildings	There is a minimum target of 30% primary energy savings for the residential sector. There is no minimum energy target for commercial or public buildings and instead targets are largely set in terms of the number of properties to be renovated across the public, private and residential sectors. Savings will be evaluated mainly based on the Energy Performance Certificate (EPC) upgrade however there are still unknown details. There is €73m allocated to the digitalisation of buildings which will link to the promotion of energy management systems and deployment of e-mobility infrastructure.
Tax system for energy products aligned to the green transition	Not specifically mentioned.
Provide funding for renovation of buildings	The NRRP allocates approx. 13% of funding towards energy efficiency improvement to a total of approx. €4.1bn. Total planned budget for energy efficiency measures is estimated at €11bn, which is seen as credible but not ambitious[331]. €1.3bn is allocated for investing in energy savings in homes and €350m is allocated for adaptation and further energy efficiency as part of regeneration plans. A separate Loan Facility will provide close to €1.4bn for energy efficiency and demonstration projects in SMEs or large enterprises alongside €450m in the form of grants. €2bn is provided for the business and commercial sector. €200m is dedicated to public sector buildings and energy infrastructure of public entities. Further funding is allocated for energy renovation of health infrastructure (€189m) and the justice system (€27m).
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC with data from 2012-2016 estimates that only 1.1% of annual renovations were medium depth and 0.2% deep renovations. For non-residential buildings, the estimated number is 2.9% for medium, and 0.4% deep[332].

[330] Ivanova, V. et al. (2021), see note 30, page 61.
[331] European Commission (2022). Energy Poverty National Indicators: Insights for a more effective measuring. Available at: https://energy-poverty.ec.europa.eu/index_en?primaryId=1461 (Accessed on 26 November 2022).
[332] European Commission (2019), see not 31, page 61.

Create world-leading companies	There are programmes proposed for upskilling and training for green skills, but the programmes are still under development.
Raise global ambition to tackle climate change	Not specifically mentioned.
Improve health and well-being	Not specifically mentioned.
Address inequality and energy poverty	The report mentions that an estimated ~18% of the population is unable to keep their homes adequately warm in 2019 according to the EU Energy Poverty Observatory. The NRRP proposes a framework that will introduce monitoring and energy poverty reduction mechanisms to address this. The stated aim is to reduce energy poverty by 50% until 2025 and by 75% by 2030.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned.
Mobilising industry for a clean and circular economy	Not specifically mentioned.

The following compares the views of the citizens and the national stakeholders along with Greece's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

In general, citizens felt that EU directives are not being implemented sufficiently and that there needs to be more cooperation between the local public bodies and local companies to achieve the goals that are being set out. There could also be better urban planning frameworks developed in cooperation with citizens.

Increasing renewable energy in buildings: National stakeholders mentioned that Greece is proactive in encouraging renewables in buildings through programmes offering subsidies for integration of renewables and the implementation of Energy Communities, which was introduced into law (Law 4513/2018). This enables the local community (individuals, SMEs, and local authorities) to contribute to the country's transition towards clean energy sources. They mentioned the importance of long-term commitment to renewables from the government, which is currently happening.

Provide funding for renovation of buildings: Citizens felt there is a lack of information on how to apply for financial aid and renovation is not affordable even with subsidies in place. National stakeholders agreed with this view, citing that renovation should be affordable to all, procedures should be easy to understand and that people living in smaller houses should have greater incentives. National stakeholders mentioned that there should be 100% financing for renovation projects. They also felt that costs of niche labour fees and materials are also high.

National stakeholders were well informed on available subsidy programmes for the renovation of buildings and mentioned a few including:

- The 'savings self-sufficiency programme' funded by the Recovery and Resilience Facility which aims to improve the asset rating of a building through targeted actions.

- The ‘savings-entrepreneurship’ that addresses SMEs in retail, services and tourism which offers improvements for energy performance, energy management and automation, and integration of renewable technologies.

- The ‘Electra’ programme which aims to improve energy performance by 30% of primary energy consumption.

National stakeholders felt that tenants should benefit from the renovation of a home. There was also a need for access to energy experts and the view was that access to experts was only for those on high incomes.

Renovate at least 3% of the total floor area of public buildings annually: National stakeholders felt that more incentives for the upgrade of public buildings was needed. One way to address this could be facilitation of public-private partnership models.

Create world-leading companies: National stakeholders mentioned there is a shortage of skilled workers and specialists, and the sector is not competitive or attractive enough. They felt the creation of an EU wide energy expert label would encourage more companies to enter the renovation and renewables markets.

Raise global ambition to tackle climate change: Citizens felt there was a lack of information in general and that more education on how energy efficiency affects our lives and that of future generations was needed. National stakeholders mentioned the need for promoting successful energy efficiency projects to encourage others to do the same. They also mentioned the need for educational programmes from early education upwards to support society in understanding the benefits.

Mobilising industry for a clean and circular economy: Citizens suggested there should be solutions to recycle industrial waste into energy. National stakeholders highlighted that there is a recycling programme in Greece that finances the substitution of old electric devices with new, environmentally friendly, and energy-efficient ones.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. As can be seen there are several actions presented across the whole timeline to 2030 and covering most areas with the exception of the tax system for energy products aligned with the green transition, improving health and well-being, and ensuring the Just Transition.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Increased commitment to and implementation of renewable energy sources.
Improving energy efficiency in buildings	Cooperation between local public bodies and local companies to achieve the goals of the EGD. Data platforms provide accurate information on how to undergo an energy efficiency project. Energy consumption contracts following renovation works carried out. Creation of a support framework for the green transition. Multi-disciplinary approach to the green transition, with cross-sectoral engagement. Stricter legal framework for the energy performance standards of buildings.
Tax system for energy products aligned to the green transition	No actions suggested.
Provide funding for renovation of buildings	Additional and improved financial incentives beyond the current mechanisms. Renovation for all including urban and rural areas. Review of existing financing schemes resulting in continuation and improvement. Introduce finance schemes to address the number of people in homes. Incentives for those living in smaller houses to encourage downsizing and avoiding the construction of larger homes. Financial support for those complying to the EU taxonomy regulation.
Renovate at least 3% of the total floor area of public buildings annually	Public-private partnerships for renovation and energy upgrade of buildings. Greater incentives for public buildings.
Create world-leading companies	Create an EU wide renovation expert label.
Raise global ambition to tackle climate change	Education and awareness campaigns. Local and regional government campaigns to raise awareness. Awareness-raising campaigns around successful public building renovations.
Improve health and well-being	No actions suggested.
Address inequality and energy poverty	Policy for renovation of properties owned by property owners and occupied by tenants.
Ensure a Just Transition that is fair, competitive, and green	No actions suggested.
Mobilising industry for a clean and circular economy	Technology investment in solutions that recycle industrial waste into clean energy.

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source** [333]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	There are many buildings which are not suitable to upgrade.	C
	EU directives are insufficiently implemented.	C
	Lack of a long-term strategy, which causes instability due to each government's economic and social policies.	S
	Rigidity of regulation and bureaucracy cause scepticism and insecurity among citizens.	S
	Lack of financial motives for the middle and upper classes.	S
	The tenants are afraid to ask for renovations because this may lead to a rent increase. The owners cannot pay the full cost by themselves.	S
Tax system for energy products aligned to the green transition	No barriers mentioned.	/
Provide funding for renovation of buildings	There is a lack of information on how to apply for financial aid.	C
	Renovation is not affordable even with subsidies in place.	C
	Costs of niche labour fees and materials are high.	C
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned.	/
Create world-leading companies	Lack of resources for attracting experts.	S
Raise global ambition to tackle climate change	No barriers mentioned.	/
Improve health and well-being	No barriers mentioned.	/
Address inequality and energy poverty	No barriers mentioned.	/
Ensure a Just Transition that is fair, competitive, and green	No barriers mentioned.	/
Mobilising industry for a clean and circular economy	No barriers mentioned.	/

[333] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. These focused on education and awareness campaigns, data platforms to enable access to information, improved finance mechanisms, public-private partnerships for public buildings, technology investments for a clean and circular economy etc.

Theme	Action name	Description	Idea Source [334]
Improving energy efficiency in buildings	Cooperation between local public bodies and local companies to achieve the goals of the EGD	Create initiatives to encourage and enable cooperation between local public bodies and local companies to achieve the objectives set out by the European Commission.	C
	Data platforms providing accurate information on how to undergo an energy efficiency project	Data platforms should be created to provide accurate information about the actions at the local level, so it is easier for citizens to follow up.	S
	Energy consumption contracts following renovation works carried out	Energy consumption contracts should be assigned to the private sector.	S
Provide funding for renovation of buildings	Additional and improved financial incentives beyond the current mechanisms	Additional financial incentives should be provided to encourage society and house owners to invest in renovations and energy upgrades. The investments should be supported with low-interest loans or co-financed with zero interest rates.	C&S
	Renovation for all including urban and rural areas	It should be possible in both urban and rural areas to apply for renovations.	S
Renovate at least 3% of the total floor area of public buildings annually	Public-private partnerships for renovation and energy upgrade of buildings	Public-private partnerships should be created for the renovation and energy upgrading of public buildings.	S

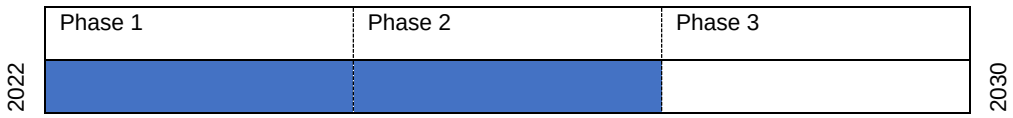
[334] C – Citizens; S – expert stakeholders

	Greater incentives for public buildings	Countries must be stimulated to renovate public buildings through incentives and financing.	S
Raise global ambition to tackle climate change	Education and awareness campaigns	Education on how energy efficiency affects our lives and that of future generations is needed. Renovation actions must be easily understandable: clear instructions and benefits of the renovation must be provided to all interested parties. Information on the economic benefits of renovation and available technologies and their impact is needed. They should also promote: The interrelation of renovations and energy upgrading actions with the objectives of the EGD. The knowledge transfers about a) how energy efficiency influences quality of life, b) the economic benefits in a simple and practical way, and c) the new technologies and their role in the transition.	C&S
	Local and regional government campaigns to raise awareness	Local and regional governments should promote the incentives, financing opportunities and benefits of energy-efficiency programmes.	S
Address inequality and energy poverty	Policy for renovation of properties owned by property owners and occupied by tenants	Ensure that the cost of renovation is not passed on to the tenant. The renovation costs should be shouldered by the owners without indirectly affecting tenants. The benefits must be made clear to both parties.	C&S
Mobilising industry for a clean and circular economy	Technology investment in solutions that recycle industrial waste into clean energy	Invest in solutions that recycle industrial waste into energy.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government support. There were only

a few actions suggested which focused on improvements and introductions to the existing finance schemes, the creation of an EU wide renovation expert label and further awareness and educational campaigns.

Theme	Action name	Description	Idea Source [335]
Provide funding for renovation of buildings	Review of existing financing schemes resulting in continuation and improvement	Continuation of financing schemes and programmes: programmes like 'EKSOIKONOMO' must continue and be improved in terms of a) beneficiaries, b) co-financing percentage, c) sectors/areas of intervention (i.e., expanding eligibility to cover more actions beyond door/window frames), and d) applications for both old and new buildings.	S
	Introduce finance schemes to address the number of people in homes	The financing schemes should consider the number of family members.	S
Create world-leading companies	Create an EU-wide renovation expert label	Create an (EU-wide) renovation expert label that will support the involvement of competent people and give incentives for specialisation in the field.	S
Raise global ambition to tackle climate change	Awareness-raising campaigns around successful public building renovations	Awareness-raising campaigns: with a focus on investments in public buildings that can offer significant business opportunities to the private sector/companies.	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. There were a few actions suggested which focused on government commitments to renewable energy, frameworks supporting the green transition including multi-disciplinary and cross-sectoral approaches, stricter regulation for energy performance and further financial support for public and private building owners.

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.

[335] C – Citizens; S – expert stakeholders

Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[336]
Increasing renewable energy in buildings	Increased commitment and implementation of renewable energy sources	Commitment to renewable energy sources (RES): the government must be committed to enlarging the use of RES.	S
Improving energy efficiency in buildings	Creation of a support framework for the green transition	Creation of a support framework for the green transition: it should include spatial plans that regulate the built environment, modernise infrastructure (e.g., watering systems), urban renovation, urban green spaces etc.	S
	Multi-disciplinary approach to the green transition, with cross-sectoral engagement	Reduction of bureaucratic procedures: the interaction of society (citizens and companies) with the public sector must be facilitated to encourage them to get involved in the green transition procedures. Sectors that will be involved in activities, such as banks and construction companies, must be supported to provide their services.	S
	Stricter legal framework for the energy performance standards of buildings	Stricter legal framework for the energy-related characteristics of the buildings: the legal framework should become stricter in relation to the energy standards of buildings, while financial incentives for energy upgrades should be provided to the owners during real estate transactions (to avoid further costs for the buyers/tenants).	S
Provide funding for renovation of buildings	Incentives for those living in smaller houses to encourage downsizing and avoiding the construction of larger homes	Improved incentives for small houses: households that live in smaller spaces should receive better incentives.	S
	Financial support for those complying to the EU taxonomy regulation	Support for receiving financing according to EU taxonomy regulation.	S

Just Transition

National stakeholders mentioned the lack of incentive for all social groups to invest in renovation. While lower-income classes are stimulated to participate in various renovation programmes, there are not enough incentives for the middle and upper ones. They also felt

[336] C – Citizens; S – expert stakeholders

that households with fewer people and of a smaller size should have increased incentives compared to larger more crowded homes. Finally, it was also important to protect the tenant through the renovation process and ensure there are no increases in rent.

6.13 Hungary

6.13.1 Sustainable food systems

6.13.1.1 Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[337] in Hungary that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[338]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Hungary's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Hungary did not point out any relevant food policy on a national level. This does not necessarily reflect the actual food policy situation but can indicate the lack of policies visible to the stakeholders present.

Additionally, an Overview of the national R&I food investment landscape carried out by the European Commission points to the following strategies as key pieces of food policy in Hungary.

- New Hungary Rural Development Programme 2012-2020 (Ministry of Agriculture, 2011)[339], managed by the Ministry of Agriculture (MoA). The Strategy focuses on the development challenges of agriculture, rural development, the food sector and environmental protection.

- Medium- and Long-term Development Strategy for the Food Industry (2014-2020) (Ministry of Agriculture, 2014)[340]. Considering the national approach towards the food industry as a strategic sector, Hungary developed a strategy which served as a guide for the MoA and the Government to develop and implement measures for the entire food industry chain.

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[337] A stakeholder meeting took place on 14 September 2022 with one national government representative and one research/academia sector representative. Additional feedback was received in written form by a member of a macro-regional food initiative.
[338] Dr Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[339] Ministry of Agriculture, Government of Hungary (2011). New Hungary Rural Development Programme. Available at: https://enrd.ec.europa.eu/sites/default/files/fms/pdf/BA7A2748-FBA5-23D9-8FC1-A61716C5AD57.pdf (Accessed on 15 November 2022).
[340] Ministry of Agriculture, Government of Hungary (2014). Medium- and Long-term Development Strategy for the Food Industry (2014-2020). Available at: https://elelmiszerlanc.kormany.hu/download/4/db/f0000/%C3%89lelmiszeripari%20Fejleszt%C3%A9si%20Strat%C3%A9gia.pdf (Accessed on 15 November 2022).

- Food Chain Safety Strategy 2013-2022 (Ministry of Agriculture, 2013)[341]. This Strategy encompasses topics along the entire food systems value chain, including knowledge management of food chain safety, control of food chain risks and control of unknown hazards and unacceptable risks.

General overview of actions per theme

The actions proposed by the Hungarian citizens and stakeholders on transforming the current food system in Hungary consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food processing, distribution and retail. Finally, the proposed actions mainly focus on immediate implementation tools (e.g. education, communication and interaction) and medium-term implementation tools (e.g. subsidies and grants).

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (3)	Financial support and making plots of land available for community gardening programmes
	Grants system for sustainable food projects
	Incentives for more people to take up urban farming
Sustainable food processing, distribution & retail (9)	Orienting food advertisements towards healthy food
	Expansion of the Nutriscore label to more products
	Organic products from Hungarian farmers should have priority in supermarket placement compared to comparable imported products
	Introduction of a voucher/points system in supermarkets for purchase of organic and sustainable products
	Shortening the supply chain
	Government grants for food-based businesses transitioning towards zero waste
	Introduction of obligatory certificates on non-seasonal produce Regulation on introduction of a mandatory label for out-of-season produce
	Introduction of new taxes on out-of-season produce sales
	Introduction of minimal purchase quotas of sustainable food products for supermarkets

[341] Ministry of Agriculture, Government of Hungary (2013). Food Chain Safety Strategy 2013-2022. Available at: https://cdn.kormany.hu/uploads/document/f/f0/f0a/f0a7a2bec373d6f9e1c8f33c846f7d8ed1b12351.pdf (Accessed on 15 November 2022).

Sustainable food consumption (4)	Awareness-raising campaigns on a healthy and sustainable diet
	Subsidies for schools for education on sustainable food production, with a practical approach
	Subsidies for expansion of school cafeteria menus Subsidies for diversifying the offer of healthy meals in school cafeterias
	Development of targeted food taxes for unsustainable and unhealthy food products
Food loss and waste reduction (1)	Campaigns sharing best practices on household food waste reduction
Ensuring food security (1)	Investments in decentralised food production to achieve food security
Combating food fraud (0)	
Across the entire food cycle (4)	Educational programmes on various elements of the food system
	Political parties should work on a consensus when it comes to food policy
	Working on the cohesion of food policies with other countries in the region
	Educational programmes for public servants on facilitating food system transformation

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source**[342]
Sustainable food production	Lack of criteria for sustainable food production means current subsidies are not targeted enough.	S
Sustainable food consumption	Low-income people cannot prioritise healthy and organic food because it is too expensive.	S
Across the entire food cycle	Food policies should be harmonised and implemented through a common, cross-sectoral action plan.	S
	Reorientation of long-term sustainability policies is needed in the context of the current energy crisis and war in Ukraine.	S
	Lack of standards and definitions on the EU level (e.g. food waste definition).	C
	Economic inequalities within Hungary and the EU hinder a genuine food system transition.	C
	Public administration is not prepared for systems thinking but instead works in silos.	C

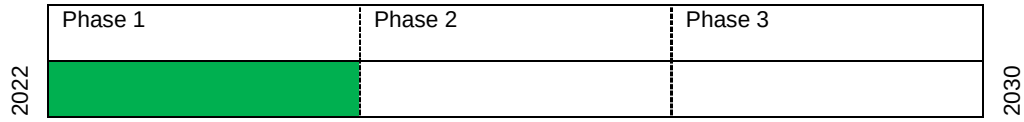
[342] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Hungary. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as healthy food advertisements, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as developing a political consensus of food policy objectives, may be more difficult to implement successfully but can produce knock-on effects, unlocking the potential of more systematic food system projects.

Theme	Action name	Description	Idea Source[343]
Sustainable food processing, distribution & retail	Orienting food advertisements towards healthy food	Food advertisements in supermarkets, billboards and TV should focus on healthy and sustainable food products.	S
	Expansion of the Nutriscore label to more products	The Nutriscore label should be expanded to cover more food products.	C
	Organic products from Hungarian farmers should have priority in supermarket placement compared to comparable imported products	Organic products grown by Hungarian farmers should have priority over imported organic products in negotiations with supermarket chains.	C
Sustainable food consumption	Awareness-raising campaigns on healthy and sustainable diets	Awareness campaigns should be organised by the government and public bodies and institutions on the importance of consuming healthy and	S

[343] C – Citizens; S – expert stakeholders

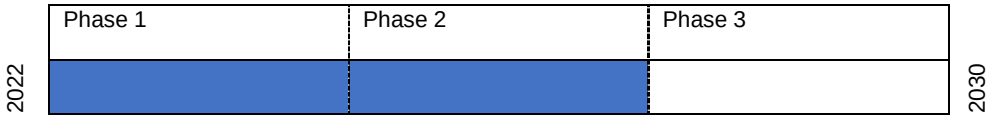
		sustainable food (e.g. previously implemented *Nébih institute* campaigns[344]).	
Food loss and waste reduction	Campaigns sharing best practices on household food waste reduction	Best practices for reducing household food waste should be shared with the wider public through leaflets and awareness campaigns.	C
Across the entire food cycle	Educational programmes on various elements of the food system	Municipalities should launch educational programmes oriented to diverse groups of citizens (e.g. targeting specific age groups and geographical regions) on the different elements of the food system (e.g. food waste, community gardening, healthy diets).	C
	Political parties should work on a consensus when it comes to food policy	Food policy priorities should not be subject to electoral changes. Political parties should therefore work to establish a cross-party consensus on food system transformation.	C
	Working on the cohesion of food policies with other countries in the region	Consultations should be conducted with the neighbouring countries to develop cohesive food system policies (e.g. to prevent unfair competition in sustainable food production).	S
	Educational programmes for public servants on facilitating food system transformation	Public administration should be strengthened to play an active role in the food system transformation through knowledge and skills education for public servants.	S

[344] Nébih.gov.hu (2022). Get to know our office. Available at: https://portal.nebih.gov.hu/hivatalunk/bemutatkozas/ismerje-meg-hivatalunkat (Accessed on 3 December 2022).

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through subsidies for farmers and local food producers, as well as various grants for various improvements in sustainability methods of different food system elements. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[345]
Sustainable food production	Financial support and making plots of land available for community gardening programmes	Municipalities should provide financial support to community garden projects and allocate gardening plots to citizens.	C
	Grants system for sustainable food projects	New, innovative, and sustainable food projects should be supported through public funding schemes.	C
	Incentives for more people to take up urban farming	New urban farmers should be supported with financial grants, plots of land at affordable prices, and tools.	C
Sustainable food processing, distribution and retail	Introduction of a voucher/points system in supermarkets for purchase of organic and sustainable products	Establishment of a voucher/bonus points system for purchases of organic and sustainable products at supermarkets.	S
	Shortening the supply chain	Subsidies to support reducing the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
	Government grants for food-based businesses transitioning towards zero waste	Grants should be made available for food-based businesses (e.g. restaurants, bakeries, supermarkets) attempting to switch to 'zero waste' functioning.	C

[345] C – Citizens; S – expert stakeholders

Sustainable food consumption	Subsidies for schools for education on sustainable food production, with a practical approach	Subsidies for schools to introduce education on sustainable food production, with a practical component (e.g. developing food gardens, incorporating healthy food into school meals).	S
	Subsidies for diversifying the offer of healthy meals in school cafeterias	School cafeteria menus should be expanded to offer more options to encourage children to eat healthy and sustainable food in schools rather than consuming highly processed food.	S
Ensuring food security	Investments in decentralised food production to achieve food security	Municipalities should develop incentives for decentralised food production (e.g. urban and community gardens, vertical farms) to promote food self-sufficiency in Hungary.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. They include changes in food product certification, the introduction of purchase quotas for supermarkets, and the use of taxation.

Theme	Action name	Description	Idea Source[346]
Sustainable food processing, distribution and retail	Regulation on introduction of a mandatory label for out-of-season produce Introduction of obligatory certificates on non-seasonal produce	Out-of-season food products should be obliged to carry special labels.	C
	Introduction of new taxes on out-of-season produce sales	Out-of-season food products should come with a higher sales tax.	C

[346] C – Citizens; S – expert stakeholders

	Introduction of minimal purchase quotas of sustainable food products for supermarkets	Supermarkets should have minimum quotas on purchasing sustainable products (e.g. chemical-, preservative-, GMO-free, seasonal food).	C
Sustainable food consumption	Development of targeted food taxes for unsustainable and unhealthy food products	Food products with higher environmental impact (e.g. high CO2 emissions) or health impact (high sugar/salt content) should be taxed more to discourage consumption.	S

Just Transition

The growing impacts of the climate crisis (droughts, extreme weather events) and the energy crisis are increasing the costs of food products. This puts the most socio-economically vulnerable groups at risk of being excluded from access to healthy and sustainable food products.

6.13.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens or stakeholders[347] in Hungary that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[348]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Hungary's policies on the EGD and Citizen and National Stakeholder Reports

Transport emissions increased by just over 19% in the 2005-2019 period in Hungary, so that their share of total emissions rose to over 22%. The cornerstones of national government policy for emissions reductions in the transport sector are EVs, more biofuels and the promotion of low-emission transport. By 2030, advanced biofuels are forecast to make up 53% of renewable energy in the transport sector, with electricity at 21%, and an increased role for hydrogen (data from European Parliament (2022)[349]). However, there is little detail available on how low-emission transport will be promoted.

The workshops with citizens and stakeholders showed that government policy is broadly supported, but that doubts remain about the costs and environmental benefits and disbenefits of EVs. In addition, they wanted to see much greater emphasis on improving

[347] A stakeholder meeting took place on 14 October 2022 and involved a participant from the national government and two from academia.
[348] Prof Tom Rye, Molde University College, Norway.
[349] European Parliament (2021). Climate action in Hungary Latest state of play. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698060/EPRS_BRI(2021)698060_EN.pdf (Accessed on 4 January 2023).

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alternatives to car use, and limits to car use through road charging and access restrictions. The following provides more details:

- ***Citizens*** were of the strong opinion that public transport should be improved and reorganised and made accessible and affordable – they felt that the current network, and the ticketing system, do not serve the needs of the current population. Cycling infrastructure should be improved to make it a safe and easy alternative; one way to do this, which was supported by the citizens group, would be to restrict the use of cars in urban areas and city centres, perhaps through Low Emission Zones. Park and ride for cars, and better parking for bikes, were also suggested. They supported more EV charging infrastructure, and possibly incentives to buy EVs, but expressed doubts about affordability, the ability of the electricity grid to cope with demand, the environmental benefits, and ethical and environmental issues around sourcing and disposing of batteries. They wanted to see more encouragement of or even requirements for home working and suggested that companies should be provided with tax incentives for offering their employees alternative sustainable transport options. They were also keen on locating facilities close to where people live and work, to reduce the need to travel, and suggested education and awareness campaigns about sustainable transport.

- ***Stakeholders*** generally agreed with the suggestions from citizens but were also keener on restrictions on car use and taxes on the use of high emitting modes, which puts them somewhat at odds with national policy, largely focused on biofuels and electrification as it is. They specifically mentioned the 15-minute city, but this echoes the points the citizens made about planning the city for local trips; and they considered that carsharing – perhaps based on small electric vehicles – and carpooling could complement conventional public transport. They also pointed out the necessity of generating green electricity if EVs are to reduce carbon emissions.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source**[350]
Clean vehicles	EV purchase incentives.	C&S
	EV charging infrastructure.	C&S
	Energy needs planning and sourcing from green electricity.	S
Better public transport	Faster more reliable public transport with newer electric vehicles.	C&S
	Integrated PT tickets available via all sales media.	C

[350] C – Citizens; S – expert stakeholders

	PT integration, including integration with car sharing and bikes.	C
Spatial planning and city development	More and safer bike infrastructure and parking.	C&S
	15-minute city/services located locally.	C&S
Pricing and charges for transport	Taxation of polluting vehicles.	S
	Taxation of airlines.	S
	Restraint of private motor vehicle traffic in cities.	S
	Tax incentives for employers offering green travel options to employees.	
Planning and operation of transport networks	PT network improvement.	C&S
Governance	Promoting homeworking.	S
Greening transport in general	Education and awareness raising.	C&S
	School-based sustainable travel campaigns.	C&S

Barriers to EGD implementation

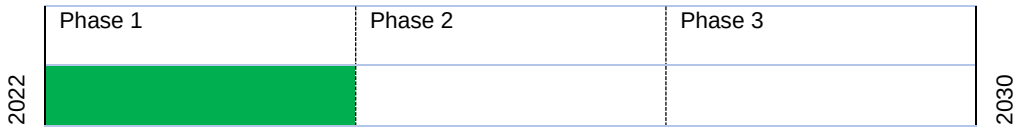
There was little discussion in either group about barriers to EGD implementation. The only significant barrier was perceived to be the great difference in conditions between urban and rural areas in terms of their different levels of accessibility, particularly for people with no car. The perceived reluctance of the EU to act against its members who do not comply with directives or other commonly agreed mandatory measures was also seen to be a barrier to successful implementation.

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Instruments of implementation: communication and education

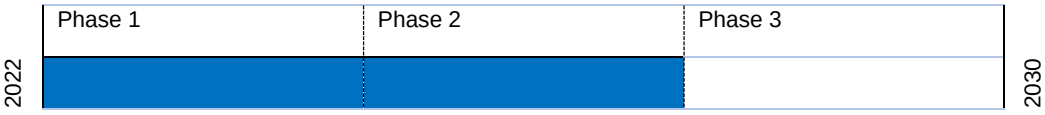
Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Hungary. These mainly consist of communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [351]
Greening transport in general	Education and awareness-raising	Public campaigns should be launched to change citizens' mindsets and encourage them to reduce travel and use more sustainable means of transport. The involvement of non-profit organisations is important to ensure the wide dissemination of information.	C&S
	School-based campaigns	Children should be encouraged and educated to go to school by bike, on foot or by public transport.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments, and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source [352]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	EV charging infrastructure	Investment in additional EV charging infrastructure on- and off-street	C&S
Better public transport	Faster more reliable public transport with newer electric vehicles	Investing in new, electric, and more comfortable public transportation vehicles.	C&S
	Integrated PT tickets available via all sales media	Free public transport.	C

[351] C – Citizens; S – expert stakeholders
[352] C – Citizens; S – expert stakeholders

Spatial planning and city development	More and safer bike infrastructure and parking	Differentiation of bicycle paths and their development according to their purpose (intercity, central areas where the traffic is highest, etc.).	S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles was supported to incentivise a shift to cleaner vehicles.	S
	Taxation of airlines	As above, but for airlines.	S
	Tax incentives for employers offering green travel options	Encourage large employers to provide bike parking, showers, subsidised public transport and so on for their staff, by making all or a part of these investments tax-deductible.	C
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional, and national level, building on Hungary's already very good public transport system, but extending routes and frequencies, and integrating better with modes for the 'last mile'.	C&S
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Hungarian citizens and experts require policy changes and regulations in order to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [353]
Clean vehicles	Energy needs planning	At the EU and national level, energy needs planning, mainly due to the increased use of e-vehicles. This should also include consideration of how electricity is generated.	S

[353] C – Citizens; S – expert stakeholders

Better public transport	PT integration, including integration with car sharing and bikes	Better planning and coordination of public transport routes. A small number of multi-modal, multi-operator tickets should be available. Other modes should be integrated with public transport to cater for the 'last mile' of the trip.	C&S
Spatial planning and city developme nt	15-minute city/locate services locally	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	Reduction of private motor vehicle traffic in cities	There should be measures to restrict personal car use, such as low-emission zones in cities (which often include an element of pricing). This might also include straightforward access restrictions.	S
Planning and operation of transport networks	No suggestions in this category	/	
Governanc e	Promotion of working from home	Working from home was seen to have functioned well during the pandemic and citizens were keen to see that it was maintained, at least as a part-time way of working, to reduce the need to travel.	S

Just Transition

The Just Transition was only discussed very briefly, and mainly related to the urban/rural divide. If public transport is not maintained and made more affordable in rural areas, this will lead to some exclusion of the poorest members of society because of the EGD.

6.13.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Hungary[354] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[355]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[354] A stakeholder meeting took place on 14 September 2022 and involved three national authorities.
[355] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[356], Hungary's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €7.2bn in grants. This can be broken down as follows for the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	€444m allocated towards heat electrification and solar energy programme in the residential sector for lower-income households. The plan is to reach 11 600 households. There is also €32m planned for community-owned solar projects, where the revenue from the solar panels will be put back into improving housing conditions.
Improving energy efficiency in buildings	Hungary's NRRP does not include a dedicated energy renovation or building component. There is no dedicated funding for renovation, nor are there specific energy performance criteria or indicators. There are some specific targets, but they are limited. For example, the goal is to renovate 94 public education and 40 health buildings. University buildings are the only ones with a clearly stated target of a 30-60% reduction of primary energy end-use.
Tax system for energy products aligned to the green transition	Not specifically mentioned
Provide funding for the renovation of buildings	€184m allocated towards an 'Emerging Settlements' programme, which will include renovating 2,500 existing homes. There is money also allocated to university buildings (€179m), vocational institutions (€263m) and daycare nurseries (€111m), however, this funding is for both new projects and renovation, and it does not say what the split for each is. The share of funding allocated to infrastructural development in the public health sector cannot be clearly identified. There are other existing programmes outside of the NRRP, such as KEHOP plus[357] and TOP plus[358] that provides some funding for municipal buildings.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC based on 2012-2016 data estimates that only 0.9% of renovations in the residential sector were medium depth and 0.1% deep renovations[359]. In the non-residential sector, only 1.8% were medium and 0.2% deep.

[356] Ivanova, V. et al. (2021), see note 30, page 61.
[357] More information available on https://www.palyazat.gov.hu/kornyezeti_es_energiahatekonysagi_operativ_program_plusz.
[358] More information available on https://www.palyazat.gov.hu/terulet_es_telepulesfejlesztesi_operativ_program_plusz.
[359] European Commission (2019), see note 31, page 61.

Create world-leading companies	General support for vocational training and higher education is planned, but it is unclear if this would extend to the energy and construction industries.
Raise global ambition to tackle climate change	Not specifically mentioned
Improve health and well-being	Not specifically mentioned
Address inequality and energy poverty	Most of the plans and subsidies target disadvantaged areas. The plan supports decarbonisation through heat pumps and solar power but without a link to energy efficiency, which could have the negative consequence of putting people into energy poverty, as a heat pump in a leaky building can be expensive to operate if not managed carefully.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned
Mobilising industry for a clean and circular economy	Not specifically mentioned

The following compares the views of the citizens and the national stakeholders along with Hungary's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

The national stakeholders generally felt that implementing the EGD was complex and challenging. The Ministry for Technology and Innovation is responsible for ensuring the implementation of the EGD; however, they can only make suggestions and do not have the authority to enable other ministries to implement the changes.

Increasing renewable energy in buildings: The NRRP allocates funding for implementing heat pumps or solar panels. According to the national stakeholders, there are subsidies of approx. €1 500 to €2 500 available for such projects. Citizens felt there should be support for community energy projects and not just for individuals looking to invest in renewable energy.

Improving energy efficiency in buildings: Citizens stated there is difficulty in understanding how to make their homes energy efficient, and there is a lack of general awareness around the topic. Most buildings are old and in disrepair, making them harder to renovate.

Provide funding for the renovation of buildings: The NRRP does not explicitly say how much funding is available for renovation projects; however, the national stakeholders confirmed that subsidies cover up to 50% of the renovation costs.

Citizens feel that energy efficiency investment is expensive and that subsidies are driving prices up, which makes the subsidy obsolete. There are hidden costs, such as plumbing and re-wiring, which is also not included in the subsidy. Funds are also only available to those in single-family homes and not for those in cohabitating spaces; they are hard to understand, and not many of them in general.

National stakeholders agreed with this view stating that financing is only available for specific segments of society, mostly the middle to the upper class. National stakeholders

mentioned that it is important to develop programmes that cover 100% of the costs and that those who live in smaller houses should receive better incentives. They also suggested that tenants and owners must be involved at the same level. Finally, they mentioned that interest-free loans should be available for renovation projects.

Renovate at least 3% of the total floor area of public buildings annually: The national stakeholders felt there was a significant financial spending on the renovation of public buildings; however, communication on these projects was lacking. Further work by the Ministry of Technology and Innovation is needed to raise more awareness about these projects.

Create world-leading companies: While the NRRP does not specifically focus on upskilling construction or energy professionals for renovation, the national stakeholders confirmed there are plans for a one-stop-shop system where citizens can access all the information they need to undergo an energy renovation project. However, there is still a lack of skilled workers to carry out the work, and there is a need to train more experts to facilitate the green transition.

Citizens agreed that there was a shortage of skilled workers and technology providers. They felt there should be information centres with experts available to advise on what can be done for energy efficiency. This could be the one-stop shop, as mentioned by the national stakeholders.

Raise global ambition to tackle climate change: Citizens felt there should be more education for the youth. National stakeholders agreed that more education and awareness overall was needed.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens for what could be carried out to encourage and enable greater adoption of the EGD. There was good alignment between the citizens' and the national stakeholder views and suggested actions. However, not many actions were suggested, with many areas of the EGD not addressed.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	Creation of local energy communities
Improving energy efficiency in buildings	Information centres for energy efficiency solutions Adoption of EED and EPBD amendments A central evaluation and monitoring system
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for the renovation of buildings	Better incentives for those living in smaller houses Improvements to access to subsidy programmes Extension of subsidies for all

Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	Collaboration between companies offering energy efficiency renovations EU-wide renovation expert label
Raise global ambition to tackle climate change	Education and awareness-raising campaigns
Improve health and well-being	No actions suggested
Address inequality and energy poverty	Increased programmes for those in energy poverty CO2 quota purchases for companies to give to those in financial need
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[360]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	Many solutions in one area cause problems in other areas. For example, the electrification of public transport reallocates pollution elsewhere. The EU spends a lot of resources running public transport on electricity, but the power generators in the EU are not only based on renewable resources. The electrified vehicles result in cleaner air in the cities, but the increasing power demand leads to more emissions overall because of the non-renewable energy sources.	S
	Every country in the EU has different housing stock. It is not easy to make effective regulations or supporting mechanisms to develop every country's housing energy efficiency on a similar level.	S
	It is not easy to understand how to make the home energy efficient.	C
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for the renovation of buildings	There are many plans to broaden the range of beneficiaries, but there are not sufficient finances or political will.	S
	Subsidies are increasing the costs of renovation.	C
	Funding is only available for single-family homes.	C
	Energy efficient investment is expensive, and there	C

[360] C – Citizens; S – expert stakeholders

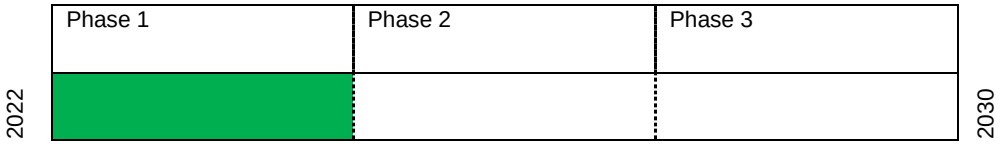
	are often additional hidden costs.	
	It is not easy to renovate older buildings.	C
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned	/
Create world-leading companies	There is a shortage of experts to execute the Energy Performance of Buildings (EPBD) in Hungary. Teaching and training them is time-consuming, making the transition slower and less effective.	S
Raise global ambition to tackle climate change	Not enough communication/awareness-raising/education to accompany the programmes. There are plenty of good examples, but citizens do not know about them.	C&S
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	The transition puts a disproportionate burden on those in a financially precarious position. The Hungarian Government does not offer the necessary financial support.	S
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication and education

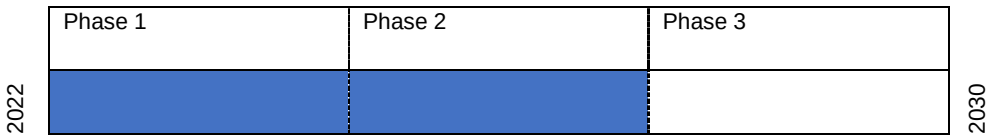
The following are the actions that citizens and national stakeholders identified as being able to be carried out in the short term with minimal support. There were not a high number of actions suggested. Actions focused on creating greater information for citizens, improvements and more subsidies for citizens and collaboration between companies and training programmes to create skilled workers.

Theme	Action name	Description	Idea Source[361]
Improving energy efficiency in buildings	Information centres for energy efficiency solutions	Setting up information centres (physical and digital) to discuss different aspects of energy-efficient solutions, which can develop a tailor-made plan adapted to the needs of each customer.	C&S
	Adoption of EED and EPBD amendments	The EED and EPBD energy efficiency directives will be amended and transposed into national law.	S
Provide funding for the renovation of buildings	Better incentives for those living in smaller houses	People who live in smaller houses should receive better financial incentives.	S
	Improvements to access to subsidy programmes	Subsidy applications must be written in a way that is understandable to all.	C&S
Create world-leading companies	Collaboration between companies offering energy efficiency renovations	Collaboration among organisations that support people in starting energy-efficiency renovations/works.	S
	Training programmes for upskilling energy and construction professionals	Training programmes for upskilling energy and construction professionals.	C&S
Address inequality and energy poverty	Increased programmes for those in energy poverty	Giving priority to those living in energy poverty in the programmes.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and may require government support. There was also not a high number of actions presented in this category. Actions focused on creating standards for local energy communities and energy renovation, monitoring and evaluation, creating an

[361] C – Citizens; S – expert stakeholders

EU-wide renovation expert label and education and awareness campaigns, amongst others.

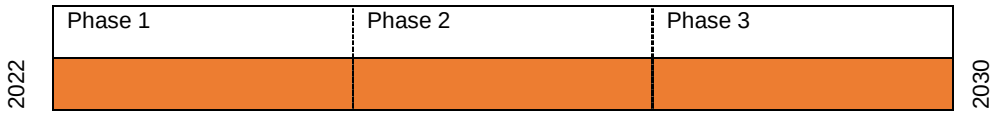
Theme	Action name	Description	Idea Source[362]
Increasing renewable energy in buildings	Creation of local energy communities	Support should be provided for creating local energy communities in rural areas.	C&S
Improving energy efficiency in buildings	A central evaluation and monitoring system	A central evaluation and monitoring system that looks at all climate policy implementation and effectiveness across different sectors should be established.	S
	Create a minimum standard for energy efficiency renovation	The energy efficiency of buildings should be regulated to achieve a minimum standard.	C
Provide funding for the renovation of buildings	Extension of subsidies for all	The financing policy for energy modernisation should be improved by abolishing the 'family only' rule and extending subsidies to all types of owners and housing, including old urban housing, adobe houses, etc.	C&S
Create world-leading companies	EU-wide renovation expert label	Creating an EU-wide energy renovation expert label.	S
Raise global ambition to tackle climate change	Education and awareness-raising campaigns	Energy efficiency, sustainability and environmental awareness must become part of the education system.	C&S
Address inequality and energy poverty	CO2 quota purchases for companies to give to those in financial need	Companies' CO2 quota purchases should be used directly to support those in financial need, thus helping them to make energy-efficiency investments.	C&S

[362] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



There were no actions suggested by citizens and stakeholders in this category.

Just Transition

The national stakeholders agreed that the most important priority is providing financial support for those who need it to be part of the green transition and designing long-term projects involving every social class with different housing conditions. The most relevant points raised were as follows:

- Independent experts are required throughout the project to advise on the best solution and ensure that it is being carried out
- In Hungary, most support is provided for families with children. Other demographics should also be considered.
- The split incentive between the property owner and the tenant needs to be solved.

6.14 Ireland

6.14.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens or stakeholders in Ireland[363] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[364]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[363] A stakeholder meeting took place on 6 October 2022 involving three members of academia and one member of civil society.
[364] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.

Summary of Ireland's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Ireland pointed to the below programme as existing policy supporting EGD. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of policies visible to the stakeholders present.

- National Waste Prevention Programme (Environmental Protection Agency, 2004)[365] – The national programme aims to establish a circular economy, reducing various types of waste, including the one million tonnes of food waste generated in Ireland every year, as well as increasing the efficiency of farms.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policies within food policy in Ireland.

- Foodwise 2025 (Department of Agriculture, Food and the Marine, 2015)[366] – The current 10-year plan for the agri-food industry. The plan addresses the Irish commitments to Sustainable development goals, emphasising goal 2 (zero hunger) and 14 (sustainable seas, oceans, and marine resources). Overall, the plan focuses on growth of food exports and creation of new jobs in the agri-food sector. The plan will be superseded by the Agri-Food Strategy 2030.

- Agri-Food Strategy to 2030 (Department of Agriculture, Food and the Marine, 2020)[367] – The strategy outlines the economic, environmental and social sustainability vision of the Irish agri-food system until 2030. The strategy focuses on the cross-sectoral cooperation of various stakeholders.

- Agriculture Action Plan 2021 (Department of Agriculture, Food and the Marine, 2021)[368] – A plan statement outlines 75 actions to further develop a sustainable, innovative, and competitive agri-food, forestry and seafood sector. The strategy sets out five strategic goals for the department: 1) safeguarding public, animal and plant health and welfare; 2) providing support to farm families and other small-scale food producers; 3) providing optimum policy framework for sustainable development of agri-food sector; 4) delivering a sustainable, competitive, and innovative seafood sector; and 5) maintaining strategic, operational, regulatory, and technical capacity in food services.

General overview of actions per theme

The actions proposed by the Irish citizens and stakeholders on transforming the current food system in Ireland consist of seven categories, aiming at addressing specific

[365] Environmental Protection Agency (2004). National Waste Prevention Programme. Available at: https://www.epa.ie/publications/circular-economy/resources/Circular_Economy_8PP_fa_v9_digital.pdf Accessed on 22 November 2022.
[366] Department of Agriculture, Food and the Marine, Government or Ireland (2015). Foodwise 2025. Available at: https://assets.gov.ie/109083/cf17ada8-e95a-4a10-b228-7743a8b68c44.pdf (Accessed on 22 November 2022).
[367] Department of Agriculture, Food and the Marine, Government or Ireland (2020). Agri-Food Strategy to 2030. Available at: https://assets.gov.ie/132638/c3139851-eac7-460f-9837-91a28fa031bf.pdf (Accessed on 22 November 2022).
[368] Department of Agriculture, Food and the Marine, Government or Ireland (2021). Agriculture Action Plan 2021. Available at: https://www.gov.ie/en/press-release/c1473-mcconalogue-publishes-agriculture-food-and-the-marine-action-plan-2021/ (Accessed on 22 November 2022).

components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food production, processing, distribution, and retail. Finally, the proposed actions are mainly focused on immediate implementation tools such as communication, education, and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production (8)	Awareness campaigns promoting local and sustainable food producers
	Development of knowledge transfer hubs for sustainable food producers
	Promotion and educational campaigns on carbon farming
	School education on growing food
	Incentives for small-scale sustainable food production
	Investments in research on circular economy potential in food production
	Subsidies for crop growing projects in elementary and high schools on a national level
	Subsidised agricultural land for young and new farmers
Sustainable food processing, distribution & retail (11)	Introduction of smaller food portion sizes in supermarkets
	Development of bulk delivery systems for local food producers
	Negotiating better prices for farmers' products
	Incentives for supermarkets to offer more organic and local food products
	Rent subsidies for small shops selling local and sustainable food products
	Regulation outlining more detailed food labelling
	Development of taxation systems based on the environmental impact of products
	Regulation on including a carbon footprint label on all food products
	Regulation introducing maximum transport distance for imported food products
	Regulation on obligatory quotas of locally produced food products in supermarkets
	Legislation introducing a phased ban on unsustainable food packaging
Sustainable food consumption (4)	Awareness campaigns on current seasonal products
	School education on cooking sustainably
	Awareness campaigns for citizens to understand the environmental impacts of their food consumption choices
	Awareness programmes promoting connections between consumers and local farmers
Food loss and waste reduction (4)	Educational workshops on reduction of food waste and water use in household food preparation
	Awareness campaigns promoting more frequent grocery shopping to avoid food waste
	Regulation on the presentation of best-before dates on food

	products
	Legislation to reduce food waste across the food cycle
Ensuring food security (3)	Diversifying food imports
	Increasing food security in Ireland by stabilising production costs
	Regulation on importing food products that are also produced in Ireland
Combating food fraud (0)	
Across the entire food cycle (2)	Documentary series on the Irish food system and how to make it more sustainable
	Use of EU trade agreements to promote the transition to sustainable food systems

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source**[369]
Sustainable food production	Poor internet connectivity in rural areas of Ireland reduces the quality of life and restricts access to innovative agricultural tools.	S
	Unsustainable food production (meat, dairy, fishing industry) are receiving large subsidies blocking sustainable food system transformation.	S
Sustainable food processing, distribution & retail	Challenges in providing sustainable and healthy food at affordable prices, while also fairly compensating food producers.	C&S
	Lack of clarity on food labels about how to recycle food packaging.	S
Sustainable food consumption	There is a lack of connection among the general public with food and where it originates from.	C
Food loss and waste reduction	Food waste reduction is insufficiently incentivised on personal, retail and industry levels.	C&S
Ensuring food security	Climate change effects will reduce available land for food production.	C
Across the entire food cycle	EU trade deals allow for unsustainable food to be imported at cheap prices.	C

[369] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Ireland. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns promoting local sustainable products, are easy to implement (low-hanging fruit), however, they also have a limited potential to contribute to the food system transformation. Others, such as negotiating fairer prices for sustainable food producers, may be more difficult to implement successfully, but can produce knock-on effects, in raising overall sustainable food production.

Theme	Action name	Description	Idea Source [370]
Sustainable food production	Awareness campaigns promoting local and sustainable food producers	Awareness campaigns should be organised on a regional level to promote the local and sustainable food producers and their products.	C
	Development of knowledge transfer hubs for sustainable food producers	Knowledge sharing and transfer hubs should be organised for sustainable food producers to exchange on best practices.	S
	Promotion and educational campaigns on carbon farming	Carbon farming should be promoted through campaigns and free educational programmes.	S
	School education on growing food	School education should include programmes on growing food to strengthen the connection between the students and their food sources.	C&S
Sustainable food processing, distribution & retail	Introduction of smaller food portion sizes in supermarkets	Supermarkets should be encouraged to introduce smaller food packaging to make it easier for consumers to buy the amount of food they need.	C

[370] C – Citizens; S – expert stakeholders

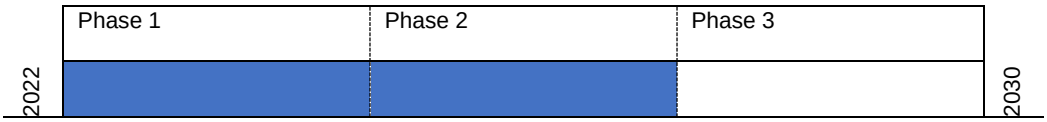
	Development of bulk delivery systems for local food producers	Local food producers should be able to deliver their produce in bulk (e.g., to community centres where the customers would pick them up) to reduce the time and transport emissions on delivery.	C
	Negotiating better prices for farmers' products	Small-scale and sustainable farmers should be more fairly remunerated for their produce (e.g., by negotiating with supermarkets and distributors through cooperatives or government support in negotiations).	S
Sustainable food consumption	Awareness campaigns on current seasonal products	Campaigns should be organised in supermarkets to make consumers aware of which products are in season and empower them to shop more sustainably.	C
	School education on cooking sustainably	School education should include programmes on cooking in a healthy and sustainable way (e.g., using plant-based protein).	C&S
	Awareness campaigns for citizens to understand the environmental impacts of their food consumption choices	Awareness campaigns should be organised on environmental impacts of food consumption choices (e.g., advertisements on environmental impact of meat consumption).	S
	Awareness programmes promoting connections between consumers and local farmers	Awareness workshops should be organised promoting closer relationships between consumers and local farmers (e.g., visits to local and sustainable farms to see the production process, buy products directly from farmers and make connections).	S
Food loss and waste reduction	Educational workshops on reduction of food waste and water use in household food preparation	Education workshops should be organised by municipalities on how to reduce food and water waste in meal preparation in households.	C
	Awareness campaigns promoting more frequent grocery shopping to avoid food waste	Awareness campaigns should be organised on the benefits of more frequent grocery shopping as an alternative to rarer, larger grocery shopping, to reduce household food waste.	C
Ensuring food security	Diversifying food imports	Imports of food products that are not produced in Ireland should be secured from various countries, to increase resistance to geopolitical shocks.	C
	Increasing food security in Ireland by stabilising production costs	Food security should be increased by minimising food production cost variations (e.g., investments in renewable energy on farms to reduce impact of diesel price changes).	C

Across the entire food cycle	Documentary series on the Irish food system and how to make it more sustainable	A documentary series should be developed on how the Irish food system works and the areas and challenges where it can be transformed to become more sustainable.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [371]
Sustainable food production	Incentives for small-scale sustainable food production	Financial incentives should be provided to support small-scale sustainable food production (e.g., urban gardens, community orchards etc.).	C
	Investments in research on circular economy potential in food production	Investments should be made in research on exploring the potential of implementing circular economy solutions in food production.	C
	Subsidies for crop growing projects in elementary and high schools on a national level	Subsidies should be provided for schools to implement projects for students to grow their own crops as an educational tool.	S
	Subsidised agricultural land for young and new farmers	Young and new farmers should get access to agricultural land at subsidised prices.	S

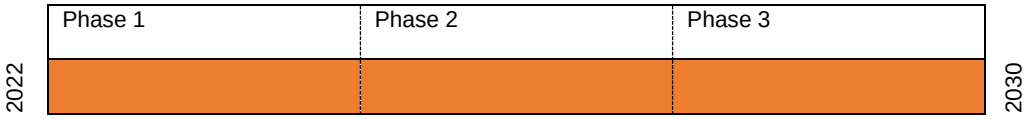
[371] C – Citizens; S – expert stakeholders

Sustainable food processing, distribution & retail	Incentives for supermarkets to offer more organic and local food products	Supermarkets should receive financial incentives to offer more organic and local food products.	C
	Rent subsidies for small shops selling local and sustainable food products	Small shops with local and sustainable food products should receive rental assistance through subsidies.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus coming with the longest development period before they can be implemented. Accordingly, these actions depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions regulations of food labelling, legislation of food tax adjustments, as well as use of imports and trade agreements to promote a sustainable food system transformation.

Theme	Action name	Description	Idea Source[372]
Sustainable food processing, distribution & retail	Regulation outlining more detailed food labelling	Regulation should be developed to detail the mandatory information on food product labels (e.g., animal feed and conditions information on meat products).	C
	Development of taxation systems based on the environmental impact of products	A taxation system should be developed to make food product prices correspond to their environmental impact (e.g., low taxes on organic and healthy food; high taxes on highly processed and carbon-intense food).	C
	Regulation on including a carbon footprint label on all food products	Regulation should be developed making a carbon footprint label mandatory on all food products.	C

[372] C – Citizens; S – expert stakeholders

	Regulation introducing maximum transport distance for imported food products	Regulation should be introduced placing a maximum transport distance for all food products being imported into Ireland.	C
	Regulation on obligatory quotas of locally produced food products in supermarkets	Regulation should be introduced establishing minimum quotas on local food products in supermarkets (e.g., 20% of products from within a 100km radius of the store).	C
	Legislation introducing a phased ban on unsustainable food packaging	Legislation should be developed outlining a phased ban on unsustainable food product packaging (e.g., unnecessary plastic packaging on produce, single use packaging).	C
Food loss and waste reduction	Regulation on the presentation of best-before dates on food products	Regulation should be introduced on presentation of best-before dates on food products to prevent non-expired food being thrown away.	C
	Legislation to reduce food waste across the food cycle	Legislation should be introduced with quotas on food waste reduction across the food cycle (e.g., in production, distribution, consumption) with outlined alternatives for discarded food.	C&S
Ensuring food security	Regulation on importing food products that are already produced in Ireland	Regulation should be introduced on reducing imports of food products that are already produced in Ireland.	C
Across the entire food cycle	Use of EU trade agreements to promote the transition to sustainable food systems	EU trade agreements should be used more actively to encourage other countries to make their food systems more sustainable.	C

Just Transition

The participants noted that the increases in food prices that are expected with more sustainable and organic production should not make high-quality food inaccessible to the most vulnerable socio-economic groups in the society.

On the other hand, the labour and production costs of sustainable food producers should be compensated. Overall, the price of food products needs to support the social and economic sustainability of farmers.

6.14.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[373] in Ireland that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document

[373] A stakeholder meeting took place on 6 October 2022 and involved one national authority and two Research and education community members.

to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[374]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Ireland's policies on the EGD and Citizen and National Stakeholder Reports

The transport sector in Ireland accounts for about 18% of total emissions. In 2021 the national Climate Action Plan[375] aimed to reduce this by 51% by 2030, using four main policies:

- Investing and encouraging the use of sustainable transport, with 500 000 additional daily public transport and active travel journeys, like walking or cycling, by 2030.
- Electrification – subsidies and investment in recharging infrastructure to reach almost 1 million EVs in the private transport fleet by 2030 and buying over 5 000 new electric buses.
- Demand management – introducing measures at the national, regional and local levels, such as parking management, to manage travel demand more efficiently. The target is to cut fossil-fuelled car km by 10%.
- More biofuels in the mix - 20% for diesel and 10% for petrol.

In addition, Ireland has spent EUR 164 million of Recovery Funds[376] on upgrading a few pieces of the commuter rail network around Cork.

In the workshop, citizens and stakeholders expressed reservations about policies that promote the purchase and use of EVs by private individuals: both groups felt that EVs are expensive, and their environmental benefits are exaggerated, particularly with Ireland's current electricity generation mix, and that battery production and disposal brings with it environmental and ethical concerns. They were also not convinced that improvements in active travel and public transport would be delivered; and stakeholders were concerned that freight transport had been left out of the Climate Plan. In general, they wanted to see more decisive and stronger action to reduce emissions from transport and so their views were not aligned with current Irish government policy. In more detail:

Citizens said that they distrusted rhetoric around electric vehicles – for example, they said that they are presented as emission-free, which is not the case in life cycle terms and especially with Ireland's electricity generation mix. They were also concerned regarding the end of life of batteries and the cost of replacing them. They wanted to see increased investment in electric vehicle charging infrastructure in rural areas but subsidies of smaller and used electric cars (so that subsidies do not only go to wealthier purchasers).

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[374] Prof Tom Rye, Molde University College, Norway.
[375] Department of Transport, Government of Ireland (2021). Climate Action Plan will transform how we travel with decarbonisation creating a cleaner greener transport system. Available at: https://www.gov.ie/en/press-release/bb62c-climate-action-plan-will-transform-how-we-travel-with-decarbonisation-creating-a-cleaner-greener-transport-system/ (Accessed on 22 November 2022).
[376] European Commission (2022), see note 255, page 249.

Public transport in Ireland is seen as too expensive, unreliable, time-consuming and not well-connected, especially in rural areas. Significant infrastructure spending is needed on public transport, electric high-speed rail links across the country, the Dublin Metro, improved bus links, and bike parking and bike rental services at stations. Public/active transport should be made more attractive and convenient to use by removing barriers to use, for example using debit cards for payment, allowing bikes on buses/trains, and improving personal safety with well-lit routes and security personnel and cameras. There was support for free or low-cost public transport, especially for students, pensioners and workers.

- ***Citizens*** called for investment in active transport infrastructure, cycle paths, greenways; but also an improvement in transport safety and security with improved lighting, bike paths segregated from traffic, and secure bike parking. They felt that car transport to public buildings should be discouraged by reducing/removing car parking – but any other form of restraint on private car use was not discussed. Rail freight and sea freight should be promoted, they argued but did not really say how.

In terms of how the government interacts with the public on transport, they wanted more accountability to the public with more and more meaningful public consultations on transport projects. Finally, they thought it was important to raise public awareness, starting with the youngest active travel and encouraging active travel for all from an early age.

- ***Stakeholders*** generally agreed with the suggestions from citizens, but dealt with them more in depth and made additional points. They were not very supportive of policy on EVs, and questioned whether there should be purchase subsidies for large (SUV-size) EVs, as they thought these are regressive as only wealthier households can afford such new cars. They also pointed out that the carbon benefits of the transition to EVs may be negated by the increase in large vehicles and SUV purchases, and large cars have a worse safety record in collisions with pedestrians and cyclists – something that should be communicated. Instead, they wanted a much wider focus on a range of greener fuels and funds for the greening of freight fleets. They also thought that the EU and national governments are currently failing in their strategy for emissions reduction in the maritime and international aviation sectors.

A key point made by stakeholders was that in order to meet the emissions targets, it is crucial to reduce the distance travelled and not just change the engine technology. They were also concerned about messaging, arguing that advertisements need to be regulated to remove 'greenwashing' (when a product is presented as environmentally friendly when in fact, it is not). Communications and messaging about the green transport transition should be improved, and an interdisciplinary education plan about sustainability should be provided.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders, as well as the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source[377]
Clean vehicles	Purchase incentives for smaller clean vehicles (not just EVs), including second-hand	C&S
	EV charging infrastructure	S
	Hydrogen fuelling infrastructure	S
	Management of the environmental impact of battery production and disposal	S
	Biofuels should not be food-based or derived from land previously used for food production	S
Better public transport	Newer, cleaner more comfortable PT vehicles	C&S
	Cheaper or free PT	C&S
	Demand responsive public transport in rural areas	S
	PT integration, including integrated ticketing	C&S
Spatial planning and city development	More bike paths and better walking infrastructure, with a focus on personal security	C&S
	Restrain sprawl, out-of-town development	S
	Limits on car parking at public buildings	C
Pricing and charges for transport	Taxation of polluting freight vehicles	S
	Carbon taxation of airlines and maritime	S
Planning and operation of transport networks	PT network improvement – speed, reliability, coverage (especially suburb-to-suburb and rural areas)	C&S
	Enhanced security on public transport and active travel networks	C&S
Governance	Improved sustainable transport project delivery capacity in local and national government	C&S
	Ensure subsidy schemes, e.g. bike to work are available to all and/or targeted on the poorest	S
Greening transport in general	Education and awareness-raising	S
	Regulating advertising for green products	S

Barriers to EGD implementation

The main barrier to EGD implementation mentioned by citizens was the long period of time taken to implement sustainable transport investments – better public transport, new bike paths and so on. Stakeholders, however, made several points. Unusually, in comparison to other countries, the stakeholders in Ireland did comment on barriers to specific EGD proposals (widening of the ETS, biofuels and fuel taxes, for example). They also spoke about barriers to the implementation of measures that the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea Source[378]
Clean vehicles	There is no floor price on the ETS, according to the stakeholders, in which case the ETS can send a zero or even negative price signal. The ETS must have a minimum carbon price within it. Permits should not be issued for free.	S

[377] C – Citizens; S – expert stakeholders
[378] C – Citizens; S – expert stakeholders

	Biofuels - very difficult to ensure that the use of crops for the production of biofuels has no impact on food production. Even if biofuel is made from waste, it is hard to know that it is not due to deliberately increased production of waste	S
	There is no infrastructure for hydrogen despite including hydrogen in the policy	S
Better public transport	Implementation times for new public transport infrastructure are excessively long. Lack of capacity may be part of the problem.	S
Spatial planning and city development	Planning and development: low-density housing and large shopping centres on the outskirts of urban areas are contributing to the problems. They are car centric.	S
Pricing and charges for transport	Aviation and maritime energy use and/or emissions are not taxed enough at the national level.	S
	Prioritising energy security (and the price of fuel) over climate emergency – sends the wrong message if we are trying to reduce fossil fuel.	S
	Why should private citizens bear a higher proportionate cost on emissions from their vehicles than truckers, who emit much more and cause more road safety and local air pollution problems?	S
Planning and operation of transport networks	There is still a lot of spending on building new roads – including the TEN-T network. New roads generate additional traffic.	S
Governance	Lack of capacity at the local authority level – so for example, active travel funds do not get spent. Similar problems in public transport projects. Lack of capacity and complex implementation procedures slow delivery to beyond one election cycle.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

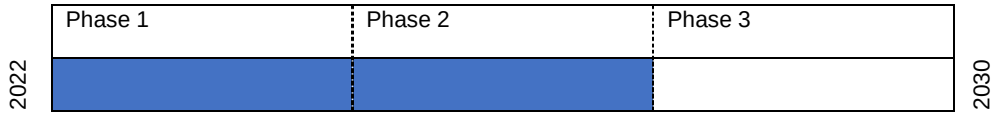
Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations and businesses, proposed by citizens and stakeholders in Ireland. These mainly comprise communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source[379]
Greening transport in general	Education	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution especially in schools from an early age	C
	Regulating advertising	Stakeholders believed that there is some advertising that promotes products as having environmental benefits that are minimal or unproven (they pointed to the example of EVs), and they suggested that such advertising should be banned.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline



These actions will have an impact in the medium term.

Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column 'action name'.

Theme	Action name	Description	Idea source[380]
Clean vehicles	Purchase incentives for smaller clean vehicles (not just EVs)	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy cleaner vehicles, but targeting less wealthy people and emphasising smaller vehicles.	S
	EV charging infrastructure	This is lacking in Ireland currently, contributing to range anxiety (a standard EV term relating to users being concerned about how far they can travel on a charge and whether they will get to a charger before their battery goes flat).	S
	Hydrogen fuelling infrastructure	Although a move to hydrogen is part of the Climate Strategy, there is currently no investment in hydrogen fuelling infrastructure.	S
Better public transport	Newer, cleaner more comfortable PT vehicles	Investing in new, electric and more comfortable public transportation vehicles.	C&S

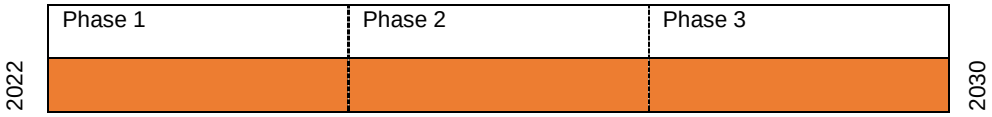
[379] C – Citizens; S – Expert Stakeholders
[380] C – Citizens; S – expert stakeholders

	Cheaper or free PT	Cheaper or free public transport, targeted at less wealthy user groups like the elderly and students.	C&S
	Demand responsive public transport in rural areas	Public transport in rural areas is lacking and this was seen as a potential solution.	S
Spatial planning and city development	More bike paths and better walking infrastructure	Walking and cycling infrastructure is currently lacking, especially in more suburban areas. Its expansion and improvement are necessary.	C&S
Pricing and charges for transport	Taxation of polluting freight vehicles	Higher taxation of more polluting freight vehicles. Stakeholders were of the opinion that companies were paying less tax than individuals on their vehicles and that this should be changed.	S
	Carbon taxation of airlines and maritime sector	These modes are seen to be undertaxed, currently.	S
Planning and operation of transport networks	PT network improvement – speed, reliability, coverage	Investment in improved public transport capacity and speeds, at local, regional and national level (especially suburb to suburb and rural areas).	C&S
	Enhanced security on public transport and active travel networks	Personal security was seen to be a significant barrier to the use of more sustainable transport, hence this focus.	C&S
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Ireland citizens and experts require policy changes and regulation in order to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea

			source[381]
Clean vehicles	Battery production and disposal	This was seen as a major downside of EVs that is currently not properly addressed. There should be management of the environmental impact of battery production and disposal	S
	Biofuels planning and sourcing	These should not be food-based or derived from land previously used for food production.	S
Better public transport	PT integration	Better planning and coordination of public transport routes, including integration of ticketing, with payment by debit card as well as cash and app.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	No suggestions in this category	/	S S
Planning and operation of tspt networks	No suggestions in this category	/	S
Governance	Improved capacity to deliver sustainable transport project in local and national government	A lack of capacity in this area was perceived, slowing down the delivery of necessary projects.	S
	Targeting of subsidies	Ensure subsidy schemes for clean transport e.g. bike to work (bike purchase scheme) are available to all and/or targeted on the poorest and/or income related.	S

Just Transition

Citizens were concerned about the lack of public transport in rural areas, and the potential regressiveness of EV subsidies benefiting the wealthier members of society (as has been shown in analysis of who receives EV subsidies in Norway[382]). Stakeholders went a lot further in their analysis of the justness of the transition.

Firstly, they said that they did not consider the current focus on EVs to be a fair policy. EVs are a premium product, and the starting price is out of range for many. There needs to be diversity in the types of vehicles (size and distance) available, with costs tailored to suit various pockets. The current focus is on larger SUV vehicles with no thought about the impact and danger for pedestrians (who on average, are poorer than car drivers). It would be fairer to stop grants for larger models.

[381] C – Citizens; S – Expert Stakeholders
[382] Cf. Aasness M.A. and Odeck J. (2015). The increase of electric vehicle usage in Norway—incentives and adverse effects. Available at: https://link.springer.com/article/10.1007/s12544-015-0182-4 (Accessed on 4 January 2023).

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The planning and housing tenure system does not fairly impact low-income families. Highly walkable, often more central neighbourhoods that promote active forms of transportation and have a variety of destinations within walking distance and well-connected streets are usually less affordable, while people living in more peripheral neighbourhoods are more likely to be unable to afford a car. The poor public transport accessibility in these areas means they spend more time and more money to travel, and distances make walking and cycling less practical than in wealthier and more central neighbourhoods. It is essential for a Just Transition to address this disconnect in transport planning.

In Ireland, the funds collected under the carbon tax contribute to a Just Transition. Still, some modifications could be made:

- Fair access to Bike to Work schemes[383]: there is a need to find a way to open it up to lower-income populations and in lower socio-economic areas. Participants suggested that kids' seats and cargo bikes should be added to such schemes. Currently, such plans are offered by employers who can pay for a new bicycle and the employee then repays the cost in regular instalments from their salary before tax, so the tax deduction is a discount on the cost of the bike. They should instead be available to everyone.

- Fair access to public transport (urban and rural) is necessary. There should be consideration of things like demand-responsive transport for rural areas. Also, support should be given to develop and promote shared mobility schemes, such as car sharing. Such schemes will require apps to facilitate them. The lack of safety for active travel and public transport impacts social cohesion and uptake of transport solutions.

6.14.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Ireland[384] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[385]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Ireland's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[386], Ireland's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €989m. This can be broken down as follows concerning the European Green Deal (EGD) priorities:

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[383] A scheme whereby employees can buy a bike through payroll deduction before tax.
[384] A stakeholder meeting took place on 6 October 2022 and involved one National authority, two Local authorities, two research and education community members.
[385] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[386] Ivanova, V. et al. (2021), see note 30, page 61.

Increasing renewable energy in buildings	There is a target of 400 000 heat pump installations in existing buildings by 2030.
Improving energy efficiency in buildings	There are targets to retrofit 500 000 homes to a B2 rating by 2030. This extends to retrofitting 1 million houses by 2040 and 1.5 million by 2050. For public and commercial buildings, the target is to upgrade one-third of the premises to a B rating by 2030.
Tax system for energy products aligned to the green transition	The NRRP includes a proposal for a carbon tax but there is no mention of a tax system for energy products specifically.
Provide funding for the renovation of buildings	€40m will go to the de-risking of a low-cost residential retrofit loan scheme through the use of loan guarantees. €60m is allocated to a Public Sector Retrofit Pathfinder project and a Public Sector Buildings' Energy Retrofit Programme for deep retrofit of public offices.
Renovate at least 3% of the total floor area of public buildings annually	Based on an EC study, between 2012 and 2016, the renovation rate for residential buildings was 0.6% medium retrofit and 0.1% deep retrofit[387]. There is no mention of non-residential buildings. One of the focus points of the NRRP, however, is on public buildings. This includes the target to upgrade at least 5,400m² of public office accommodation across Ireland, aimed at a minimum of a 50% increase in energy efficiency.
Create world-leading companies	€114m will be available under priority for a Green Skills Action programme covering energy renovation, Net Zero Energy Building (NZEB) upskilling, and other skills for a low-carbon economy. There are also plans to create technical assistance mechanisms such as one-stop shops.
Raise global ambition to tackle climate change	There are plans for an ongoing annual awareness-raising campaign.
Improve health and well-being	There is no mention of the impact on health and well-being due to renovation projects.
Address inequality and energy poverty	The NRRP does not target specific groups, such as those potentially facing or in energy poverty.
Ensure a Just Transition that is fair, competitive, and green	There is no mention in the NRRP regarding the Just Transition.
Mobilising industry for a clean and circular economy	There is no mention in the NRRP regarding a clean and circular economy.

The following compares the views of the citizens and the national stakeholders along with Ireland's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is, firstly, to understand where the strengths and weaknesses lie in the current national plans; and, secondly, to inform the actions to be taken to ensure the adoption of the EGD based on the views of the citizens and national stakeholders.

Increasing renewable energy in buildings: Solar photovoltaic panels (PV) and heat pumps are the two technologies mentioned by citizens, stakeholders and the NRRP for

[387] European Commission (2019), see note 31, page 61.

Ireland. In Ireland, the national policy allows heat pumps to be considered renewable technology, even though EU policy does not consider a heat pump a renewable technology. Citizens felt that solar panels were not affordable and there was no incentive, such as a Feed-in-Tariff (FIT), to encourage their adoption and enable a quicker payback. In contrast, National stakeholders mentioned there are good pilots which will promote the adoption of heat pumps. In particular, they noted that the outcomes from projects such as the EU-funded 'heat pump for all' project which is examining if heat pumps can be put into less efficient homes, will drive the adoption of such technologies. These types of projects would enable the goals of the Irish NRRP, targeting 400 000 heat pump installations by 2030.

Improving energy efficiency in buildings: Citizens mentioned several key barriers to increasing energy efficiency projects. They included the tenant vs owner barrier and how policies concerning this area are needed along with governments not understanding the inconvenience of renovation. For example, if a property owner is mandated to improve their energy efficiency performance to a B rating (or other), to undergo the renovation they may have to evict the tenant, and in this instance the tenant may not have an alternative accommodation to go to.

Citizens suggested that property owners ensure a certain certification standard before renting their buildings. The national stakeholders also discussed this. However, unintended consequences that could go against the Just Transition were mentioned. For example, tenants would need to be evicted to carry out the work, and then, the owner could increase the rent on the improved quality of the property or find renters willing to pay more.

The review of the NRRP by the Irish Green Building Council[388] highlighted that there was a lack of awareness of the benefits of energy renovations which means they are not often perceived as a priority. Citizens suggested that a nationwide media campaign, similar to those during the COVID-19 pandemic, would be helpful to enable the adoption of energy efficiency projects. National stakeholders also mentioned the need for awareness campaigns which use real-world people and real-world examples of undergoing an energy efficiency project. Citizens and national stakeholders are therefore aligned in their views concerning the need for more education and awareness campaigns, which is also supported by the review of the NRRP.

National stakeholders felt that there should be more emphasis on collecting better quality data, for example, improving the existing Building Energy Rating (BER) system to include better quality datasheets and profiles for consumption. In addition, there should be an authoritative, reliable and single recognised data source to be used by financial institutions.

Tax system for energy products aligned to the green transition: There was no mention of tax systems for energy products; however, national stakeholders and citizens raised the issue of tax reduction schemes for those undergoing renovation, private and public property owners. The NRRP also mentions a proposed carbon tax, but citizens or national stakeholders did not discuss this to understand their views of such a tax.

Provide funding for the renovation of buildings: Citizens felt very strongly that renovation is not affordable. Citizens feel the pressure of increasing energy costs. They think renovation is only affordable for those on social welfare payments or the wealthy, and the squeezed middle is being ignored. This idea was consolidated by the review of the NRRP by the Irish Green Building Council, which highlighted a clear need for low-cost finance solutions. National stakeholders also mentioned that energy costs had increased

[388] Cf. www.igbc.ie.

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significantly, so citizens do not have the funds to put towards energy efficiency projects. Energy poverty was quoted at 43%, and national stakeholders felt that the grant schemes needed to reflect the new reality due to increased energy costs.

National stakeholders suggested that there should be 100% funding for the energy assessment of buildings to encourage the adoption of energy efficiency projects by the squeezed middle. However, it was also mentioned that 100% of financing could interfere with the market. National stakeholders also noted that people believe the costs will be higher if using a grant-funded scheme and the required SEAI-registered contractor. This perception needs to be addressed to identify whether or not this is the reality.

Citizens understood the available grants well, and the one-stop shop promoted by the Sustainable Energy Authority of Ireland (SEAI) was well received. National stakeholders also mentioned these fully funded grants, however noted that there are long waiting lists for those who can avail of these grants. This is mainly due to the shortage of skilled workers to carry out the work and demand exceeding supply.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt local councils should lead the way and set good examples. They also felt that other big consumers, such as hospitals, should be targeted first. National stakeholders felt there was a good push towards public buildings taking the lead and publishing their data for all to see. However, more could be done, in particular concerning the use of district heating. The Bauhaus initiative was also mentioned as an enabler of comfortable and sustainable living, which could be driven by public buildings and local councils. The NRRP emphasises public buildings leading the way, which aligns with citizen and national stakeholder viewpoints.

Create world-leading companies: Citizens felt there was a lack of trust in those providing energy efficiency services and that best in class were not being carried out. They also felt there was a risk of prices being pushed up if only registered contractors could deliver the work. Hence, a balance between sound quality construction and affordable prices was required.

The review of the NRRP by the Irish Green Building Council also highlighted a lack of trust in the outcome of energy renovations exacerbated by a labour and skills shortage.

National stakeholders also mentioned the skills shortage in delivering renovation projects. They said there was also difficulty in getting contractors to upskill in retrofitting or energy. There is currently no requirement for tradespeople (e.g. plumbers) to undergo Continuous Professional Development (CPD). If this were addressed, it would be an opportunity to upskill this sector for energy efficiency offerings such as heat pump installation and maintenance.

Raise global ambition to tackle climate change: There were several mentions by citizens and national stakeholders on raising awareness through mainstream media and social media campaigns. The NRRP specifically states plans for awareness-raising campaigns which align with citizen and national stakeholder views.

Improve health and well-being: National stakeholders felt that awareness campaigns should also mention comfort and health. This is currently not addressed by the NRRP.

Address inequality and energy poverty: This was discussed well by both national stakeholders and citizens. Both groups had a good awareness of the issues with increased energy prices and ensuring there are no unintended consequences of policies, e.g. the

case of property owners pushing tenants out for renovation and rising costs as a result and so forth. However, the NRRP does not explicitly target groups that may be in or move into energy poverty; perhaps this is something to be addressed at the national level.

Ensure a Just Transition that is fair, competitive, and green: National stakeholders mentioned that the perception from citizens is that only those on high or low incomes can avail of energy efficiency projects, which is not fair for all. In addition, larger properties fare better as the renovation costs are higher; therefore, the funding received is still higher, even if it is only a percentage of the renovation. As such, more funding is going to those who have bigger houses. They felt there should be incentive schemes for people looking to downsize or a modified rating system depending on the type and size of the home. This is also not addressed by the NRRP, and further discussions at the national level would be helpful.

Mobilising industry for a clean and circular economy: Citizens felt the life cycle of building materials should be considered more in renovation projects, that many building materials only have certification for 15 years, which is not enough. National stakeholders felt there should be more mainstream awareness concerning embodied carbon. A clean and circular economy is also not mentioned in the NRRP; further discussions at the national level to take on these viewpoints would be beneficial.

General overview of actions per theme

The following is a summary of the actions proposed by the national stakeholders and citizens during the workshops.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Enable community collaboration Renewable energy infrastructure roll-out
Improving energy efficiency in buildings	Research into long-term climate policy Improved quality of data and available datasets for energy assessments Create a single trusted source of data Revision of the rating system to account for different types and sizes of houses Mandates for companies to reduce energy based on company headcount Changes in regulation for private wires and energy sourcing Prioritise energy efficiency first in planning laws Improvements to the Building Control Act for the domestic sector Implementation of long-term climate policy
Tax system for energy products aligned to the green transition	Reduced tax on council rental rates for property owners carrying out renovation projects

Provide funding for the renovation of buildings	Revision of funding levels to account for different types and sizes of buildings Low-cost or no-cost loans for renovation 100% funding for Sustainable Energy Communities (SECs) 100% funding for home energy assessments Research into the positives and negatives of 100% funded schemes for all Funding for micro-generation schemes that address the property owner vs tenant issue
Renovate at least 3% of the total floor area of public buildings annually	Training for public council landlords and tenants on how to improve energy efficiency New KPIs for public councils to monitor progress Government-run energy service company
Create world-leading companies	Attract young people into the energy sector Public strategy to address the skills shortage Create a professional body for upskilling trades workers in energy-relevant sectors
Raise global ambition to tackle climate change	Real-world and real-person example media campaigns
Improve health and well-being	Awareness campaign highlighting additional benefits of renovation
Address inequality and energy poverty	Reduce-use marketing campaign
Ensure a Just Transition that is fair, competitive and green	Mortgage loan rates linked to energy performance Legislation for tenant protection during property owner renovation
Mobilising industry for a clean and circular economy	Mandates for the lifespan of renovation developments Research into an embodied carbon register Accountability of energy waste Implement the embodied carbon register

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers mentioned explicitly by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source [389]
Increasing renewable energy in buildings	No specific barriers mentioned	/
Improving energy efficiency in buildings	Change of governments results in a shift in grant policies which undermines the coherence of the national energy efficiency and retrofit programme and can negatively impact citizens' perceptions. There is a need for long termism to be institutionalised - an action raised for the roadmap.	S
	The Energy Performance of Buildings Directive mandates that an EPC (Building Energy Rating (BER) in Ireland) is completed to receive a grant. However, there is an issue in that the EPC data is not considered	S

[389] C – Citizens; S – expert stakeholders

	accurate. It was proposed that there was a need for more work on data and the quality of EPC assessment. A key barrier is that defaults are currently used in the EPC landscape.	
	GDPR emerged as a regulatory barrier impacting the ability to collect data and support research for more effective and granular policy development.	S
	Energy Performance of Buildings Directive (EPBD) revisions of levels will be adjusted from 2025. They could be different when the user renews their BER, which could be challenging	S
	Cultural changes, such as wearing more clothes, are needed during the energy crisis but can be challenging.	S
	Retrofitting is not an interesting way to spend money. This option is identified as a psychological barrier.	S
	The quality of EPC data was a major barrier identified. Poor quality data impacts the proper and accurate stock modelling used to inform climate policy. Policymakers and researchers are working with insufficient data.	S
Tax system for energy products aligned to the green transition	No specific barriers mentioned	/
Provide funding for the renovation of buildings	100% funding is not available for all. Considering the costs and inflation, grants do not cover the vast majority of people.	S
	Access to finance is a major challenge. The grant system does not account for how citizens pay for the balance outside of the grant.	S
Renovate at least 3% of the total floor area of public buildings annually	Local authorities are reluctant to participate in consortia for applications to the European Investment Bank because of the several requirements needed for funding.	S
Create world-leading companies	There is a lack of skills and labour to deliver energy-efficiency projects.	C&S
Raise global ambition to tackle climate change	More education and awareness-raising campaigns are needed.	C&S
Improve health and well-being	No specific barriers mentioned	/
Address inequality and energy poverty	No specific barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No specific barriers mentioned	/
Mobilising industry for a clean and circular economy	No specific barriers mentioned	/

Other high-level barriers across all themes of the EGD included:

- The ambition of the current policy is not always in line with the targets for 2050.
- The actual targets are not set but keep shifting and changing, especially when the EU regulation is translated from European to local levels.
- There is no specific body responsible for the integral implementation of the EGD.
- National and local bodies have too much flexibility in setting their objectives and targets for the EGD.

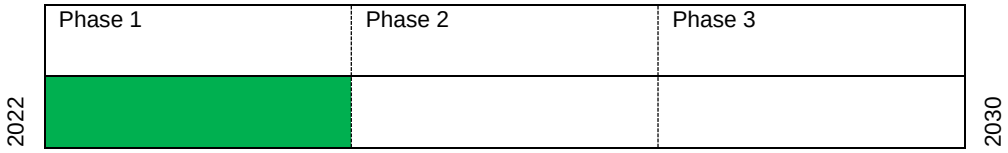
- The decision-making process is too slow.
- Stability is crucial for investors seeking to fund energy efficiency projects; however, the current market is fluctuating.

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main instruments of implementation: education and awareness-raising

Actions that can be carried out now with minimal support suggested by the national stakeholders and the citizens are outlined in the following table. This includes a wide range of measures across most of the EGD areas. There is a focus on education programmes, media, and awareness-raising campaigns to address the low-hanging fruit. Other actions are related to improving policies or research areas that will later feed policies.

Theme	Action name	Description	Idea Source[390]
Increasing renewable energy in buildings	Enable community collaboration	Community mobilisation and collaboration should be enhanced, e.g. through Citizen Energy Communities, Renewable Energy Communities and other means.	S
Improving energy efficiency in buildings	Research into long-term climate policy	It is necessary to start the work on a bill to consider long-term climate policy. Establishing legislation and a department focused on the 'long termism' should be created. Participants mentioned as an example the Well-being of Future Generations Act in Wales and the Future Generations Commissioner for Wales.	S
	Improved quality of data and available datasets for energy assessments	The need for more research and data in real-time should be urgently addressed. Specifically, there needs to be significant	S

[390] C – Citizens; S – expert stakeholders

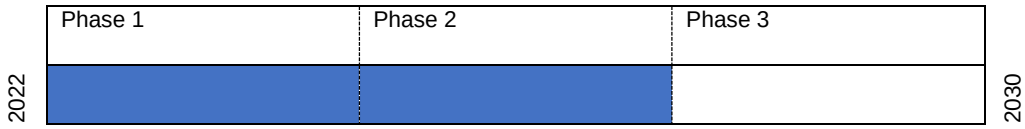
		investment in the EPC scheme to produce quality data and datasets. This aspect can also enable nuanced policies for different housing archetypes-micro-modelling archetypes.	
	Create a single trusted source of data	A single trusted source of data should be identified. Financial institutions and other stakeholders also need this.	S
	Revision of the rating system to account for different types and sizes of houses	Ratings should be revised to consider the house's size and overall energy usage.	S
Provide funding for the renovation of buildings	Revision of funding levels to account for different types and sizes of buildings	Enable different requirements and levels of funding depending on the type of building, e.g. public, private or rented.	C
	Low-cost or no-cost loans for renovation	Various measures should be implemented to promote affordability, such as low-cost or no-cost loans for renovation.	S
	100% funding for Sustainable Energy Communities (SECs)	100% funding should be provided to SECs for Energy Master Plans.	S
	100% funding for home energy assessments	100% fund should be available for some measures - e.g. home energy assessments. This option will empower citizens to know the best and most appropriate path for energy upgrades, both in terms of cost and how to progress.	S
	Research into the positives and negatives of 100% funded schemes for all	An analysis should be made to understand how renovation schemes are made 100% financed in other countries at a policy level (cf. Spain and Portugal grants, Italy tax credits).	S
Renovate at least 3% of the total floor area of public buildings annually	Training for public council property owners and tenants on how to improve energy efficiency	Training for public council property owners and tenants to improve the energy efficiency of public buildings.	S
	New KPIs for public councils to monitor progress	Local authorities should establish new KPIs related to the current and emerging developments in the energy and energy upgrade sector.	S
Raise global ambition to tackle climate change	Real-world and real-person example media campaigns	Media campaigns showing real-life examples of families who have done renovation projects and are seeing the benefits.	C
Create world-leading companies	Attract young people into the energy sector	Educational programmes and awareness-raising campaigns should be promoted to address the skills shortage and increase employment in the retrofitting/renovation sector.	S

		Also, career fairs, social media campaigns (e.g. TikTok), and EU programmes like the BLAST project and Erasmus Plus project should be used.	
	Public strategy to address the skills shortage	A strategy should be developed to address the skills shortage for renovation.	S
Improve health and well-being	Awareness campaign highlighting additional benefits of renovation	Awareness campaigns that discuss other benefits of renovation beyond energy and cost savings, including improved health and well-being.	S
Address inequality and energy poverty	Reduce-use marketing campaign	Run a 'reduce-use' energy campaign, showing citizens how to reduce energy and save on their energy bills, for example, by wearing more clothes when cold at certain times of the day.	S
Ensure a Just Transition that is fair, competitive and green	Mortgage loan rates linked to energy performance	Young people should be supported in the housing crisis, and mortgage loan rates should be linked to the property's energy upgrades to promote a Just Transition. The rate should decrease once the renovation works are completed and the energy rating is upgraded. Another suggestion was to abolish stamp duty and put it into renovation instead.	C&S
	Legislation for tenant protection during property owner renovation	Legislation for greater tenant protection during renovations should be implemented to prevent 'renovictions' and rent increases.	S
Mobilising industry for a clean and circular economy	Mandates for the lifespan of renovation developments	Mandate that renovation must last the lifetime of the priority.	C
	Research into an embodied carbon register	Research and process for developing an embodied carbon register should get started.	
	Accountability of energy waste	An accountability process should be established for energy waste.	

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: policy formation, creation of professional bodies

The national stakeholders and citizens also suggested actions that can be carried out in the medium term but need government support to implement further. These now included a high level of policy-related activities to enable the EGD, including introducing private wire laws, changes to planning laws, mandates for private companies, reduced taxes for renovated properties etc. These medium-term actions also included improvements to the Building Control Act and the creation of professional bodies to increase the skillsets of existing tradespeople to address the energy crisis.

Theme	Action name	Description	Idea Source [391]
Improving energy efficiency in buildings	Mandates for companies to reduce energy based on company headcount	Introduce quotas for companies to achieve energy standards based on a company's headcount.	C
	Changes in regulation for private wires and energy sourcing	Enable citizens to source their energy sources and allow for private wires.	C
	Prioritise energy efficiency first in planning laws	Ensure planning laws prioritise energy efficiency first, for example enabling south-facing buildings regardless of other planning requirements.	C
	Improvements to the Building Control Act for the domestic sector	The Building Control Act for the domestic sector should be implemented. It is currently not functioning, and this should be examined. An independent body should be established to regulate the quality of work and costs - including taking responsibility for certification.	S
Tax system for energy products aligned to the green transition	Reduced tax on council rental rates for property owners carrying out renovation projects	Reduce tax on council rental rates if property owners carry out renovation projects.	S

[391] C – Citizens; S – expert stakeholders

Provide funding for the renovation of buildings	Funding for micro-generation schemes that address the property owner vs tenant issue	Provide funding for micro-generation schemes that would allow both tenants and property owners to benefit (i.e. tenants have a warmer home, and the owner can sell back to the grid)	S
Renovate at least 3% of the total floor area of public buildings annually	Government-run energy service company	The feasibility of the government becoming an active player in the renovation and energy upgrade market should be assessed.	S
Create world-leading companies	Create a professional body for upskilling trades workers in energy-relevant sectors	Establish a professional body for upskilling trades workers in relevant sectors. This body would also be responsible for the certification of contractors, increasing the number of registered experts, which would provide more trust and also ensure there are not increased costs due to only a small number of certified bodies. This should include mandated Certificates for Professional Development (CPD). Related relevant bodies in the field include the Construction Industry Register Ireland (CIRI).	S
Mobilising industry for a clean and circular economy	Implement the embodied carbon register	The embodied carbon register should be implemented.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation: regulatory change, deep infrastructure projects

Actions that will take longer to implement were few, with only two suggestions, as shown in the following table.

Theme	Action name	Description	Idea Source [392]
Increasing renewable energy in buildings	Renewable energy infrastructure roll-out	A large-scale roll-out of renewable energy infrastructure - specifically District Heating and Electrification.	S
Improving energy efficiency in buildings	Implementation of long-term climate policy	Implementation of long-term climate policy.	S

Just Transition

This was mainly discussed by the national stakeholders; however, citizens did feel the squeezed middle was being left behind in the green transition, which was not fair, and there was a perception that renovation was only affordable to those on high incomes or low incomes.

Issues raised by the national stakeholders included the following.

- Addressing the perception that bigger homes receiving energy grants fare better than smaller homes.
- Ensuring tenants are not evicted because the property owner is mandated to carry out an energy renovation project.
- Ensuring the 'accidental landlords' as a result of the previous recession are not penalised due to increased legislation for energy upgrades; an 'accidental property owner' is a person who becomes an owner by circumstance rather than plan. There are many accidental property owners in Ireland due to significant drop in house prices from 2008 onwards, which resulted in those who purchased a home prior to 2008 being in negative equity for many years. These people could not afford to sell their homes and instead were left in a position to rent them out in order to pay the mortgage.
- Ensuring the cost of the renovation is not passed from the property owner to the tenant.
- Examining the policy not to provide 100% funding for renovation projects, as 43% of citizens are in energy poverty in Ireland.
- Enabling more district heating schemes, especially for apartment buildings.

[392] C – Citizens; S – expert stakeholders

6.15 Italy

6.15.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[393] in Italy that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[394]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Italy's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Italy did not point to any key food policies on a national level. However, they emphasised the importance of a food network listed below. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of policies visible to the stakeholders present.

- Banco Alimentare Food Bank (Bancoalimentare.it, 2022)[395] – A network of food banks in Italy, promoting the recovery of food surpluses and their redistribution to charitable structures, organising the National Food Collection Day and other food collection actions.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policies within food policy in Italy.

- Strategic Plan for Innovation and Research in the Agricultural, Food and Forestry Sectors (2014-2020) (Ministry of Agriculture, Food and Forest Sovereignty, 2014)[396] National framework for R&I actions entrusted to a committee composed of ministerial representatives together with regions, research bodies and companies, and coordinated by the Ministry. The Strategic Plan is focused on six thematic areas. Four of those are relevant for sustainable food systems: 2) climate change, biodiversity, soil functionality and other ecological services in agriculture; 3) coordination and integration of food supply chain processes; 4) quality typicality and safety of food and healthy lifestyles; 6) development of knowledge system for the agricultural, food and forestry sectors.

- National Integrated Programme of Controls 2020-2022 (Ministry of Health, 2020)[397] – The programme aims to guide the official controls for food safety and the fight against

[393] A stakeholder meeting took place on 20 October 2022 and involved one academic representative.
[394] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[395] Cf. https://www.bancoalimentare.it/it.
[396] Ministry of Agriculture, Food and Forest Sovereignty, Italian Government (2014). Strategic Plan for Innovation and Research in the Agricultural, Food and Forestry Sectors (2014-2020). Available at: https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/9065 (Accessed on 23 November 2022).
[397] Ministry of Health, Italian Government (2020). National Integrated Programme of Controls 2020-2022. Available at: https://www.salute.gov.it/pianoNazionaleIntegrato2020/homePianoNazionaleIntegrato2020.jsp (Accessed on 23 November 2022).

fraud along the production chain, from the fields to the table, according to the risks. In particular, the programme has the following priorities: protection of consumers and fair competition by maintaining a high level of protection of human health, animal health, plant health and food safety; fight against fraud and counterfeiting; and defence of agri-food production through the analysis of the life cycle of agro-industrial production chains products.

- National Technology Agri-Food Cluster (CLAN) (Clusteragrifood.it, 2022)[398] – A network of different agri-food chain stakeholders (such as companies and research centres) promoting R&I in food industry through platforms on technology for food safety, sustainability of food chains and promotion of consumer health.

General overview of actions per theme

The actions proposed by the Italian citizens and stakeholders on transforming the current food system in Italy consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food processing, distribution, and retail. Finally, the proposed actions are mainly focused on short-term, immediate implementation tools such as communication, education, and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

[398] More information is available at https://clusteragrifood.it/en/.

Theme	Action
Sustainable food production (5)	Training for citizens interested in urban farming.
	Financial support for food producers' cooperatives and associations.
	Subsidies for sustainable community and urban gardening.
	Subsidies for local sustainable food production.
	Incentives for production of organic, artisanal, and local products.
Sustainable food processing, distribution & retail (10)	Promotional campaigns encouraging the use of reusable food packaging.
	Promotional campaigns encouraging citizens to purchase directly from local food producers.
	Revision of food market working hours to be accessible to more people.
	Social media promotion campaigns for local food markets.
	Awareness campaigns on reducing the use of bottled water.
	Subsidies for more sustainable food distribution.
	Revision of the Nutriscore label to include more information.
	Reduction of VAT on organic products.
	Regulation outlining the reduction of food packaging for supermarkets and food vendors.
	Regulation for food labels to include production information.
Sustainable food consumption (3)	Educational workshops on maintaining healthy and plant-based diets.
	Subsidies to make local and organic food available in school meals.
	Regulation establishing quotas on use of local products in catering businesses.
Food loss and waste reduction (3)	Encouraging food businesses to donate unused food.
	Awareness campaigns on household food waste reduction.
	Encouraging use of data collection in industrial food production.
Ensuring food security (1)	Establishment of more stringent monitoring of soil and ground water quality.
Combating food fraud (1)	More stringent monitoring of food products' certificates.
Across the entire food cycle (1)	School education on food sources, building healthy and plant-based diets, and reducing food waste.

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

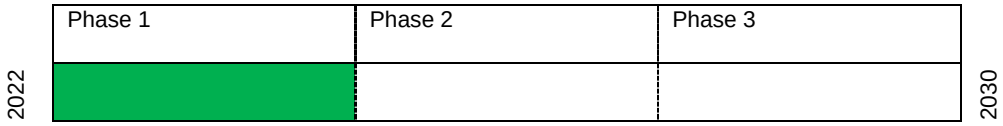
Theme	Barrier	Idea Source[399]
Sustainable food production	There is a lack of communication and insufficient information sharing due to the confidentiality policies of both small and large producers.	C
	There is little capacity to anticipate and react to unpredictable events in the food production sector, for instance, during the COVID-19 pandemic.	C
Sustainable food processing, distribution & retail	There is a lack of standards in food labelling and traceability, while consumers demand accurate information on food products.	C
Food loss and waste reduction	It is difficult to redistribute fresh food in time before its degradation.	C
Combating food fraud	The cost of an accurate monitoring system for sustainable production is very high.	C
	There is inaccurate data reporting in the food industry.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Italy. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns on reusable packaging, are easy to implement low-hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as more stringent food product quality monitoring, may be more difficult to implement successfully, but can produce knock-on effects in raising the overall food quality.

[399] C – Citizens; S – expert stakeholder

Theme	Action name	Description	Idea Source[400]
Sustainable food production	Training for citizens interested in urban farming	Municipalities should organise skills-based training for citizens interested in taking up urban farming.	S
Sustainable food processing, distribution & retail	Promotional campaigns encouraging the use of reusable food packaging	Promotional campaigns should be organised to encourage citizens to use reusable food packaging (e.g., in supermarkets, or for the meals they take with them to work).	C
	Promotional campaigns encouraging citizens to purchase directly from local food producers	Promotional campaigns should be organised to encourage citizens to purchase food products directly from local food producers when possible.	C
	Revision of food market working hours to be accessible to more people	Municipalities should revise the working hours of food markets to make them more accessible to people with '9 to 5' work schedules.	C
	Social media promotion campaigns for local food markets	Local food markets should be promoted on social media as events, to get more people interested in visiting them.	S
	Awareness campaigns on reducing the use of plastic bottled water	Awareness campaigns should be organised to reduce the use of plastic bottled water, which will lead to reduced amounts of plastic waste.	C
Sustainable food consumption	Educational workshops on maintaining healthy and plant-based diets	Educational workshops should be organised to teach citizens how to maintain healthy and plant-based diets.	C&S
Food loss and waste reduction	Encouraging food businesses to donate unused food	Food businesses like supermarkets and restaurants should be encouraged to donate their unused food through existing channels like apps or cooperation with food banks.	C&S
	Awareness campaigns on household food waste reduction	Awareness campaigns should be organised on the impact of household food waste and methods for its reduction.	C&S
	Encouraging use of data collection in industrial food production	Use of data should be encouraged in industrial food production to spot areas where there is waste.	S
Ensuring food security	Establishment of more stringent monitoring of soil and ground water quality	The quality of soil and ground water should be strictly monitored to make sure food production processes are maintaining the health and	C

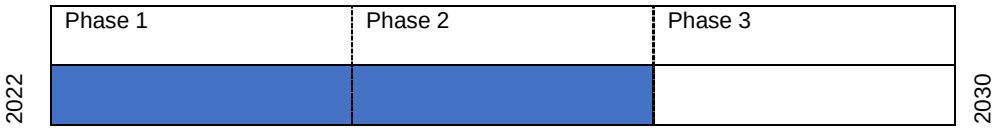
[400] C – Citizens; S – expert stakeholders

		reproductive capacity of nature.	
Combating food fraud	More stringent monitoring of food products' certificates	There should be more stringent monitoring to make sure food products adhere to the certificates on their food labels (e.g., making sure products labelled as organic are being produced without pesticides).	C
Across the entire food cycle	School education on food sources, building healthy and plant-based diets, and reducing food waste	Schools should organise holistic education on food systems including food sources, maintaining healthy and plant-based diets, and methods to reduce food waste.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[401]
Sustainable food production	Financial support for food producers' cooperatives and associations	Financial support should be provided for the functioning of food producers' cooperatives and associations (e.g., through operational grants).	C

[401] C – Citizens; S – expert stakeholders

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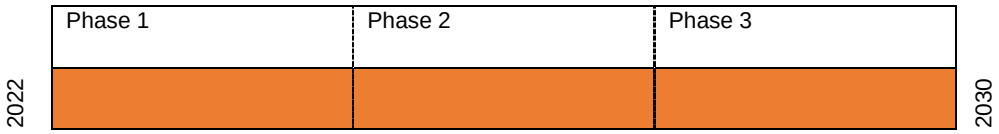
	Subsidies for sustainable community and urban gardening	Subsidies should be provided for sustainable community and urban gardening (e.g., municipal grants and provision of unused plots of land).	C&S
	Subsidies for local sustainable food production	Subsidies should be provided for local sustainable food production.	S
	Incentives for production of organic, artisanal, and local products	Production of organic, artisanal, and local products should be incentivised by local and regional governments.	C
Sustainable food processing, distribution & retail	Subsidies for more sustainable food distribution	Subsidies should be provided to make the food distribution methods more sustainable (e.g., grants for electric vehicles, use of cargo trains).	C
Sustainable food consumption	Subsidies to make local and organic food available in school meals	Schools should receive subsidies to extend the use of locally grown and organic food in meals for students.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include taxation tools, regulations of food packaging, quotas on specific food product use, and revision of existing regulations to make them more in line with the goals of EGD.

Theme	Action name	Description	Idea Source[402]
Sustainable food processing, distribution & retail	Revision of the Nutriscore label to include more information	The Nutriscore label should be revised to provide more extensive information on food products.	C
	Reduction of VAT on organic products	VAT should be reduced on organic food products.	C

[402] C – Citizens; S – expert stakeholders

	Regulation outlining the reduction of food packaging for supermarkets and food vendors	Regulation should be developed outlining mandatory reductions of packaging on products that supermarkets and food vendors are allowed to use.	C
	Regulation for food labels to include production information	Regulation should be developed on food labels to include more production information (e.g., small-scale family farm vs. industrial farm; production vs. processing location).	C
Sustainable food consumption	Regulation establishing quotas on use of local products in catering businesses	Regulation should be developed establishing minimum quotas on use of local products in catering businesses.	C

Just Transition

The high-quality, sustainable, and healthy food should remain affordable for all citizens, including those from more deprivileged socio-economic backgrounds. On the other hand, it was pointed out that food producers should also be fairly compensated for their products.

6.15.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens or stakeholders[403] in Italy that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[404]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Italy's policies on the EGD and Citizen and National Stakeholder Reports

According to a 2019 report analysing the state of transportation emissions in Italy, the country has already adopted several measures to cut these emissions[405]. These include subsidies for the purchase of low-emission vehicles and additional purchase taxes on high-emitting vehicles; a strategy and funding for EV charging infrastructure; law on the proportion of biofuel used in transport; and various initiatives to encourage and require sustainable urban mobility planning by regions and cities, which in turn leads to investment in sustainable modes and in many cases also access restrictions to city centres. In addition,

[403] A stakeholder meeting took place on 20 October 2022 with one participant from the academia/research sector.
[404] Prof Tom Rye, Molde University College, Norway.
[405] Transport and Environment (2019). Emissions reduction strategies for the transport sector in Italy. Available at https://www.transportenvironment.org/discover/emissions-reduction-strategies-transport-sector-italy/ (Accessed on 25 November 2022).

Italy is spending almost EUR 35 billion of Recovery Funds on more sustainable urban transport; replacement of 3 000 buses with low emission modes; and extending the network of charging stations across the country[406]. However, the bulk of its Recovery Funds will be spent on extending its high-speed rail network which performs poorly in carbon reduction terms due to limited mode shift from air, electricity generation mix and large amounts of embodied carbon in construction.

The workshops with citizens and stakeholders showed some support for investment in long distance passenger rail, as well as public transport more generally. Neither group disagreed strongly with any of the national policies or proposals. To give more detail:

- ***Citizens*** thought it would be a good idea to introduce incentives for big enterprises to move to an electric car fleet, but they should also be incentivised to encourage remote working and flexible hours to reduce the need to travel. They also suggested that companies should employ people who do not need to commute for long distances. There was concern about the environmental impact of short haul low-cost flights and support for moving passengers to train from plane. Public transport for local and regional trips needs to be improved for all types of trips, but especially for trips to school; and levels of personal security on public transport should be improved. Improved public transport is especially important in rural areas and the edge of cities and should be integrated with car travel by means of park and rides, but also better integration with other modes like car-sharing and micro mobility (including, in the future, autonomous vehicles). Finally, car sharing (like BlaBlaCar) was supported if it can be made safer for women.

- The ***stakeholder*** generally agreed with the suggestions from citizens, but also had several more strategic recommendations, to do with energy planning and security (for EVs especially) and for the delivery of sustainable urban transport plans. She felt it would be unrealistic to provide a very dense network of slow EV chargers across cities, both for electricity supply and charger occupancy reasons, and so she suggested a more scientific approach to their placement.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[407]**
Clean vehicles	Targeted low-emission vehicle purchase incentives	C&S
	Energy needs planning	S

[406] European Commission (2021). Piano Nazionale di Ripresa e Resilienza. Available at https://www.governo.it/sites/governo.it/files/PNRR.pdf (Accessed on 25 November 2022).
[407] C – Citizens; S – expert stakeholders

Better public transport	Better PT vehicles	C&S
	Cheaper PT	C
	PT integration	C
	Better personal security on PT	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	S
Pricing and charges for transport	Taxation of polluting vehicles	C&S
Planning and operation of transport networks	PT network improvement	C&S
	Park and ride sites	C
Governance	National monitoring of sustainable urban mobility plans (SUMPs)	S
	Regulating car sharing	C
	Regulating to permit more home working	C
Greening transport in general	Education	C
	Encouraging companies to recruit staff who live nearby and to use more homeworking	C

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. The stakeholder, however, made several points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholder sees as necessary to achieve the objectives of the EGD – this being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Barrier	Idea Source[408]
Governance	Lack of monitoring of the implementation of sustainable mobility plans at the national and local levels.	S
Governance	Lack of coordination between Europe and the Member States in implementing the EGD goals.	S
Governance	Lack of obligations for Member States to ensure a fair transition for the most vulnerable groups.	S

[408] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

Instruments of implementation: communication and education

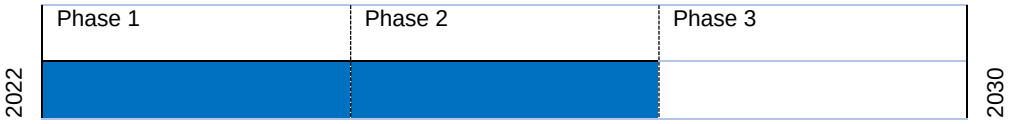
Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Italy. These mainly consist of communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [409]
Greening transport in general	Education	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution especially in schools from early age	C

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column ‘action name’.

[409] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea source [410]
Clean vehicles	Targeted purchase incentives for low-emission vehicles	At the national level, setting price caps, reducing VAT for low-emission vehicles to increase their accessibility and appeal, and providing financial incentives to buy such vehicles. However, this did not just apply to electric vehicles but all low-emission vehicles, given that consumers should not be trapped into the use of one technology.	S
Better public transport	Better PT vehicles	Investing in new, less polluting and more comfortable public transportation vehicles.	C&S
	Cheaper PT	Cutting public transport fares to encourage greater use, and social inclusion.	C
Spatial planning and city development	More bike paths	Little detail was given but participants want to see better cycling infrastructure for cyclists and micro-mobility users.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport	S
Planning and operation of transport networks	PT network improvement	Increased investment in improved public transport capacity and speeds, at local, regional and national level, is required.	C&S
	Park and ride sites	Parking on the edge of cities was seen as a method to reduce travel into cities by car.	C
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Italian citizens and experts require policy changes and regulation to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better

[410] C – Citizens; S – expert stakeholders

coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [411]
Clean vehicles	Energy needs planning	At the national level, energy needs planning, mainly due to the increased use of e-vehicles. EVs will increase electricity demand but as a net importer of electricity, Italy will have to decide where and how many EV charging stations to provide, and to strengthen the electricity grid if necessary.	S
Better public transport	PT integration	Better planning and coordination of public transport routes to give a faster and more integrated journey with less waiting time.	C&S
	Better personal security on PT	Both stakeholders and citizens pointed out that public transport currently faces personal security problems at night in particular, and that these need to be addressed before more women in particular will use it. This is partly a governance issue and partly a question of investment in surveillance technology and staff.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	No suggestions in this category	/	
Planning and operation of tspt networks	No suggestions in this category	/	
Governance	National monitoring of sustainable urban mobility plans (SUMPs)	In Italy, the national level requires the preparation and implementation of SUMPs by municipalities of a certain size. However, there is little follow-up of the impacts of this. The stakeholder felt that this kind of monitoring would help to measure how local transport policy is supporting the EGD.	S
	Regulating car sharing	It was noted that car sharing schemes like Blablacar can reduce car use, but that there are personal security issues for women, which need to be addressed to make the mode more attractive, and safer.	S

Just Transition

Citizens did not raise the issue of a Just Transition in mobility. However, the stakeholder wanted to see financial incentives for the transition strategically targeted towards those who need them most, like small and medium-sized enterprises and poorer segments of the

[411] C – Citizens; S – expert stakeholders

population. She argued that one-off windfall incentives are useless. Revenue for the Just Transition could be raised by higher taxes on freight transportation for e-commerce multinationals. She also noted that economic barriers prevent some citizens from supporting the green transition. Those living in peri-urban or rural areas often have no alternatives to private cars since electric vehicles are only affordable for the wealthy and public transport and cycling in these areas are not viable.

6.15.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Italy[412] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[413]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Italy's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[414], Italy's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €235bn in total, of which €191.5bn is from the EU Recovery & Resilience Facility, with the remainder coming from complementary national funds and the REACT EU Fund. This can be broken down as follows with respect to the EGD priorities:

Increasing renewable energy in buildings	Italy's 'Superbonus' scheme encourages the adoption of renewable technology in buildings such as solar PV, heat pumps and co-generation.
Improving energy efficiency in buildings	Italy's goal is to reduce consumption by 209 ktoe per year of final energy savings (equivalent to 0.6% of the residential sectors final energy demand in 2018) along with a reduction of emissions by 718 ktCO2 per year, covering 195 schools, 48 judicial buildings, and 50 000 residential buildings per year.

[412] A stakeholder meeting took place on 20 October 2022 involving 1 national authority and 1 research and education community member.
[413] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[414] Ivanova, V. et al. (2021), see note 30, page 61.

Tax system for energy products aligned to the green transition	Italy has a 'Superbonus'[415] scheme, which offers a 110% tax rebate for the purchase cost of technologies such as insulation of the building envelope, heat pumps and new boilers, solar PV and co-generation, and home automation. This represents approx. 26% of the public budget for residential renovation in Italy's National Energy and Climate Plan. The scheme will stop at the end of 2022, and its extension or refinement is still under debate in Italy.
Provide funding for renovation of buildings	Approximately €22bn is allocated to renovation, of which €15bn is funded through the NRRP. €4.7bn is directed towards energy efficiency and seismic engineering of private and public housing through the existing 'Ecobonus' and 'Sismabonus' incentive schemes. Other funding is allocated for new construction and there is €3.9bn is allocated to school buildings requalification and safety. To be eligible for funding in residential buildings, the renovation must be classified as 'deep renovation' and must ensure an improvement of at least two energy classes.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC based on data from 2012-2016 suggests that only 1.5% of residential sector renovations were medium depth and 0.3% deep renovations, based on floor area. In the non-residential buildings sector 4.9% were medium depth, and 0.6% deep renovations[416]. Italy has a goal to increase the deep renovation rate to 0.7% per year in the residential sector by 2030, and 2.9% in the non-residential sector (excluding hospitals).
Create world-leading companies	The NRRP also plans to accelerate the procedures for renovation through a national portal for the energy efficiency of buildings and a one-stop shop to assist citizens and businesses. There are no measures targeting skills and training renovation of buildings or for energy professionals.
Raise global ambition to tackle climate change	The NRRP plans information activities targeting the residential sector, strengthened through specific initiatives to close information gaps and provide training on available tax incentives to citizens.
Improve health and well-being	Not specifically mentioned.
Address inequality and energy poverty	Not specifically mentioned.
Ensure a Just Transition that is fair, competitive, and green	There are various tax credit schemes for energy efficiency renovation as mentioned such as the 'Superbonus', 'Ecobonus' and 'Sismabonus'

[415] The 110% Superbonus is the tax relief governed by Article 119 of Decree-Law No. 34/2020 (Relaunch Decree), which consists of a 110% deduction of the expenses incurred as of 1 July 2020 for the implementation of specific interventions Aimed at energy efficiency and static consolidation or reduction of seismic risk of buildings. The subsidised interventions also include the installation of photovoltaic systems and infrastructures for recharging electric vehicles in buildings. The Budget Law 2022 extended the facility, providing for different deadlines depending on who incurs the eligible expenses, cf. https://www.governo.it/it/superbonus.
[416] European Commission (2019), see note 31, page 61.

	schemes. Those who are on lower incomes cannot avail of these tax credit rebate schemes, as they may not be earning any or enough tax to avail of this. However, so that they are not excluded from the scheme, there is an option for the homeowner to pass the tax credit to the solution provider delivering the renovation or the finance institution who is financing it. This means that the homeowner does not need to be a taxpayer to participate in the scheme and ensures fairness for all.
Mobilising industry for a clean and circular economy	Not specifically mentioned.

The following compares the views of the citizens and the national stakeholders along with Italy's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders in order to inform the actions to be taken to ensure the adoption of the EGD.

Increasing renewable energy in buildings: National stakeholders mentioned that incentivising energy efficiency should go hand in hand with increasing the production of renewable energy in buildings. However, Italy is behind in implementing renewable energy policy in line with European procedures. Alternative solutions such as heat pumps should also be encouraged and energy communities should be implemented.

Improving energy efficiency in buildings: Citizens mention that it is difficult to convince real-estate owners to invest in renovation. Students or those in low-income housing are not interested in renovation. They also felt that higher energy efficiency standards for new buildings are needed.

The national stakeholders outlined that approx. 80% of Italians own their own home. However, many live in condominiums and both citizens and national stakeholders mentioned that the issue of co-ownership can make it difficult to achieve energy efficiency. National stakeholders also cited social barriers such as a government request to lower heating to 18ºC in the winter, of which citizens would not do unless they were in a financial situation where they had to save costs.

Citizens and national stakeholders both felt that the focus should be on the renovation of existing buildings and not the construction of new buildings, even if they are highly efficient.

Provide funding for renovation of buildings: Citizens felt that incentives distort the market and there is a lot of confusion regarding the subsidies that are available. They suggested the creation of an entity that helps citizens find the information and incentives, for example the one-stop-shop approach. National stakeholders agreed with this view suggesting there should be 'Energy Awareness Centres' to help citizens choose which type of materials or which efficiency and renewable energy systems to use.

With respect to the 'Superbonus', citizens felt this should be extended to 10 years and should not stop at the planned 2-year mark at the end of 2022; they felt this would allow the owner to do further upgrades over a long period of time and still benefit from the scheme. This would enable a longer-term approach. National stakeholders were also positive about the Superbonus scheme, citing that it was also only made possible on the back of the EU

directive 'Fit for 55' plan, which created a movement within national policies. The national stakeholders, however, stated there were issues with respect to abuse and fraud and revisions were needed to avoid this and link it to primary energy resources, however, it should not be abolished as per the current plan. They also mentioned the downside to 100% renovation grants, which tend to have a negative impact on the increased cost of renovation and suggested that 70-80% grants should be introduced.

Renovate at least 3% of the total floor area of public buildings annually: Renovate Italy[417] highlighted the instability of the tax credit schemes, e.g. 'Superbonus', and the lack of their long-term predictability, as well as the current level of bureaucracy, as the main challenges for accelerating the rate and depth of renovation. The 'Superbonus' scheme is due to finish in 2022.

Citizens and national stakeholders both agreed that the public sector must lead the way. National stakeholders also mentioned that policies are required for the renovation of historical buildings.

National stakeholders mentioned that there is a need to improve the competencies and awareness of the employees of the public sector, issuing authorisations and creating laws.

Create world-leading companies: Citizens suggested there should be support for local businesses working on energy efficiency solutions.

National stakeholders highlighted that the 'Superbonus' had a negative effect with respect to the workforce, leading to improvisation and poor execution of the work. More training at all levels is needed.

Raise global ambition to tackle climate change: Citizens highlighted that the mindset in Italy towards sustainability needs to change and education campaigns were needed. National stakeholders agreed with this view stating that citizens needed to be informed about the advantages of the policies carried out by the EU in relation to energy efficiency. National stakeholders mentioned that education must be tailored to the individuals' needs and perspectives. They also suggested that schools should become energetic hubs and that there should be knowledge sharing at the EU level, with Member States learning from the success and failures of each other. It is also necessary to inform citizens.

Improve health and well-being: National stakeholders mentioned the importance of awareness-raising campaigns connecting energy efficiency with air quality and health as approx. 600 000 people die every year in Europe because of poor air quality.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. As can be seen there is a wide diversity of actions but none mentioned to address energy poverty, the Just Transition or mobilising a clean and circular economy.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government**

[417] Cf. https://renovate-italy.org/.

support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	Action
Increasing renewable energy in buildings	Creation of energy communities
Improving energy efficiency in buildings	Mandate the renovation of condominiums Create better controls for those implementing renovation works Create policies to stop a small number of owners blocking a renovation project of a co-owned condominium Roll-out of smart meters Develop and publicise a manual for best practices Combine energy efficiency with building digitalisation efforts
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Create one-stop shops Re-evaluate and extend the 110% bonus scheme beyond 2022 Reform bonus and incentive schemes to create flexibility for those applying for them Create a central European coordinated body to enable citizens find the right incentives and bonus schemes for their situation
Renovate at least 3% of the total floor area of public buildings annually	Accelerate the improvement of energy efficiency in public buildings
Create world-leading companies	Create better supports for local business offering energy efficiency solutions Provide comparative information on what other countries are doing to create ideas Create more ESCOs Training programmes for administrators, municipalities and construction companies
Raise global ambition to tackle climate change	Education programmes for schools
Improve health and well-being	Education programmes on additional benefits of energy efficiency projects such as health benefits
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[418]
Increasing renewable energy in buildings	There is a need for a better connection between building efficiency and renewable energies policies.	S
	The implementation of regulations is too slow (20 regulations on renewables issues are currently waiting for implementation) and there is a lack of capacity of the administrations to go into detail and thus give concrete examples to citizens on actions that could be taken.	S
	Conflicts of interest occur every time that the monopoly of an energy organisation/institution is challenged.	S
Improving energy efficiency in buildings	It is difficult to convince real-estate owners to renovate.	C
	Students, low-income housing and those renting are not interested in renovation.	C
	There is a disconnect between energy efficiency strategies and citizens' perception of them.	S
	There are different legislations applied to different regions, e.g. in Lombardy, the law on geothermal energy allows the installation of geothermal probes that reach a depth of no more than 150 metres from ground level and at least 10 metres from an aquifer, but this is not allowed in the southern regions.	S
	Different administrations at different levels (regional, national) do not communicate with each other or do not seem to be moving towards the same goals. This situation creates a standstill.	S
	The authorisation of various initiatives is not clearly defined. The problem is that different offices must issue different authorisations (superintendency, municipal, regional, etc.).	S
	EU rules and standards are sometimes excessive and too rigid	S
	Tenants are afraid to ask property owners to start renovation programmes because they might increase the rental costs.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Incentives may distort market prices.	C
	There is a lot of confusion about available subsidies.	C
	Students and low-income families find it difficult to invest in renovation.	S
Renovate at least 3% of the total floor area of public buildings annually	Some legislation needs to be updated. For example, there was a public call for tenders for the energy renovation of schools, but unfortunately, school buildings are tied to a law of 1975 that imposes precise parameters for total square metres, total volumes, and organisation of spaces, which prevents projects that may lead to a substantial renovation of school buildings to be executed.	S
Create world-leading companies	Lack of citizens' education on sustainability issues.	C
	There is little communication about what Europe does to improve energy efficiency.	S
Raise global ambition to tackle climate change	No barriers mentioned	/

[418] C – Citizens; S – Expert Stakeholders

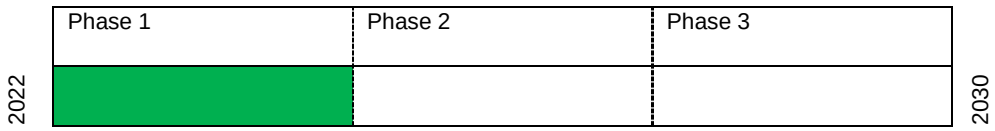
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. There were a good number of actions suggested. There was a focus from both citizens and national stakeholders on actions that enable the renovation of condominiums especially where there is co-ownership. With respect to funding, actions that continue the 'Superbonus' scheme were also suggested and there was also a focus on educational and awareness programmes.

Theme	Action name	Description	Idea Source[419]
Increasing renewable energy in buildings	Creation of energy communities	True Energy Communities should be implemented.	S
Improving energy efficiency in buildings	Mandate the renovation of condominiums	Mandate condominiums to renovate, ensuring all owners have to adhere and remove any blockers from any one particular owner.	C
	Create better controls for those implementing renovation works	Introduce more controls on those responsible for implementing renovation works and mandate for qualified inspectors on the performance of old and new buildings, and stricter sanctions for non-performance.	C&S
	Create policies to	In case the owners of blocks of	S

[419] C – Citizens; S – Expert Stakeholders

	stop a small number of owners blocking a renovation project of a co-owned condominium	buildings cannot agree on a renovation project, if a majority agree, they should be able to proceed with the project.	
	Roll-out of smart meters	Smart meters should be installed to let users know how much they consume and the use of sensors should be improved.	S
	Develop and publicise a manual for best practices	A manual for best practices should be developed.	S
	Combine energy efficiency with building digitalisation efforts	Energy efficiency should be combined with building digitisation.	S
Provide funding for the renovation of buildings	Create one-stop shops	Create a one-stop-shop mechanism to ensure access and information regarding subsidy schemes.	C
	Re-evaluate and extend the 110% bonus scheme beyond 2022	Extend the 110% bonus scheme to 10 years, beyond 2022. Examine if the rate should be reduced to 70-80%.	C&S
	Reform bonus and incentive schemes to create flexibility for those applying for them	Bonuses and incentives must be designed for those needing them and with more flexible criteria for applying.	S
	Create a central European coordinated body to enable citizens find the right incentives and bonus schemes for their situation	A body coordinated at the European level should be created to accompany citizens to find the right incentives and bonuses for their specific situation.	S
Create world-leading companies	Create better supports for local businesses offering energy efficiency solutions	Support for local business offering energy efficiency solutions.	C
Raise global ambition to tackle climate change	Education and awareness programmes	Education to change the mindset of the Italian citizens towards sustainability and energy efficiency. Provide better communication on what the EU is doing for the green transition.	C&S
	Provide comparative information on what other countries are doing to create ideas	A comparison with what other countries are doing in the energy efficiency sector should be encouraged.	S
Improve health and well-being	Education programmes on additional benefits of energy efficiency projects such as health benefits	The EGD should be better explained, especially with regards to the connection between health and the quality of air.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.

2022	Phase 1	Phase 2	Phase 3	2030

Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There was only a small number of actions mentioned here, focussing on accelerating energy efficiency in public buildings, creating more companies that can deliver energy efficiency solutions and training and education programmes.

Theme	**Action name**	**Description**	**Idea Source**[420]
Renovate at least 3% of the total floor area of public buildings annually	Accelerate the improvement of energy efficiency in public buildings	Setting an example by improving the energy efficiency in public buildings, including cultural heritage buildings.	S
Create world-leading companies	Create more ESCOs	Energy Service Companies (ESCOs) for Energy efficiency should be strengthened.	S
	Training programmes for administrators, municipalities and construction companies	The Government should invest in the training for administrators (through the union of Italian municipalities and regions) and various construction-related figures from bricklayers to engineers of all ages.	S
Raise global ambition to tackle climate change	Education programmes for schools	Renovation should start from schools for both improving energy efficiency and raising awareness	S

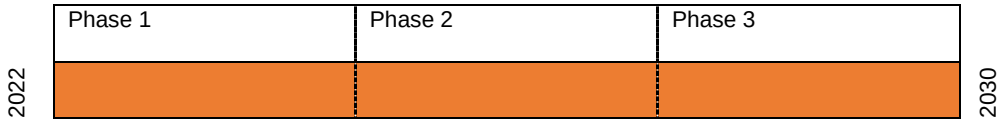
[420] C – Citizens; S – Expert Stakeholders

Actions requiring changes in regulations that will take longer to implement

There were no actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Just Transition

National stakeholders felt that preventing energy poverty was of high importance with respect to the Just Transition. Social housing, schools, and hospitals should all be to a highly efficient standard so that all citizens have the opportunity to live in an energy-efficient building and benefit from the economic and health benefits.

To achieve this, well-targeted programmes are required, such as renovation programmes available to all, avoidance of hidden costs for renovation, further funding to support the long-term maintenance of energy efficiency solutions, e.g. building integrated renewable technologies.

The information should also be available to all, and national stakeholders suggested the provision of a centre to offer information on how to renovate, the available subsidies and how to access them as well as an introduction to the companies who can carry out the renovation work.

To prevent renovation costs being passed from the property owner to the tenant, they suggested that there should be a split of the cost and the advantage between both, but it was not clear how this would be implemented.

6.16 Latvia

6.16.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Latvia[421] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any

[421] A stakeholder meeting took place on 15 September 2022 and involved a representative from a Planning Region. A ministerial senior expert at EU Affairs division of Ministry of Agriculture of Latvia provided additional feedback via survey.

barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[422]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Latvia's policies on the EGD and Citizen and National Stakeholder Reports

The following policy was pointed out by the participants of the stakeholder meeting in Latvia. It is not an exhaustive list but rather serves as an indication of what the most visible policy is to the stakeholders.

- Cabinet Regulation No. 172 (Government of Latvia, 2012)[423] was pointed out by stakeholders to be proven to influence public procurement towards more sustainable products. The criteria are for high-quality, seasonal, and unprocessed food products. It regards nutritional norms in educational institutions, social care and social rehabilitation institutions, and medical treatment institutions.

Additionally, the overview of the national R&I food investment landscape carried out by the European Commission points to the following strategies as a critical piece of food policy in Latvia.

- Latvia 2030 – Sustainable Development Strategy (Government of Latvia, 2010)[424] is the centrepiece of Latvia's agri-food policy, modelled on the Sustainable Development Goals (SDGs). The strategy stresses the importance of creating an 'innovative, eco-efficient and competitive economy' where innovation and knowledge can be used for the production of healthy food.

- Latvian Bioeconomy Strategy 2030 (LIBRA) (Ministry of Agriculture, 2018)[425] is the long-term national strategy enabling a knowledge-intensive bioeconomy. LIBRA was developed by the MoA in co-operation with researchers of the Latvia University of Life Sciences and Technologies (LLU). It aims to deliver Latvia's contribution to EU objectives set in flagship initiatives such as the 'Innovation Union' and the 'Resource Efficient Europe' under Europe 2020 and in the European Bioeconomy Strategy and its associated Action plan.

[422] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[423] Government of Latvia (2012). Regulations Regarding Nutritional Norms for Educatees of Educational Institutions, Clients of Social Care and Social Rehabilitation Institutions, and Patients of Medical Treatment Institutions. Available at: https://likumi.lv/ta/id/245300-noteikumi-par-uztura-normam-izglitibas-iestazu-izglitojamiem-socialas-aprupes-un-socialas-rehabilitacijas-instituciju (Accessed on 10 November 2022).
[424] Government of Latvia (2011). Latvia 2030 – Sustainable Development Strategy. Available at: https://www.pkc.gov.lv/sites/default/files/inline-files/LIAS_2030_en_0.pdf (Accessed on 18 November 2022).
[425] Ministry of Agriculture, Government of Latvia (2018). Latvian Bioeconomy Strategy 2030 (LIBRA). Available at: https://www.zm.gov.lv/public/files/CMS_Static_Page_Doc/00/00/01/46/58/E2758-LatvianBioeconomyStrategy2030.pdf (Accessed on 18 November 2022).

General overview of actions per theme

The actions proposed by the Latvian citizens and stakeholders on transforming the current food system in Latvia consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production. Overall, the proposed measures mainly focus on implementation tools such as communication, education and regulation.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (8)	Promotion of urban farming
	Training programmes for farmers
	Development of new sustainable food products
	Subsidy mechanisms specifically targeting small producers
	Subsidies to support the expansion of the production of organic crops
	Linking EU and national incentives for food producers to sustainability characteristics of their food production
	Revitalising small gardens
	Directing agricultural subsidies towards more sustainable crop production
Sustainable food processing, distribution & retail (6)	Building networks between local producers and customers
	Promoting local products
	Promotion of direct sales by farmers
	Vouchers to make sustainable healthy products available to low-income people
	Stricter advertising regulations for supermarkets
	Introduction of a meat tax
Sustainable food consumption (9)	Awareness campaigns on habit changes
	Promoting tourism based on local gastronomy
	Awareness campaigns on the importance of consuming sustainable and local food
	Educational workshops by schools and NGOs on healthy and sustainable food consumption
	Crop harvesting workshops
	Cooking workshops in schools
	Use of green procurement in all public institutions
	Prioritising local producers in public procurement schemes
	Adjusting food taxes to reflect sustainability characteristics of food
Food loss and waste reduction (1)	Awareness raising on budgeting and planned food purchases
Ensuring food security (0)	
Combating food fraud (0)	

Across the entire food cycle (1)	More intersectoral dialogues should be organised on food system transformation involving as many parties as possible

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Barrier**	**Idea Source**[426]
Sustainable food production	It is difficult for farmers to plan sustainable production because businesses have no predictable funding to promote sustainability.	S
	Conflicting views in the production sector, not everyone understands the need to move forward with sustainable solutions—for example, discussions between conventional and organic farmers.	C
Sustainable food processing, distribution & retail	It is difficult for local producers to get to the negotiation table because they do not reach the required volumes (procurement problem), so they cannot compete with large producers.	S
Sustainable food consumption	There is a lack of public awareness and difficulty in changing habits.	C
Across the entire food cycle	To achieve a food system transformation, more significant investments in science and innovation and new technologies will be required.	C
	Lack of capacity of responsible public institutions – there is a need for an interdisciplinary approach to prioritise sustainability issues, assess them systematically, and develop a long-term strategy.	C
	It is unclear who is the primary institution responsible for the green transition, e.g. for economic aspects — inter-institutional fragmentation issues.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can primarily be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

[426] C – Citizens; S – expert stakeholders

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Latvia. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All these actions can be implemented straight away. Some, such as promotional campaigns on local gastro-tourism, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as intersectional dialogues on food system transformation, may be more difficult to implement successfully but can produce knock-on effects in getting the wider society to share a vision of food system transformation.

Theme	Action name	Description	Idea Source [427]
Sustainable food production	Promotion of urban farming	Promotional campaigns should be organised to encourage people to take up urban farming.	C&S
	Training programmes for farmers	Training sessions should be organised to equip farmers with skills to cultivate a diverse set of crops.	
Sustainable food processing, distribution & retail	Building networks between local producers and customers	More connections should be built between local producers and customers (e.g. through markets and fairs).	C
	Promoting local products	Local food products should be highlighted at food markets and events.	C
	Promotion of direct sales by farmers	More venues should be open to facilitate farmers directly selling their produce to consumers (e.g. farmers' markets).	S
Sustainable food consumption	Awareness campaigns on habit changes	A national awareness campaign should be organised on changing consumption habits towards more sustainable patterns (e.g. transition to plant-based diets).	C
	Promoting tourism based on local gastronomy	Promotional campaigns should be organised to promote regional tourism based on local gastronomies. This would help in branding the regions based on their food production.	S
	Awareness campaigns on the importance of consuming sustainable and local food	Awareness campaigns should be organised for society on sustainable and healthy food consumption. These should be adapted to different socio-economic groups within Latvian society and be catered to different socio-economic backgrounds.	C
	Educational workshops by schools and NGOs on healthy and sustainable food consumption	Schools should organise theoretical and practical education on healthy and sustainable food consumption, forming healthy dietary habits with students.	C

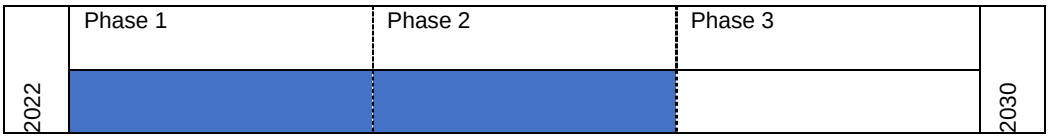
[427] C – Citizens; S – expert stakeholders

	Awareness raising on budgeting and planned food purchases	Awareness campaigns should be organised to plan food purchases and meals in the appropriate volume.	C
	Crop harvesting workshops	Workshops should be organised to allow people to harvest crops for their consumption.	C
	Cooking workshops in schools	School curricula should include cooking workshops with the basics of cooking healthy meals.	C
	Use of green procurement in all public institutions	Green procurement should become obligatory for all (local/regional/national) public institutions.	C
Across the entire food cycle	More intersectoral dialogues should be organised on food system transformation involving as many parties as possible	Dialogues should be organised with different public bodies, interest groups and food producers to discuss food system transformation.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mainly affect increasing the sustainability of food production through subsidies for organic, urban, and small-scale farming, as well as incentive system revamp. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [428]
Sustainable food production	Development of new sustainable food products	Investments should be made in developing new sustainable food products to promote sustainable food habits.	C

[428] C – Citizens; S – expert stakeholders

	Subsidy mechanisms specifically targeting small producers.	Subsidy programmes should be developed targeting small food producers, supporting them in energy efficiency and production optimisation. These programmes should be designed to surpass the lobbying of narrow interest groups.	C
	Subsidies to support the expansion of the production of organic crops	Subsidies should be provided for farmers to expand their share of organic produce.	C
	Linking EU and national incentives for food producers to sustainability characteristics of their food production	EU and national incentives for food producers should be exclusively linked to the sustainability components of their production.	C
	Revitalising small gardens	Incentives should be provided for citizens to grow food in their gardens.	C
	Directing agricultural subsidies towards more sustainable crop production	Agricultural subsidies should be used to promote the cultivation of more sustainable crops (e.g. less water-intensive crops).	C
Sustainable food processing, distribution & retail	Vouchers to make sustainable healthy products should be made available to low-income people	Sustainable and healthy food products should be subsidised to make them more affordable for low-income people.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the most extended implementation period. However, they depend on the policy-making process beginning immediately.

2022	Phase 1	Phase 2	Phase 3	2030

Main instruments of implementation: new regulatory frameworks

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in how public procurement handles food system transformation and changes in taxation around food products.

Theme	Action name	Description	Idea Source [429]
Sustainable food processing, distribution and retail	Stricter advertising regulations for supermarkets	The way supermarkets advertise food should be regulated to promote the consumption of healthy food products.	C
	Introduction of a meat tax	A meat tax should be introduced to make meat more expensive.	C
Sustainable food consumption	Prioritising local producers in public procurement schemes	Public procurement schemes should be outlined in a way where they give priority to local food producers.	C
	Adjusting food taxes to reflect sustainability characteristics of food	Food taxes should be increased for carbon-heavy food products and reduced for sustainable and local food products for the prices to be more reflective of the environmental impact of food.	C

Just Transition

Low-income households might be disproportionally affected in the process of a transition to a more sustainable food system. If the prices of food products are not regulated in a fair way, they could lose access to healthy and sustainable food. Therefore, transparent stimulus schemes must accompany the needed awareness-raising (provided through campaigns, public discussions, deliberative events, food labels etc.).

Small and medium businesses face a significantly higher burden of transition to sustainable production modes when compared with large companies. An example of this is the unaffordable costs of energy-efficient solutions, IT tools etc. which are too expensive compared to the production volumes.

Public consultation processes on subsidies and food policy, in general, should give a solid platform for small-scale food producers and ensure no collusion of private interests or corruption. Openness, transparency, and a deliberative approach in developing future food system transformation processes are essential to leave no one behind.

6.16.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Latvia[430] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[431]. These themes and the

[429] C – Citizens; S – expert stakeholders
[430] A stakeholder meeting took place on 15 September 2022 and involved three National authorities, two Local authorities, one Research and education community member.
[431] Prof Tom Rye, Molde University College, Norway.

analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Latvia's policies on the EGD and Citizen and National Stakeholder Reports

There was no readily available information on national government policies that support the EGD in the field of mobility in Latvia. The country is spending EUR 303m of Recovery Funds on creating an integrated public transport system in the Riga region (where 65% of the population lives), building new cycling infrastructure, and electrifying key rail corridors[432]. Moreover, €1.2 billion from Cohesion Policy Funds will support integrated territorial development, sustainable multimodal urban mobility, such as trams, cycling paths and electric vehicle charging infrastructure. Investments will also improve road safety and modernise railways[433].

The workshops with citizens and stakeholders revealed, in brief, the following points.

Citizens saw the reorganisation and improvement of public transport as key to reducing emissions from private transport, along with improved EV purchase incentives and charging infrastructure (although there were also some doubts about the sustainability of battery production). There was some willingness to see restrictions on car use in cities to deliver better cycling conditions. There was a low level of knowledge about the EGD's proposals concerning mobility amongst citizens and stakeholders.

Stakeholders also felt that improving public transport, both urban and inter-urban, was extremely important, along with promoting EVs. They also strongly agreed that the Latvian government must produce a sustainable mobility strategy to guide other government levels more effectively and provide funding. There was little discussion of the role of the built environment in reducing emissions from transport, except that there is a need for more cycling infrastructure.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

[432] European Commission (2022). Latvia's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/latvias-recovery-and-resilience-plan_en (Accessed on 16 November 2022).
[433] European Commission (2022). EU Cohesion Policy: €4.6 billion for Latvia to support a green and fair economy and society in 2021-2027. Available at https://ec.europa.eu/commission/presscorner/detail/es/ip_22_6249 (Accessed on 6 December 2023).

Theme	Action	Idea source[434]
Clean vehicles	EV purchase incentives	C&S
	EV charging infrastructure	C&S
Better public transport	Better PT vehicles	C&S
	Better PT infrastructure	C&S
	PT integration (better planning of PT system)	C
Spatial planning and city development	More bike paths	C&S
Pricing and charges for transport	Fuel subsidies for poorer households	S
	Restraint of private motor vehicle traffic	S
Planning and operation of transport networks	PT network improvement	C&S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	S
	Extending SUMPs to functional urban region	S
	National strategy on sustainable urban mobility	S
Greening transport in general	Training of sustainable mobility professionals	S
	Exchange of experience	S

Barriers to each theme

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); and nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final), although there was a recognition that the EGD had some proposals for freight as well as passenger transport, something that was welcomed). Mainly, though, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea source[435]
Clean vehicles	At the EU level, there was concern that the end of sales of internal combustion engine cars in 2035 would cascade more polluting vehicles into poorer households and areas.	S
Better public transport	In general, the lack of funding for public transport was seen as a barrier to implementing emissions-reduction measures.	S
Spatial planning and city development	No barrier identified.	/
Pricing and charges for transport	No barrier identified.	/

[434] C – Citizens; S – expert stakeholders
[435] C – Citizens; S – expert stakeholders

Planning and operation of transport networks	Ongoing construction of more roads and parking at the national level.	S
	At the EU level, funding new interurban road infrastructure as part of Structural Funds runs against the aims of the EGD.	S
Governance	Tax policies favour private car use.	S
	Lack of a sustainable mobility policy.	S
Greening transport in general	At the EU level, funding new interurban road infrastructure as part of Structural Funds runs against the aims of the EGD.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in short to medium term.

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Latvia. These mainly comprise of communication and education activities. All these actions can be implemented straight away.

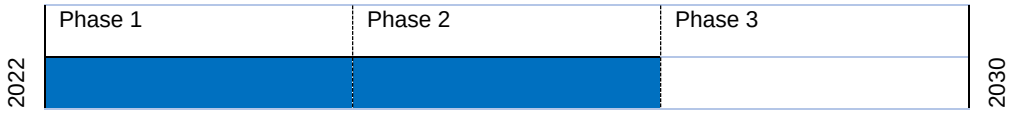
Theme	Action name	Description	Idea source [436]
Greening transport in general	Training	Better training, university courses and ERASMUS exchanges to create a cadre of sustainable mobility professionals.	S
	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S

[436] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the short and medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source[437]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	EV charging infrastructure	Not detailed by stakeholders, but essentially investment in a wider network of charging stations across the country, including in rural areas.	S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public transport vehicles.	C&S
Spatial planning and city development	More bike paths	Further details were not provided; the general idea was to improve the availability and quality of cycling infrastructure.	S
Pricing and charges for transport	More disincentives to use polluting vehicles	Low-emission and low-traffic zones in cities.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local, regional and national levels.	C&S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	At the regional level, cooperation between municipalities in implementing sustainable urban mobility plans (SUMPs) (for example, the development of bicycle infrastructure connecting municipalities).	S

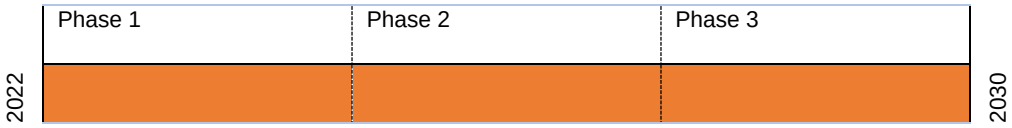
[437] C – Citizens; S – expert stakeholders

	National level sustainable mobility strategy	There is currently no such strategy that stakeholders identified as a major failure. Its introduction, and links between it and funding, were seen as essential to develop an emissions-reducing mobility system.	S

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Latvian citizens and experts require implementing policy changes and regulations. Depending on how they are developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may not require regulation in some circumstances, but they are included here for completeness.

Theme	Action name	Description	Idea source[438]
Clean vehicles	None in this category	/	/
Better public transport	None in this category	/	/
Spatial planning and city developmen t	None in this category	/	/
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrain personal car use, such as low-emission zones in cities (which often include an element of pricing) and traffic-limited zones.	S
Planning and operation of transport networks	None in this category in this country	/	/

[438] C – Citizens; S – expert stakeholders

Governance	None in this category in this country	/	/

Just Transition

Stakeholders expressed some concern about charging more for transport – for example, for access to Low Emission Zones with more polluting vehicles – risks promoting inequality. There were also concerns about the share of the Climate Social Fund that would be allocated to Latvia and transport, given its low GDP per capita in the EU context. However, the Just Transition was not an issue that provoked much discussion overall.

6.16.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Latvia[439] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[440]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Latvia's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?,* commissioned by the Renovate Europe campaign[441], Latvia's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €1.82bn. This can be broken down as follows concerning the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	There are €80m allocated to modernisation of transmission and distribution networks. However, the plan does not specify how much funding is allocated specifically for building integrated renewables.

[439] A stakeholder meeting took place on 15 September 2022 and involved 2 local authorities and 1 civil society representative.
[440] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[441] Ivanova, V. et al. (2021), see note 30, page 61.

Improving energy efficiency in buildings	The NRRP will add 182 apartment building renovations to the 370 already planned for funding via other EU funds; this goal seems low, and a gap will remain to reach Latvia's 2030 renovation target of 2 000 apartment buildings and 838 central government buildings. Furthermore, according to Latvian National Partner Ekubirojs[442], the NRRP states that lack of private sector involvement to scale-up renovations, trust among stakeholders, and awareness of the existing opportunities are among the key challenges to increase the rate and depth of renovation.
Tax system for energy products aligned to the green transition	Not mentioned.
Provide funding for renovation of buildings	€120m funding for business, €57m for apartment buildings, €29m for municipal buildings and infrastructure and €24m for historical buildings. Renovate2Recover state that the funding focuses disproportionately on the business sector, whereas residential buildings are the biggest energy consumers in Latvia's building stock.
Renovate at least 3% of the total floor area of public buildings annually	A 2019 study estimates that only 0.9% of residential renovations were medium retrofit and that there were no deep renovations. For non-residential buildings 1.3% were medium and 0.3% were deep retrofit.
Create world-leading companies	There are no specific measures to support skills and education in the construction and energy efficiency sectors. Still, Latvia has been focusing efforts on procedural improvements such as certification of independent experts, with planned activities targeting improvement in vocational training, improving the construction information system and raising end-user awareness.
Raise global ambition to tackle climate change	Not mentioned.
Improve health and well-being	Not mentioned.
Address inequality and energy poverty	The proposed measures do not explicitly target energy poverty. However the NRRP also includes the creation of a new Financing Fund for the construction of quality affordable housing for low-income households, with an overall value of €43m.
Ensure a Just Transition that is fair, competitive, and green	Not mentioned.
Mobilising industry for a clean and circular economy	It is not clear if the NRRP will support the realisation of further potential benefits (e.g. adaptation, urban resilience, use of sustainable construction materials, clean air).

The NRRP highlights that, on its own, it will be insufficient to reach national objectives for 2030. To accelerate programme delivery, further measures to integrate energy efficiency improvements and support supply chain and project take-up into a deep approach should be considered.

[442] Cf. https://ekubirojs.lv/en/.

While the NRRP mentions €80m funds for the modernisation of transmission and distribution networks, it does not mention specific funding for building integrated renewables. However, the national stakeholders say that the government is emphasising encouraging the adoption of solar PV by private individuals to support the energy grid. It is unclear, however, if there is an incentive scheme for individuals to adopt this. Renewables in buildings were also not raised by the citizens, which would suggest a disconnect between the government emphasis, knowledge of the need and subsequent adoption by private stakeholders.

Citizens were obvious that renovation should be affordable to all and be 100% funded or offer other incentives to reward good behaviour, for example, incentivising those wishing to downsize. However, national stakeholders felt that citizens should take some responsibility for making wiser decisions regarding green transition and ecology/environment. It is unrealistic and unnecessary to propose that all expenses related to creating a more energy-efficient private property would lie on the shoulders of the government. This could be a significant barrier to the green transition unless a resolution between these differing views can be found.

Citizens felt that many individuals could not afford to renovate, and renovations are not possible in older historic buildings or challenging to undertake in multi-tenanted apartment buildings; they also felt that private individuals were not motivated to invest in energy efficiency measures. National stakeholders consolidated this view that more financial support for the green transition should end up in the hands of the people. Concerning the NRRP, there is a heavy reliance on private funding to meet the long-term renovation strategy targets. However, the NRRP only contributes 2.4% of the total budget required for the renovation of the entire building stock by 2050 and plans on how to scale the private sector are not clear. As such, there is a disconnect between what is being offered nationally and what citizens are willing to do.

National stakeholders suggested that public buildings should innovate and lead by example when it comes to renovation. However, from the review of the NRRP by the Renovate2Recover report, funding for the renovation of public buildings has not been seen as a priority.

Citizens felt accessibility of the information concerning energy efficiency in buildings was difficult to ascertain, which was confirmed by the national stakeholders. Stakeholders stated that the current support in financial programmes for promoting energy-efficient buildings is too challenging for the average person to understand. In particular, the difficulty of how to go about renovating a multi-tenanted property was mentioned, which was also a view consolidated by the citizens.

There is no plan in the NRRP to address the creation of a skilled workforce, and national stakeholders mentioned that access to excellent and qualified experts is limited, as only wealthy individuals can access them. National stakeholders said that this is a global problem and perhaps a global solution is needed to address it.

National stakeholders believed that more education on climate change and awareness of the green transition was needed before there would be the uptake of actions relating to green growth.

General overview of actions per theme

The following are the actions suggested by the national stakeholders that could be taken concerning enabling the adoption of the EGD beyond what is currently being achieved. As seen from the table below, most actions focus on improving energy efficiency, increasing funding levels for various individuals, education campaigns and creating a skilled workforce. The emphasis from national stakeholders did not include the adoption of renewable energy in buildings and was not primarily discussed overall.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Increasing renewable energy in buildings	No specific actions mentioned
Improving energy efficiency in buildings	Public buildings leading the way Energy champions Education campaigns to encourage individuals to be part of the solution Energy efficiency education platforms Awareness campaigns led by municipalities Improved processes for energy-efficient building construction
Tax system for energy products aligned to the green transition	No specific actions mentioned
Provide funding for renovation of buildings	Accessible renovation Incentivisation for those in rented accommodation Long-term funding for renovation Increase support for renovation of bigger houses Incentives for down-sizing Increased grants and subsidies
Renovate at least 3% of the total floor area of public buildings annually	No specific actions mentioned
Create world-leading companies	Invest in a skilled workforce Create EU-level certified experts
Raise global ambition to tackle climate change	No specific actions mentioned
Improve health and well-being	Awareness campaigns on other socio-economic benefits of renovation Encourage use of digital technologies for monitoring socio-economic impacts of renovation
Address inequality and energy poverty	No specific actions mentioned
Ensure a Just Transition that is fair, competitive and green	
Mobilising industry for a clean and circular economy	No actions mentioned

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified; these were the barriers mentioned explicitly by each of the citizen and stakeholder groupings.

Theme	Barrier	Idea Source[443]
Increasing renewable energy in buildings	No specific barriers mentioned.	
Improving energy efficiency in buildings	The public sector often does not set an example for the private sector.	S
	There are territories and cities where the bilingual (Latvian/Russian) community is significant. Yet, official communication and documents are mostly available only in the Latvian language, which can be a challenge for some citizens who are not fluent in the Latvian language. This language barrier slows down green transition and initiatives in such cities.	S
	There are not enough experts who can communicate with people on energy-efficiency-related topics in a way that would promote citizen engagement.	S
Tax system for energy products aligned to the green transition	No specific barriers mentioned.	
Provide funding for renovation of buildings	Accessibility of the information is difficult.	C&S
	Support programmes are sporadic, and it is not possible to apply for them at any given moment. This short-term support hampers progress in the field.	S
	Some individuals cannot afford to renovate.	C
Renovate at least 3% of the total floor area of public buildings annually	Renovations are not always possible in older, historical buildings.	C
	Some individuals are not motivated to invest in energy-efficiency measures.	C
	Renovation is difficult in apartment buildings due to multi-tenant ownership.	C
Create world-leading companies	Labour shortage	C
	Lack of climate knowledge in SMEs	C
	Hard to find the right expert	C
Raise global ambition to tackle climate change	There is an issue with a general understanding of the environment and climate, meaning people often do not even believe in climate change and, therefore, see no reason to change their behaviour and actions.	S
	Residents think they do not need to be educated on the subject. They do not believe in the municipality and are not willing to cooperate.	S
	The whole topic of green transition and making buildings more energy efficient is not interesting for the average citizen and, therefore, yields low participation from them.	S
Improve health and well-being	No specific barriers mentioned.	
Address inequality and energy poverty	No specific barriers mentioned.	

[443] C – Citizens; S – Stakeholders

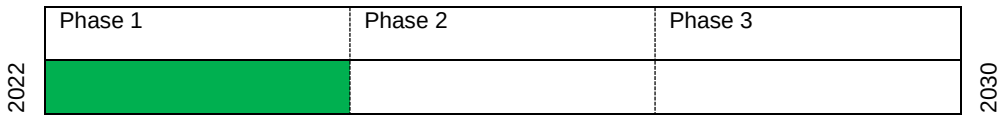
Ensure a Just Transition that is fair, competitive and green	No specific barriers mentioned.	
Mobilising industry for a clean and circular economy	No specific barriers mentioned.	

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

This focuses mainly on education and awareness campaigns, creating better access to renovation funding, and examining incentives for those in rented accommodation.

Theme	Action name	Description	Idea Source[444]
Improving energy efficiency in buildings	Public buildings leading the way	Ensuring that public buildings lead the way towards the green transition.	S
	Energy champions	One person/organisation should be committed to the whole energy efficiency process and guarantees it in the long term with sufficient caveats.	S
	Education campaigns to encourage individuals to be part of the solution	The belief that individuals themselves do not have to do anything to reduce energy losses should be challenged.	S
Provide funding for renovation of buildings	Accessible renovation	Make renovation accessible for any user. Renovation schemes should include people living in apartment blocks, rural areas, etc. Renovation schemes are only for the very poor or the very wealthy.	S
	Incentivisation for those in rented accommodation	Create systems for incentivising renters to invest in making buildings more energy efficient, allowing them to benefit from housing renovation.	S

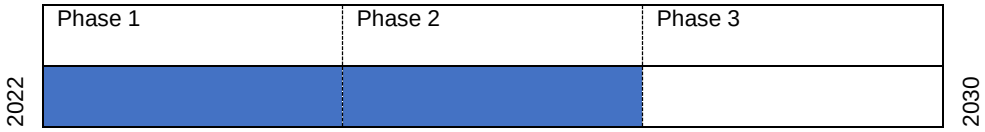
[444] C – Citizens; S – expert stakeholders

		Property owners should not pass on renovation costs to their tenants.	
Improve health and well-being	Awareness campaigns on other socio-economic benefits of renovation	Create more informational and educational communication to inform citizens about the benefits (besides financial, including health, safety, and socio-economic stability) of making buildings more energy efficient (and also about the risks and harms of not doing so).	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, funding, digital technologies, and workforce upskilling

The following actions can be carried out in the medium term with support from the government or other national agencies. This includes education platforms and awareness campaigns led by municipalities as well as increasing the level of funding for individuals, encouraging the adoption of digital technologies for measurement and verification, and further investment into creating a skilled workforce.

Theme	Action name	Description	Idea Source [445]
Improving energy efficiency in buildings	Energy efficiency education platforms	Create platforms and mechanisms which citizens can use to learn about best practices for making buildings more energy efficient.	S
	Awareness campaigns led by municipalities	Municipalities need to minimise and refute pre-existing stereotypes held by citizens against energy efficiency processes.	S
Provide funding for renovation of buildings	Long-term funding for renovation	Government needs to undertake responsibility and long-term commitment to renewable energy programmes.	S
Create world-leading companies	Invest in a skilled workforce	All sectors need to attract a more qualified workforce.	S

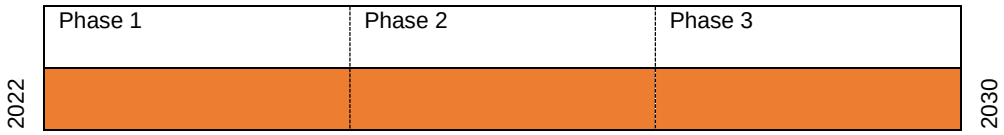
[445] C – Citizens; S – expert stakeholders

Improve health and well-being	Encourage use of digital technologies for monitoring socio-economic impacts of renovation	Digital technologies need to be more broadly used to ensure the optimal temperature in public spaces.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: improving the industrialisation process, investment and policies, creating certified labels for EU experts delivering retrofitting.

The following actions are those that can be carried out in the longer term and require increased levels of support from the government. This includes improving the industrialisation process for the development of energy-efficient buildings, further investment and policies around renovation subsidies and grants, as well as the creation, and creating certified labels for EU experts delivering retrofitting.

Theme	Action name	Description	Idea Source [446]
Improving energy efficiency in buildings	Improved processes for energy efficient building construction	Industrialising processes dedicated to making buildings more energy efficient to make the transition quicker.	S
Provide funding for renovation of buildings	Increase support for renovation of bigger houses	Bigger and wider support mechanisms for bigger houses.	S
	Incentives for down-sizing	People who downsize/live in smaller homes should have better incentives.	S
	Increased grants and subsidies	Bigger financial support from the EU and government for fully co-funding or loans dedicated to compensating renovation costs.	S
Create world-leading companies	Create EU-level certified experts	Develop a certification process of specialists on a broad scale; EU-level-wide unified certification for renovation experts.	S

[446] C – Citizens; S – expert stakeholders

Just Transition

The focus of the discussion between citizens and national stakeholders was ensuring that renovation was affordable and that all citizens had access to qualified experts and trustworthy information regarding how to be part of the green transition. Renovations should also be accessed by all regardless of the building they live or work in; for example, multi-tenanted properties should have the same opportunities as private detached or semi-detached residences.

Another topic mentioned by national stakeholders was that property owners should not pass the renovation costs on to their tenants.

6.17 Lithuania

6.17.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[447] in Lithuania that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[448]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Lithuania's policies on the EGD and Citizen and National Stakeholder Reports

An overview of the national R&I food investment landscape carried out by the European Commission points to the following policies as most relevant in Lithuania.

- Sustainable Agri-biological Resources and Safer Food (Ministry of Education and Science, 2014)[449] – Action plan adopted in 2014, focuses on improving safety requirements of foods via the application of innovative production and packaging technologies, from innovations to eliminate food contaminants to circularity and agri-food waste management.

[447] A stakeholder meeting took place on 20 September 2022 and involved four research and education community members.
[448] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[449] Ministry of Education and Science, Government of Lithuania (2014). Sustainable Agri-biological Resources and Safer Food. Available at: https://smsm.lrv.lt/uploads/smsm/documents/files/en_smm/smartsp/safer%20food.pdf (Accessed on 10 November 2022).

- Functional Food (Ministry of Education and Science and Ministry of Economy, 2014)[450] - The action plan adopted in 2014 focuses on biotechnologies for application in agriculture and in the food industry that can be used to create functional food ingredients, both plant-based and from animal origin.

General overview of actions per theme

The actions proposed by the Lithuanian citizens and stakeholders on transforming the current food system in Lithuania consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on actions addressing food production, processing, distribution, and retail. Finally, when it comes to short, medium, and long-term implementation periods, there is a slight emphasis on medium-term, subsidy-based actions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (15)	Facilitating closer collaboration between scientists, decision makers and practitioners in food production
	Promotional campaigns on farming as a profession
	Introducing new technologies to support farmers transitioning to sustainable farming
	Shortening supply chains
	Invest into developing crops that do best in the specific fields in Lithuania
	Support for farmers to diversify the crops they grow
	Financial incentives for urban farmers
	Focus the targeting of agricultural subsidies to support growing the most appropriate crops in specific areas
	Subsidies for farmers raising small numbers of livestock
	Incentives for maintaining soil health
	Incentives promoting crop rotation and diversity
	Research on local and sustainable *superfoods*
	Subsidies for school programmes on gardening
	Regulation of urban farming
	Regulation on animal welfare
Sustainable food processing, distribution & retail (14)	Increasing availability of local produce in supermarkets
	Awareness campaigns on the labelling system for food products
	Introduction of subscription models for urban

[450] Ministry of Education and Science and Ministry of Economy, Government of Lithuania (2014). Functional Food. Available at: https://www.smm.lt/uploads/documents/en_smm/smartsp/functional%20food.pdf (Accessed on 10 November 2022).

	farms
	Making healthy and affordable food more available in the markets
	Incorporate supermarkets in short-distance supply chains (distributing food from local food producers)
	Incentives for food producers to adopt sustainable food labels
	Investments in laser-labelling on fruits and vegetables
	Financial support for farmers to deliver produce directly to customers
	Regulation replacing single-use packaging with sustainable, reusable packaging
	Standardisation and expansion of food packaging deposit schemes.
	Regulation placing instructions on how to preserve unused food on food packaging
	Extending reusable packaging for food products in supermarkets and households
	Food labelling to include warnings on packaging waste harm
	Lowering of sale taxes for small-scale farmers
Sustainable food consumption (3)	Educational programmes for students on sustainable food consumption habits
	Agro-tourism campaigns
	Awareness campaigns on the dangers of highly processed foods
Food loss and waste reduction (5)	An application helping track actual food consumption needs, energy consumption and food waste generation of a household
	Expanding the use of food composting bins
	Developing innovative packaging to reduce food waste
	Invest in distribution systems for soon-to-expire foods
	Scaling up composting of food waste from companies and individuals
Ensuring food security (2)	Produce more food locally to get closer to food self-sufficiency
	Develop a national food resilience plan
Combating food fraud (1)	Standardisation and inspections on food sustainability claims and labels
Across the entire food cycle (5)	Development of a social sustainability approach to food system transformation
	Transferring expertise on food system digitisation across the EU
	Communication campaigns by public agencies responsible for food
	Use of transparency and open data in food system transition
	Applying digitisation and artificial intelligence in increasing the sustainability of food systems

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Action	Idea Source[451]
Sustainable food production	Small-scale farmers' legal status prevents them from receiving EU funding to cover wages and make investments, as they are not considered legal entities but individuals.	S
	The Lithuanian national requirements for farmers and industries are higher and/or stricter than those of the EU. Therefore, local businesses in the national market compete with those from other countries, which set more favourable regulations.	C
	There are insufficient incentives for farmers to implement renewable energy in their food production, which could reduce product costs and increase long-term competitiveness.	S
Sustainable food processing, distribution & retail	Insufficient regulation on shortening farm-to-fork distance. There is no legal obligation to ensure a short distance between the production and distribution place, which does not always allow for maintaining high production quality.	S
	Although EU-regulated labelling rules prevail in Lithuania, there are some national-level solutions as well, causing confusion.	C
	Farmers and small producers are more burdened in placing their products on the market because of high requirements, taxes and, particularly, a disorganised short food supply system.	S
Sustainable food consumption	Consumers often cannot afford more sustainable products due to high prices.	S
	Insufficient public awareness regarding food labelling means that consumers do not make sustainable choices due to a lack of knowledge.	S
	How we eat is dictated by tradition, so significantly changing the food consumption patterns comes with a certain resistance from the population.	C
Combating food fraud	There is a lack of clarity regarding sustainable food labelling, giving way to greenwashing.	C
Across the entire food cycle	Sustainable food system development lacks aims and tools for their achievement due to changes with each electoral cycle.	C

[451] C – Citizens; S – expert stakeholders

	National-level decision suffers from insufficient stakeholder engagement.	C
	Sustainable food system transition is not approached in a systemic way. There are no policy solutions at the national level which would include all stakeholders (i.e. all actors involved in food systems).	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Lithuania. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All of these actions can be implemented straight away. Some, such as awareness campaigns on product labelling, are easy to implement (low-hanging fruit), however, they also have a limited potential to contribute to the food system transformation. Others, such as facilitation of intersectional cooperation in food production, can be more difficult to implement successfully, but can have knock-on effects.

Theme	Action name	Description	Idea Source [452]
Sustainable food production	Facilitating closer collaboration between scientists, decision makers and practitioners in food production	Closer collaboration should be promoted between different stakeholders in the food production process, including decision makers, researchers and scientists, and farmers and food producers.	C
	Promotional campaigns on farming as a profession	Campaigns promoting farming as a profession, especially for young people.	C
	Education on gardening in schools	Schools should introduce gardening workshops in their curricula.	C

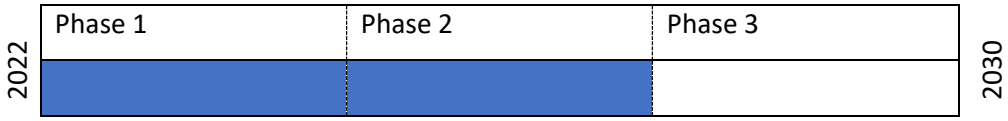
[452] C – Citizens; S – expert stakeholders

Sustainable food processing, distribution & retail	Making local produce available in supermarkets	Locally produced food should be accessible in local supermarkets.	S
	Awareness campaigns on the labelling system for food products	Awareness campaigns should be organised explaining the different sustainability and health labels on food products.	C
	Introduction of subscription models for urban farms	Subscription models should be developed where consumers would pay annual payments to urban farms (providing them with financial security) and in return receive monthly packages of produce.	C
	Increasing availability of local produce in supermarkets	Supermarkets should make healthy and affordable food more available and visible on the shelves.	C&S
	Incorporate supermarkets in short-distance supply chains (distributing food from local food producers)	Supermarkets should have a stronger responsibility for retailing locally produced food.	C
Sustainable food consumption	Educational programmes for students on sustainable food consumption habits	Education should be provided for students to develop sustainable and proactive attitudes to food consumption.	C
	Agro-tourism campaigns	The local governments should organise promotional campaigns for agro-tourism in Lithuania for local and foreign visitors.	C
	Awareness campaigns on the dangers of highly processed foods	Awareness campaigns should be organised on the dangers of consuming highly processed foods (e.g. fast food).	C
Food loss and waste reduction	An application helping track actual food consumption needs, energy consumption and food waste generation of a household	An application should be developed to help households track their food consumption needs, with the consumption of energy they create and waste they generate, promoting awareness on food impact.	C
Across the entire food cycle	Development of a social sustainability approach to food system transformation	The food system transformation policy should include citizen consultations focusing on the social component of the transition.	C
	Transferring expertise on food system digitisation across the EU	The Lithuanian expertise on food system digitisation should be shared with other EU Member States.	C&S
	Communication campaigns by public agencies responsible for food	Public bodies and agencies should communicate their work on regulating and inspecting food products more visibly and transparently.	

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern incentivising urban and organic farming, applying new technologies to achieve sustainability and self-sufficiency goals, and shortening supply chains. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [453]
Sustainable food production	Introducing new technologies to support farmers transitioning to sustainable farming.	New technologies should be made available to farmers (such as open data, applications, satellite tracking) to support their transition to sustainable farming.	C
	Shortening supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
	Invest into developing crops that do best in the specific fields in Lithuania	Research on what types of crops do best in Lithuanian climate.	C
	Support for farmers to diversify the crops they grow	Supporting farmers in cultivating several different crops on their farms.	C
	Financial incentives for urban farmers	Providing incentives for urban farmers to develop their farms and place products on the market.	S
	Focus the targeting of agricultural subsidies to support growing of the most appropriate crops in specific areas	Agricultural subsidies should be targeted to growing the appropriate and high yield crops for the specific areas where they are grown.	C
	Subsidies for farmers raising small	Subsidies for raising few animals in better conditions, making livestock	C

[453] C – Citizens; S – expert stakeholders

	numbers of livestock	farming profitable for small scale farmers.	
	Incentives for maintaining soil health	Initiatives by farmers to maintain soil health on their farms should be incentivised by the government.	C
	Incentives promoting crop rotation and diversity	Farmers should be financially incentivised to rotate the crops they cultivate, as well as to diversify the crops on their farms.	C
	Research on local and sustainable 'superfoods'	More research should be funded on local superfoods such as fermented products, oats etc.	C
	Subsidies for school programmes on gardening	Subsidies should be provided to schools to organise educational workshops on gardening for students.	C
Sustainable food processing, distribution & retail	Incentives for food producers to adopt sustainable food labels	Incentives should be provided for food producers who align their products with sustainability requirements for sustainable food labelling.	C
	Investments in laser labelling on fruits and vegetables	Invest in use of lasers for food produce labelling, instead of using stickers.	C
	Financial support for farmers to deliver produce directly to customers	Farmers should be supported in delivering their products (eggs, dairy, vegetables) directly to homes.	C
Food loss and waste reduction	Expanding the use of food composting bins	Food composting bins should be widely available (workplaces, public spaces, residential buildings).	C
	Developing innovative packaging to reduce food waste	Developing innovative packaging to reduce food waste (e.g. that reacts to the presence of bacteria and thus indicates food expiration dates).	C
	Invest in distribution systems for unused meals and soon-to-expire foods	Investments should be made in developing distribution mechanisms for unused meals from the catering industry as well as soon-to-expire foods. These should be distributed to charities, cooperatives, elderly people's homes, and food banks.	C
Ensuring food security	Produce more food locally to get closer to food self-sufficiency	Increase local food production corresponding to the needs of the population to increase self-sufficiency.	C
Across the entire food cycle	Use of transparency and open data in food system transition	The use of data should be significantly expanded in all components of the food system in order to promote transparency.	C
	Applying digitisation and artificial intelligence in increasing the sustainability of food systems	New technologies such as artificial intelligence should be applied with the aim of increasing the overall sustainability of food systems.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation: regulatory frameworks

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulations on food composting, food product labelling, reusable packaging, and anti-fraud measures.

Theme	Action name	Description	Idea Source [454]
Sustainable food production	Regulation of urban farming	Clear regulation needs to be introduced on urban farming, to ensure the safety of products (often grown in air polluted areas), and proper cultivating procedures (with regular inspections).	C&S
	Regulation on animal welfare	Stricter regulations on animal housing areas and animal farming should be introduced.	C
Sustainable food processing, distribution & retail	Regulation replacing single-use packaging with sustainable, reusable packaging	All single-use packaging in supermarkets should be replaced with sustainable and reusable alternatives (based on glass, hemp fibre, wicker, fabric) in a legally binding way for food product producers.	C&S
	Standardisation and expansion of food packaging deposit schemes	Food packaging deposit schemes should be expanded and standardized on a national level.	C
	Regulation placing instructions on how to preserve unused food on food packaging	Food products should include instructions on proper preservation (refrigeration, freezing, storing) procedures for unused food.	C
	Extending the reusable packaging for food products in supermarkets and households	Reusable food packaging should become obligatory in households and supermarkets.	C

[454] C – Citizens; S – expert stakeholders

	Food labelling to include warnings on packaging waste harm	Food labelling should introduce warnings on consequences of packaging waste in the environment (inspired by warnings on cigarette packs).	C
	Lowering of sale taxes for small-scale farmers	Sales taxes should be significantly lowered for small farmers to support fair competition with large-scale food producers.	C
Food loss and waste reduction	Scaling up composting of food waste from companies and individuals	Food composting should become obligatory for companies, households, and individuals.	C
Ensuring food security	Develop a national food resilience plan	Lithuania should develop a national food resilience plan including all aspects of a food system. It should range from choice of cultures to harvesting, packaging, marketing, supply and waste management.	C&S
Combating food fraud	Standardisation and inspections on food sustainability claims and labels	Sustainability and health claims on food products should be inspected and producers held accountable for false claims.	C

Just Transition

Small food producers face the highest costs of innovation and might not be able to adjust to the increasing requirements on the sustainability characteristics of food products, especially when compared to large food corporations and competition from outside Lithuania.

The already most socio-economically vulnerable groups in society are the most at risk of not being able to afford healthy and sustainable food products.

6.17.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[455] in Lithuania that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[456]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[455] A stakeholder meeting took place on 20 September 2022 with two participants coming from the national government, a representative from academia and one from civil society.
[456] Prof Tom Rye, Molde University College, Norway.

Summary of Lithuanian policies on the EGD and Citizen and National Stakeholder Reports

According to the National Energy and Climate Plan 2020-2030 for Lithuania[457], the country has in the recent past implemented three main groups of measures to reduce emissions from transport: conversion of the public transport bus fleet to electricity and biogas; electrification of 870km of railway line such that 70% of freight trains are now hauled by electric locomotives; and the development, financing and implementation of Sustainable Urban Mobility Plans (SUMPs) in all Lithuanian cities. In addition, the country is spending EUR 293 million of Recovery and Resilience Funds on supporting further purchases of clean vehicles by the public and commercial sectors; boosting the use of renewable fuels; and installing over 53000 EV charging points.

The policies adopted by the Lithuanian government met with general support from the citizens and stakeholders consulted, although they expressed some doubt about the environmental friendliness of EVs, particularly battery production and disposal. They also wanted to see many more measures to make the use of low-emission modes of transport more attractive, and to restrict the use of the private car. In this sense, they perhaps had not yet seen the benefits of the investment in railways and SUMPs that are key planks of current government policy.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[458]**
Clean vehicles	EV purchase incentives	C&S
	Energy needs planning	S
	Energy supply and raw materials for EVs	S
Better public transport	Better PT vehicles	C&S
	Free PT	C
	PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	C
Pricing and charges for transport	Taxation of polluting vehicles	S
	More disincentives to use polluting vehicles	S

[457] European Commission (2019). National Energy and Climate Action Plan of the Republic of Lithuania for 2021-2030. Available at: https://energy.ec.europa.eu/system/files/2022-08/lt_final_necp_main_en.pdf (Accessed on 2 November 2022).
[458] C – Citizens; S – expert stakeholders

	Restriction of private motor vehicle traffic	S
	Recommendations on pricing	S
Planning and operation of transport networks	PT network improvement	C&S
	Traffic safety indicators for micro-mobility	S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	S
	Monitoring SUMPs	S
	More uniform implementation across Member States	S
Greening transport in general	Education	S
	Exchange of experience	S
	Individual travel planning to reduce car use	S

Barriers to EGD implementation

Other than the point about low salaries, citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Description	Idea source
Governance	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport.	S
Governance	Lack of clear guidance on how to implement European goals on the local level.	S
Governance	Lack of coordination mechanisms to ensure horizontal and vertical coherent implementation of EGD goals on the national and local levels.	S
Clean vehicles	Disruptive impact of increasing use of e-vehicles on energy demand and supply.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

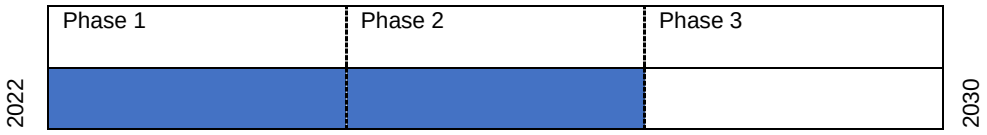
Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Lithuania. These mainly comprise of communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source[459]
Greening transport in general	Education	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution, especially in schools from early age.	C
	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S
	Individual travel planning to reduce car use	Encouraging people to eliminate or shorten trips, perhaps using personalised travel planning techniques to, for example, substitute shorter trips for longer ones, combine trips, share vehicles and use e-commerce and e-working more.	C

Actions requiring grants and incentives, or changes in current public spending

Timeline



These actions will have impact in the medium term.

Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column 'action name'.

Theme	Action name	Description	Idea source[460]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S

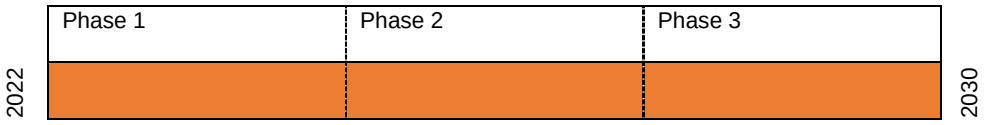
[459] C – Citizens; S – expert stakeholders
[460] C – Citizens; S – expert stakeholders

Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public transportation vehicles.	C&S
	Free PT	Free public transport.	C
Spatial planning and city development	More bike paths	Differentiation of bicycle paths and their development according to their purpose (inter-city, central areas where the traffic is highest, etc.).	S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	More disincentives to use polluting vehicles	Changing from more clean transport benefits-led policies to polluting transport limiting policies.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional and national level.	C&S
Governance	Coordination in sustainable urban mobility plans (SUMPs)	At the regional level, cooperation between municipalities in implementing sustainable urban mobility plans (SUMPs) (for example, the development of bicycle infrastructure connecting municipalities).	S
	Monitoring SUMPs	Establishing a platform for the control mechanism to ensure the implementation of sustainable mobility plans.	S

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Lithuanian citizens and experts require policy changes and regulations in order to be implemented. Some of the proposals, depending on how they are developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [461]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles.	S
	Energy supply and raw materials for EVs	At the EU level, ensuring energy supply and raw materials for necessary clean transport technologies.	S
Better public transport	PT integration	Better planning and coordination of public transport routes.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrict personal car use, such as low emission zones in cities (which often include an element of pricing).	S
	Recommendations on pricing	It was seen to be useful if the EU could provide recommendations for pricing transport during the transition towards net zero. This is because the taxation of more polluting alternatives and subsidies for e-vehicles cannot be constant during that period as the composition of vehicle fleets changes. Member states are seeking guidance on this issue.	S
Planning and operation of transport networks	Traffic safety indicators for micro-mobility	Providing traffic safety indicators that would be universal for all Member States. In particular, recommendations on micro-mobility measures and addressing related safety concerns, as part of the general drive to encourage micro-mobility as a means of reducing emissions from vehicles.	S
Governance	More uniform implementation across Member States	The EU should provide a joint approach and standard requirements, changing regulations into directives to ensure more coherent implementation. No specific examples were however provided of where this should occur.	S

Just Transition

There was some concern expressed by citizens and stakeholders about the following aspects of a Just Transition in mobility.

- Citizens identified Lithuania as a low-wage country and therefore felt that making people pay more for the transport that they currently use would have negative equity impacts.
- Stakeholders, however, rejected this argument, saying that car ownership is an indicator of wealth, and if public transport, walking and cycling are improved, this will benefit less well-off members of society.

[461] C – Citizens; S – expert stakeholders

- From stakeholders, there were concerns about energy prices and the increasing emphasis on the use of the internet to access mobility options. These two factors were seen to risk the exclusion of, firstly, less well-off people from e-mobility (and all powered personal mobility in general); and, secondly, those who are not internet literate and/or do not have a smartphone.

- There was concern that, at least initially, not enough of the Climate Social Fund was allocated to transport, and a recommendation that its distribution should be sectorial instead of geographical and managed by the EU as well as national governments.

6.17.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Lithuania[462] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[463]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Lithuania's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Lithuania in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[464], was not available for Lithuania. As a result, the following table compares the priorities of the EGD with Lithuania's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP[465] and Lithuania's Integrated NECP[466].

Increasing renewable energy in buildings	Lithuania's renewable energy contribution to the EU-level target for 2030 is 45% of gross final energy consumption in 2030.

[462] A stakeholder meeting took place on 20 September 2022 and involved one national authorities, two research and education community members.
[463] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[464] Ivanova, V. et al. (2021), see note 30, page 61.
[465] https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_lithuania_en_0.pdf (Accessed on 2 November 2022).
[466] European Commission (2019), see note 463, page 483.

Improving energy efficiency in buildings	On energy efficiency, Lithuania's contribution to the EU target is expressed in terms of primary and final energy intensity. It should be 1.5 times lower in 2030 compared to 2017. This contribution translates into 5.5 Mtoe for primary energy and 4.5 Mtoe for final energy consumption.
Tax system for energy products aligned to the green transition	It is difficult to identify how this is addressed by the NECP.
Provide funding for renovation of buildings	The estimated overall amount of public and private investment for the period 2021-2030 is EUR 14.1 billion. The identified sources of funding are EU funds and other external sources (50%), state funding (21%) and the private sector (29%). It is not clear how much of this funding is allocated specifically for renovation but it is mentioned that energy-efficient buildings and transport are receiving the largest investment.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.7% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 0.8% medium, and 0.2% deep energy savings[467].
Create world-leading companies	The country aims to reach a spending level of 2% in research and innovation (R&I) by 2030.
Raise global ambition to tackle climate change	The NECP mentions that Lithuania attempts to continuously increase consumer awareness and alter consumer behaviour in a positive way, and this is iterated throughout the plan.
Improve health and well-being	The final NECP provides information on the interactions with air quality and air emissions policy and impacts on air pollution from different scenarios but does not specify the methodology used.
Address inequality and energy poverty	On energy poverty, the NECP reports the number of households at risk of energy poverty and sets specific and measurable objectives to reduce it, including the reduction of the share of the population unable to keep home adequately warm to less than 23% by 2025 and to 17% by 2030.
Ensure a Just Transition that is fair, competitive, and green	The final plan considers the just and fair transition aspects. Lithuania anticipates that the climate transition will have a positive employment impact, with a 1.56% increase in employment for 2020-2030 and 0.14% overall increase after 2030.
Mobilising industry for a clean and circular economy	A separate plan has been prepared for the transition towards a circular economy. Once these documents have been approved, more concrete plans will be developed. There are also clustering programmes to cross-collaborate with others working in this space.

[467] European Commission (2019), see note 31, page 61.

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Increasing renewable energy in buildings: According to the national stakeholders, the funds allocated to renewable energy are not satisfactory with only €50m allocated to residents and €20m allocated to business. More effort at the national level is needed here.

Improving energy efficiency in buildings: Citizens mentioned that there is a trade-off between sustainability and a profit driven economy that needs to be carefully managed. Renovation projects focus on price and profitability rather than sustainability and quality. They also suggested that there needs to be specific strategies for urban, sub-urban and rural housing and a roadmap for sustainability.

National stakeholders mentioned the incentives for renovation of individual homes is minimal and more schemes for the renovation of apartments are needed. Renovation costs are high, and the level of financing is low with no cross-fertilisation between various financing and incentive programmes.

Provide funding for renovation of buildings: According to the national stakeholders, initially costs for renovation were covered at 100%, but now funds only provide 100% for the preparatory work and then 30-50% for the renovation. This is a barrier to uptake.

Create world-leading companies: The national stakeholders mentioned that there was a good level of training available for energy and construction professionals, however the number of students participating in these courses is low as they are not as attractive as other professional courses. As such, the number of students participating in education related to energy efficiency is declining. For example, in Kaunas Technological University there has been no heating engineers trained in four years as a result of the shift to district heating. There are also not enough quality builders to carry out the work.

Raise global ambition to tackle climate change: Citizens mentioned that more information and education on energy efficiency is required if we are to meet our EGD goals. National stakeholders agreed with this view, also stating there was poor dissemination of information about financing and investment programmes.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There was a good number of actions suggested, however, actions in the following categories were not provided: tax system for energy products aligned to the green transition, addressing inequality and energy poverty, ensuring a Just Transition or enabling industry for a clean and circular economy.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Long-term commitment to renewable energy schemes
Improving energy efficiency in buildings	National strategy and roadmap for the sustainability of urban, suburban and rural housing Create a long-term strategic national vision Mandate that any regulations cannot change for five to seven years to ensure security for those carrying out the energy efficiency project Create a framework and implementation model concerning Energy Service Companies (ESCOs) Ensure energy efficiency measures cover the whole life cycle of the building Create a long-term vision for harmonised resources and interests across sectors
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for the renovation of buildings	Ensure information about funding schemes is easily available Constant, stable increase of allocated funds Increased financial incentives for individual housing Increased financial incentives for business Examine a regional component for distribution of financing Distinguish funding between basic renovation and energy efficiency investments Increase the levels of funding incrementally year on year Increase the level of funding further, incrementally year on year
Renovate at least 3% of the total floor area of public buildings annually	Enable a better spread of district renovations coming from the municipalities Example buildings from the public sector to show the way Create platforms for dissemination and public consultation
Create world-leading companies	Enable technology innovation for energy efficiency solutions Create a national strategy for training students in relevant fields including scholarships and active promotion of the opportunities Create an EU-wide renovation expert label
Raise global ambition to tackle climate change	Education and awareness raising campaigns Publish information about the average energy consumption per square meter
Improve health and well-being	Awareness-raising campaigns around the positive impacts of energy efficiency renovation
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[468]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	There is a trade-off between sustainability and profit within the construction sector.	C
	Lack of a long-term strategic vision at the national institutions.	S
	Frequent changes in laws and regulatory rules. This unpredictability and lack of stability also hinders investments in renovation, energy-efficient improvements, and renewable energy sources.	S
	Slow decision-making speed hinders the processes for improving renovation end energy efficiency.	S
	General lack of resources, reflected in limited programme budgets, inability to support broader group investments in renovation and energy efficiency improvement of buildings.	S
	It is very difficult for the residents of apartment buildings (especially in poorer neighbourhoods, i.e., less energy-effective buildings) to agree with each other and decide (50% plus one vote of the apartment owners is required) to renovate the building and invest in increasing energy efficiency.	S
	There is a lack of trust in apartment building administrators (managing firms).	S
	There are no quick and easy ways to renovate a heritage building.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Slow speed of programme drafting when specific financing measures are foreseen, but the wait for them is very long.	S
	The rigidity of regulation and the lack of flexibility in administration, especially in the agencies overseeing funding programmes.	
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned	/
	No barriers mentioned	/
Create world-leading companies	No barriers mentioned	/
Raise global ambition to tackle climate change	No barriers mentioned	/
Improve health and well-being	No barriers mentioned	/

[468] C – Citizens; S – Expert Stakeholders

Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. There were a number of actions suggested around how to improve the funding measures and incentive schemes as well as measures to raise awareness and provide education and training for professionals. Other actions suggested included mandates to ensure regulations did not change for five to seven years to provide trust and security for the measures to be taken and for example long-term commitment to renewable energy.

Theme	Action name	Description	Idea Source[469]
Increasing renewable energy in buildings	Long-term commitment to renewable energy schemes	The government needs to make a long-term commitment to renewable schemes.	S
Improving energy efficiency in buildings	National strategy and roadmap for the sustainability of urban, suburban and rural housing	Specific strategies for urban, suburban and rural housing are required along with a roadmap for sustainability.	C&S
	Create a long-term strategic national vision	Create a long-term strategic vision at the national level that can be filtered down to the local levels.	S
	Mandate that any regulations cannot change for five to seven years to ensure security for those	Mandate that rules for energy renovation and energy efficiency improvements cannot change for five to seven years.	S

[469] C – Citizens; S – Expert Stakeholders

	carrying out the energy efficiency project		
Provide funding for renovation of buildings	Ensure information about funding schemes is easily available	Renovation schemes should be easy to understand and information regarding their accessibility should be easy to find. The information could also be coupled with places where people apply for utility cost reimbursements (booklets, posters, etc. should be provided there). They should be more flexible and available to wider groups.	S
	Constant, stable increase of allocated funds	More funding (especially for renovations) is needed to address the general lack of funds. However, simultaneously maintaining the natural process of moderate growth (without harming other sectors).	S
	Increased financial incentives for individual housing	More financial incentives should be allocated to individual housing - currently, they are forgotten. Now, financial support for renovation is more available in apartment buildings.	S
	Increased financial incentives for business	Businesses also lack funding for the time being (it would pay off for everyone through the prices of goods/services). Incentives needed for the company are not necessarily compensations for renovation; they can also help adapt to renewable energy. It would increase businesses' competitiveness and positively impact employees' salaries.	S
	Examine a regional component for distribution of financing	A regional component should be introduced when distributing support for the renovation. I.e., more intensive support specifically for regions where the possibilities of financing these processes are more complicated. Depending on the urban/rural environment, it is necessary to have specific strategies for increasing the energy efficiency of housing.	S
	Distinguish funding between basic renovation and energy efficiency investments	When distributing support, it might make sense to separate basic renovation from energy efficiency investments and concentrate support specifically on the latter. That is, the funding intensity would be increased for energy efficiency improvements but not for basic renovation elements.	S
Renovate at least 3%	Enable a better spread	Enable a better spread of district	S

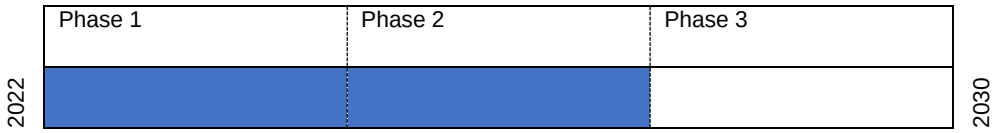
of the total floor area of public buildings annually	of district renovations coming from the municipalities	renovations coming from the municipalities.	
	Example buildings from the public sector to show the way	Public buildings should set an example and municipalities should be leading the way.	S
	Create platforms for dissemination and public consultation	Coordinating national decisions with businesses or other relevant stakeholder groups (NGOs, home administrators) is necessary. The process must be open - for example, public consultations can be organised. Implementation will be left to agencies.	S
		Agencies could encourage the dissemination of information about the quality of the renovation and its results by creating a collaborative platform for the information sent by communities. A good example worth repeating is the earlier initiative by the Housing Energy Saving Agency (APVA). Its web page previously published good models of renovation, its prices, and several years' dynamics of renovated buildings' utility costs.	S
Create world-leading companies	Enable technology innovation for energy efficiency solutions	Increase the level of innovation amongst energy and construction professionals to find solutions for energy renovation along with curricula for architects, builders, renovators and increasing the attractiveness of relevant studies.	S
	Create a national strategy for training students in relevant fields including scholarships and active promotion of the opportunities	A national strategy and a clear state policy on training students for relevant professions are needed. To start from the analysis of what is required and then form incentives for choosing the studies of relevant specialities (e.g. scholarships, the active promotion of studies, etc.).	S
	Create an EU-wide renovation expert label	Create an EU-wide renovation expert label.	C
Raise global ambition to tackle climate change	Education and awareness-raising campaigns	More information and education on energy efficiency are required. These should include tailored awareness campaigns to reach all audiences (especially the hard-to-reach ones). Campaigns should be more tailored to those most in need of renovations, who are the most difficult to negotiate with (e.g. in the case of the elderly - good examples included publicity reached through the University of the Third Age and other similar organisations).	C&S

	Publish information about the average energy consumption per square metre	Publish more information about the average energy consumption per square metre. This would allow end users to understand their baseline and how much they need to improve by.	S
Improve health and well-being	Awareness-raising campaigns around the positive impacts of energy efficiency renovation	All the positive aspects of the changes for users should be emphasised: savings, the rising value of the real estate, durability, psychological comfort (better emotional state), physical health (microclimate), etc.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government support. There were very few actions suggested in this category. The focus was on the creation of an implementation framework for the development of Energy Service Companies (ESCOs). The national stakeholders felt that the introduction of such a company would solve many of the barriers outlined in the previous section concerning creating trust in the solution provided, enabling apartments with multiple owners to renovate and ensuring the quality of the work carried out.

Theme	Action name	Description	Idea Source[470]
Improving energy efficiency in buildings	Create a framework and implementation model concerning Energy Service Companies (ESCOs)	To implement the ESCO model. In the stakeholders' opinion, this model is useful when the residents of multi-apartment buildings do not find a consensus and consequently do not renovate the building, or not install more efficient energy systems. In such situations, ESCO or other similar models would be suitable for transferring the initiative to the building administration or other companies. This model would also help when residents do not trust renovation companies and are concerned about the work quality. Here, the quality would be guaranteed by the company's interest in investment returns; residents would not suffer because the company assumes the greater risk, and residents would not need to know so many technical aspects of the renovation or energy-efficiency-improvement processes. It would encourage residents who are interested but afraid to invest.	S
	Ensure energy-efficiency measures cover the whole life cycle of the building	To implement energy-efficiency assessments covering the entire life cycle of the buildings (from construction to demolition) and based on accurate observational data.	S
Provide funding for the renovation of buildings	Increase the levels of funding incrementally year on year	Constant, stable increase of funds allocated for building renovation and energy efficiency improvement. Do this incrementally so that there is no knock-on negative consequence on the economy.	S

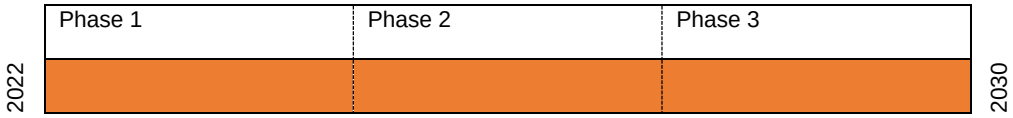
[470] C – Citizens; S – Expert Stakeholders

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. There were only two suggested actions in this category which were repetitive of earlier suggestions to create a long-term strategy at the national level and to continue the incremental increase of funding and subsidies across all sectors.

Timeline

These actions require significant political consensus, and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source [471]
Improving energy efficiency in buildings	Create a long-term vision for harmonised resources and interests across sectors	Guidance for a long-term strategic vision (harmonised resources, interests of different sectors).	S
Provide funding for the renovation of buildings	Increase the level of funding further, incrementally year on year	Constant, stable increase of funds allocated for building renovation and energy efficiency improvement.	S

Just Transition

National stakeholders discussed that those living in the most inefficient buildings tend to be the ones who need greater financial support to undertake renovation. However, these groups are also the hardest groups to agree on what needs to be done in apartment buildings and do not see the benefit of renovation. As a consequence, they are less motivated to do anything about it. Therefore, more access and a greater level of funding should be made available. Education and targeted awareness campaigns specifically for these groups are also needed. They recognised however that these increases should be done slowly and gradually, as sudden increases could harm other economic-related factors.

The issue of rural versus urban renovation was also mentioned, with a recognition that renovation costs for urban areas would have a quicker payback than rural areas as the rent prices and value of houses is higher in urban areas than rural.

[471] C – Citizens; S – Expert Stakeholders

6.18 Luxembourg

6.18.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Luxembourg[472] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[473]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Please note that the participants questioned the validity of the exercise (cf. end of document). Their concerns as well as the organisers' responses are presented at the end of this document.

Summary of Luxembourg's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Luxembourg pointed out the following policies. They do not constitute an exhaustive list but rather serve as an indication of the more visible policies to the stakeholders present.

- PAN-Bio 2025 action plan (Government of Luxembourg, 2020)[474]. The action plan aims to increase the share of agricultural land used for organic farming in the Duchy to 20% by 2025.

- National Action Plan to Reduce the Use of Plant Protection Products (Government of Luxembourg, 2014)[475]. The action plan aims to reduce the use of pesticides and other plant protection products in national agriculture, decrease the health impacts of pesticides, and implement new technologies to make up for the use of pesticides.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Luxembourg.

- Accord de Coalition (University of Luxembourg, 2018)[476]. The initiative establishing a Food Policy Council aims to connect different food systems stakeholders, covering food

[472] A stakeholder meeting took place on 26 October 2022 and involved one civil society member, one national authority, one research and academia community member.
[473] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[474] Government of Luxembourg (2020). PAN-Bio 2025 action plan. Available at: https://bio2025.lu/en/pan-bio-2025-3/ (Accessed on 16 November 2022).
[475] Government of Luxembourg (2014). National Action Plan to Reduce the Use of Plant Protection Products. Available at: https://food.ec.europa.eu/system/files/2019-03/pesticides_sup_nap_lux-rev_en.pdf (Accessed on 16 November 2022).
[476] University of Luxembourg (2018). Food Policy Council. Available at: https://food.uni.lu/projects/research-projects/food-policy-council/ (Accessed on 16 November 2022).

production, processing and retail, policy and administration, and research. The FPC works on promoting education for sustainable development with an emphasis on food education, reducing food waste, and developing resilient agriculture to promote food sovereignty.

- Anti Gaspillage Initiative (Antigaspi.lu, 2022)[477]. A food waste prevention initiative implemented by 92 municipalities of Luxembourg, initiated by the Ministry of Agriculture, Viticulture and Rural Development, serves as a platform to share advice, initiatives and information on food waste reduction.

General overview of actions per theme

The actions proposed by the Luxembourgish citizens and stakeholders on transforming the current food system in Luxembourg consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production, processing, distribution and retail. Finally, the proposed actions present a balance of policy implementation tools.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (7)	Promotional campaigns on urban farming
	Incentives for seasonal food production
	Subsidies for local sustainable food production
	Incentives for introducing new technologies to food production processes
	Subsidies to increase sustainable food production on a national level
	Financial and technical support to make agricultural subsidies more accessible to small-scale food producers
	Legislative framework promoting urban agriculture
Sustainable food processing, distribution & retail (6)	Including more comprehensive information on actual product expiration date on food labels
	Tax incentives for supermarkets to purchase produce from local food producers
	Shortening the supply chain
	Regulation on the inclusion of QR codes on food product labels with additional information
	Adjusting tax rates to correspond to the environmental impact of food products
	Regulation minimising the use of harmful ingredients in food products
Sustainable food consumption (4)	Implementation of national awareness campaigns on maintaining healthy diets
	Educational workshops on ways to substitute meat with plant-

[477] Ministry of Agriculture, Viticulture and Rural Development, Government of Luxembourg (2022). Anti Gaspillage Initiative. Available at: https://antigaspi.lu/en/frontpage/ (Accessed on 16 November 2022).

	based products
	Educational workshops on cooking with seasonal food products
	School education on good nutritional practices
Food loss and waste reduction (4)	Expanding the number of food product packaging sizes to reduce food waste
	Legislation to reduce food waste at all stages of the food production process
	Legislation protecting initiatives redistributing soon-to-expire food
	Legislation obliging food-based businesses to give away their unsold goods to limit food waste and food insecurity
Ensuring food security (0)	
Combating food fraud (0)	
Across the entire food cycle (3)	Research on all food system elements should be protected from the influence of lobbies.
	Development of citizen participation processes in food policy design
	New legislation on food policy to include strict definitions of sustainability

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Action**	**Idea Source**[478]
Sustainable food production	The farmers see the agricultural policy as inconsistent, making it difficult to make long-term investments.	S
	Not enough incentives for organic farming.	C
Sustainable food processing, distribution and retail	The Single Market in the EU makes it difficult to create competitive, sustainable food products.	C
	Food products imported from outside the EU do not have to follow strict standards on health and sustainability.	C
	Luxembourg's small size makes food product imports unavoidable.	C
	Information provided on food labels is inconsistent and often incomplete.	C
Across the entire food cycle	Food policy is not well interconnected but consists of siloed policies and sectors.	S
	Customer associations are often not included in food policymaking.	C

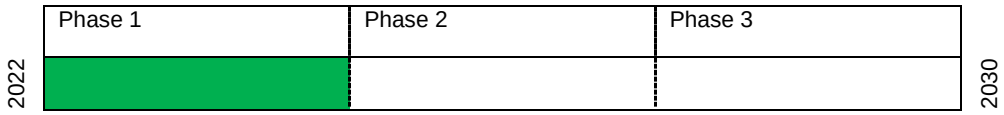
[478] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Luxembourg. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some actions, such as promotional campaigns on urban farming, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as cultivating independent scientific research on food system solutions, may be more difficult to implement successfully but can produce knock-on effects in creating a more equitable food system.

Theme	Action name	Description	Idea Source[479]
Sustainable food production	Promotional campaigns on urban farming	Promotional campaigns should be organised to encourage people to take up urban farming.	C
Sustainable food processing, distribution & retail	Including more comprehensive information on actual product expiration date on food labels	Food product labels should explain that the best-before food product labels are indicative and indicate how to assess if the product is expired.	C
Sustainable food consumption	Implementation of national awareness campaigns on maintaining healthy diets	National awareness campaigns should be organised on maintaining healthy diets (e.g. emphasising the importance of adopting plant-based meat alternatives, increasing daily fruit intake, and consuming organic food).	C
	Educational workshops on ways to substitute meat with plant-based products	Educational cooking workshops should be organised with tips on how to replace meat with plant-based alternatives.	C
	Educational workshops on cooking with seasonal food products	Educational cooking workshops should be organised on using seasonal food products in meals.	C

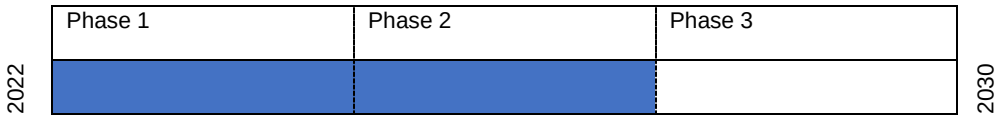
[479] C – Citizens; S – expert stakeholders

	School education on good nutritional practices	School education should include classes on healthy and sustainable diets.	S
Food loss and waste reduction	Expanding the number of food product packaging sizes to reduce food waste	The number of food product packaging sizes should be increased to reduce food waste by allowing consumers to choose the most appropriate packaging.	C
Across the entire food cycle	Research on all food system elements should be protected from the influence of lobbies.	Research on food systems should be protected from the influence of lobbies and have more of a direct policy impact.	C
	Development of citizen participation processes in food policy design	Policy design processes in food policy should be more participative (e.g. involve consumer rights associations in the consultation process, conduct focus groups with citizens etc.).	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through subsidies for farmers and local food producers and technical support for sustainable food production. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [480]
Sustainable food production	Incentives for seasonal food production	The government should incentivise seasonal food production.	C
	Subsidies for local sustainable food production	Subsidies should be provided to food producers using sustainable methods.	C

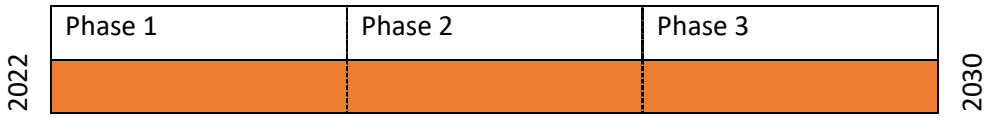
[480] C – Citizens; S – expert stakeholders

	Incentives for introducing new technologies to food production processes	Food producers should be incentivised to adopt new technologies supporting sustainable food production processes.	C
	Subsidies to increase sustainable food production on a national level	Farmers should receive subsidies to transition to more sustainable food production methods.	S
	Financial and technical support to make agricultural subsidies more accessible to small-scale food producers	Financial and technical support should be provided to small-scale food producers to access agricultural subsidies (e.g. grants for consultative services and applying for certificates).	S
Sustainable food processing, distribution & retail	Tax incentives for supermarkets to purchase produce from local food producers	Supermarkets should be incentivised to purchase more locally produced food products (e.g. through a tax on transit kilometres of food products).	C
	Shortening the supply chain	Subsidies to support reducing the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include legislative frameworks protecting new forms of food production, taxation changes, and mandating reductions in food waste generation.

Theme	Action name	Description	Idea Source [481]
Sustainable food production	Legislative framework promoting urban agriculture	A legislative framework should be developed to support urban agriculture (e.g. securing access to water supply and allowing citizens access to subsidised rent schemes for agricultural plots in cities).	C
Sustainable food processing, distribution & retail	Regulation on the inclusion of QR codes on food product labels with additional information	Regulation should be developed to introduce QR codes on food product labels with additional product origin and production process information.	C
	Adjusting tax rates to correspond to the environmental impact of food products	Tax rates should be adjusted to correspond to the environmental impact of food products (e.g. transit distances, CO2 emissions, water use).	S
	Regulation minimising the use of harmful ingredients in food products	Regulation should be introduced, minimising harmful components in food products, such as known carcinogens and other toxic ingredients.	C
Food loss and waste reduction	Legislation to reduce food waste at all stages of the food production process	Legislation should be introduced obliging reductions in food waste generation at all stages of the food production process.	S
	Legislation protecting initiatives redistributing soon-to-expire food	Initiatives working to redistribute soon-to-expire food should be protected by law (e.g. similarly to existing initiatives in Italy).	C
	Legislation obliging food-based businesses to give away their unsold goods to limit food waste and food insecurity	Legislation should be introduced to oblige food-based businesses, such as restaurants, supermarkets, and catering companies, to give away their unsold goods to limit food waste and direct donations to vulnerable groups (e.g. through food banks and social food stores).	C
Across the entire food cycle	New legislation on food policy to include strict definitions of sustainability	All new legislation on food policy should clearly state the meaning of sustainability and expand it to new categories (e.g. sanitary, economic, and nutritional aspects).	C

Just Transition

Equitable and inclusive access should be ensured to healthy and sustainable food products for all citizens to transform into a more sustainable food system.

An emphasis should be placed on balancing individual and political/systemic responsibility. The businesses need to bear their share of the financial costs instead of legislation and taxes targeting the citizens exclusively.

[481] C – Citizens; S – expert stakeholders

Annex: response to stakeholders' concerns

Participants of the stakeholder events wanted their criticisms to be included in this report, and they would like to have the results of the workshop communicated to them/ have a say in the final report.

They strongly deplored the lack of representativeness of the exercise, particularly because no farmers or farmers' associations were present.

They were therefore unable to express themselves on the issues and problems that concern them to a large extent.

Some participants also did not understand why they had been called, as they did not find it particularly relevant to mention their professional activity in the context of this notion of sustainability. The same is true for the absence of distributors and importers, even though they represent most of the commercial activities in the field.

Comments from the organiser:

- Comment on the selection of participants: twelve contacts were retained for the topic of Food, out of which seven represented national and regional authorities, three research and education communities and two civil Society. Out of the selected participants, only six informed us that they would participate, and only three participated in the end.

- The design of the event explicitly excluded the participation of the private sector (farmers would be excluded, as well as distributors and importers) and we did not receive a response from farmers' associations.

- The selection process was based on desk research as, because of GDPR, previous information on stakeholders in the hands of the European Commission could not be made available to the organisers. According to desk research, the participants were all implicated in Farm to Fork/Sustainability strategies, and therefore had a say in the process. This is validated by the replies to the first questions. The fact that most expected participants forfeited at the last minute made the discussion more partial than expected.

Participants also questioned the representativeness of the report in relation to the Luxembourg population - how can this report be described as a national report?

Comments from the organiser:

- We are fully aware that this exercise, given the low participation, cannot produce a national report. Its function is to give some interesting pointers from stakeholders in each country as to where the conversation lies in terms of sustainable food systems.

One participant also criticised the overall organisation of the event: she received the information the same morning (event link and schedule) and did not get a response despite her follow-up emails.

Comments from the organiser:

- The following emails were sent to all participants:

- First email – 26/08
- Follow-up – 19/10
- Reminder – 25/10
- We are currently checking whether one participant was informed last minute.

This discussion seemed to them disconnected, both in terms of representativeness but also in the results it will generate, and in its capacity to renew the dialogue between so-called 'lambdas' citizens and the experts of the sector.

Comments from the organiser:

- This is because it was not meant to replicate citizen-stakeholder dialogues which happen at national level, but rather provide the European Commission with contrasting information - two sides of the same coin.

The questions were too broad and not specific enough, and so were the citizens' responses.

Comments from the organiser:

- Sustainable food systems are a very vast topic – from food production, to consumption, to food waste disposal. Time and budgetary constraints made the consultations limited in time.

They did not see the added value of their work and found the output superficial in the first exercise (especially regarding the formulation of the questions). The second exercise was seen as more comprehensive and concrete, as it produced more tangible and actionable results.

Comments from the organiser:

- The first part of the exercise was designed to provide thematic experts with country-specific information to be used in the design of the roadmap, as well as to prepare to the second exercise. The fact that the stakeholders did not see the linkage between the two did not depend on the quality of the facilitation methodology. It could have been further stressed by the facilitator that the results would feed into a further document.

However, participants praised the ease of use of the tools and the facilitation of the event and remain curious to see the result.

6.18.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[482] in Luxembourg that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[483]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Luxembourg's policies on the EGD and Citizen and National Stakeholder Reports

Because of its service-based economy and power generation taking place outside the country, transport accounts for 49% of emissions, a proportion which has not changed in recent years, although absolute emissions from transport fell by 14% from 2005 to 2019[484]. Overall, its emissions per capita are the highest in the EU at 20.6 tonnes per person per year, or four times those of Sweden. Luxembourg has a comprehensive plan (MoDu2.0[485]) for investment in railways, local and regional public transport, and cycleways, implementation of which is underway, and in 2020, public transport was made free for citizens. Luxembourg is spending EUR 31 million of Recovery Funds[486] on stimulating EV uptake by the public sector and businesses and extending the network of charging stations across the country.

The workshops with citizens and stakeholders showed that, in the main, they supported the measures already being taken by their government. In more detail:

- ***Citizens*** were concerned about the end of life of batteries and the cost of replacing them and had doubts as to whether EVs are environmentally friendly. For this reason, they wanted more work to develop and encourage hydrogen cars. Public transport in Luxembourg is time-consuming and poorly connected/integrated, especially in rural areas – frequencies are too low, and journey times are too high. They, therefore, suggested more investment in public transport. They also suggested free public transport in all EU countries, including on longer journeys, to ensure equality of access (although they noted that free PT in Luxembourg, introduced in 2020, has not solved traffic congestion). They suggested parking and riding on the edge of cities and within them, less space for the private/individual car in public spaces, and more for walking and cycling infrastructure, squares, and green space. They suggested making teleworking a norm (two to three days a week), encouragement and a financial or fiscal bonus for those who use it. In general, they thought taxation could be used to

[482] A stakeholder meeting took place on 26 October 2022 with two participants coming from the national government.
[483] Prof Tom Rye, Molde University College, Norway.
[484] European Parliament (2021). Climate action in Luxembourg: Latest state of play. Available at https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)690664 (Accessed on 30 November 2022).
[485] Government of Luxembourg (2020). #Modu 2.0 A Multimodal Strategy. Available at https://transports.public.lu/dam-assets/publications/contexte/strategie/Modu20-EN-final.pdf (Accessed on 30 November 2022).
[486] European Commission (2022), see note 255, page 249.

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encourage sustainable transport modes and vehicles and discourage polluting vehicles. They also wanted to see more use of rail for freight transport and restrictions on when trucks from other countries can enter the country to fuel up (as fuel is much cheaper than in surrounding Member States).

- ***Stakeholders*** generally agreed with the suggestions from citizens. In addition, they suggested:
  - The 15-minute city.
  - Better overnight long-distance public transport.
  - Subsidized clean energy for the use of personal or company vehicles.
  - The state and possibly the EU should co-finance companies' individual and company electric vehicle purchases.
  - Whilst they did not give details, they suggested that at the national and EU levels, there should be taxation policies for citizens and companies to encourage the green transition.
  - At the national and EU level: The policy on vehicle recycling should be revised to oblige manufacturers to contribute to the transition process.
  - At the EU level, implementing the Alternative Fuels Infrastructure Directive is extremely important and needs to be speeded up.
  - Also, at the EU level: initiatives should be implemented in the maritime sector to sustain large vessels.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source**[487]
Clean vehicles	EV purchase incentives for individuals and companies	C & S
	Speed up implementation of the Alternative Fuelling Infrastructure Directive	S
	More charging infrastructure	C & S
	Stronger legislation on vehicle recycling and disposal	S

[487] C – Citizens; S – expert stakeholders

Better public transport	Free PT across Europe	C & S
	PT integration across Europe	C
Spatial planning and city development	More bike paths and better walking infrastructure	C & S
	Park and ride	S
	15-minute city	
	Less space in cities for parked and moving cars	S
Pricing and charges for transport	Taxation of polluting vehicles, tax incentives for cleaner vehicles	S
	More disincentives to reduce the use of polluting trucks and river transport	S
Planning and operation of transport networks	PT network improvement both for local and regional trips and internationally	C & S
Governance	Financial or fiscal bonus for teleworking	C
	Encouraging teleworking	C
	Encouraging modal shift to rail freight	S
Greening transport in general	Education	C & S
	Exchange of experience	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation, although they had some critiques of the current system, as noted in the table below. Stakeholders, however, made several points. These in do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final)); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Action	Idea Source[488]
Clean vehicles	Lack of EV charging infrastructure.	C
Public transport	Poor public transport – infrequent, slow.	C
Governance	Little or no cooperation between 27 Member States in sustainable infrastructure and mobility.	S
Governance	Lack of clarity on the different steps to achieve EGD aims. The related point is that different EU legislation aligned with the achievement of EGD may overlap; and/or conflict with Individual Member State legislation, causing further confusion.	S
Governance	GDPR may constrain the use of data in smart mobility applications.	S
Pricing and charges	Lack of funding is considered the most important blocking achievement factor of the EGD objectives.	S
Pricing and charges	Companies have no financial support to encourage them to decarbonize and re-evaluate the necessary logistics.	S
Pricing and charges	Insufficient subsidies are available for citizens to transition.	S

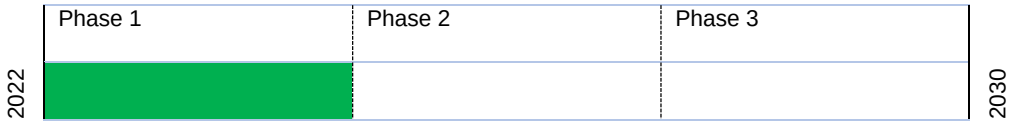
[488] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



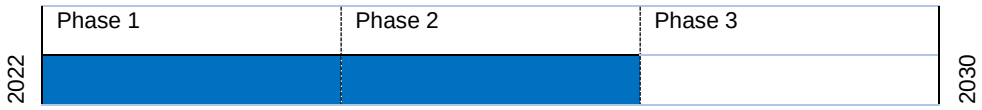
Actions that can be taken straight away by individual citizens, organisations, and businesses, are proposed by citizens and stakeholders in Luxembourg. These mainly comprise communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [489]
Greening transport in general	Education and awareness raising	Changing people's habits through education: make people aware of the environmental and health benefits of shifting to sustainable transport.	C
	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S

Actions requiring grants and incentives or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer-term are written in italics in the 'action name' column.

[489] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea source [490]
Clean vehicles	EV purchase incentives for individuals and companies	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	C & S
	Speed up implementation of the Alternative Fuelling Infrastructure Directive	This was raised, but no further details were provided. The Directive sets targets for countries to install/provide a certain number of charging points per year.	S
	More charging infrastructure	Linked to the above point.	C & S
	Stronger legislation on vehicle recycling and disposal	Few details were provided, but this suggestion reflects concern about the environmental impacts of the life cycle of EVs and other vehicles, particularly if fleet renewal is going to be speeded up as production of internal combustion engine cars reduces over time.	
Better public transport	Free PT across Europe	It was suggested that the Luxembourg experience should be extended across Europe.	S
Spatial planning and city developmen t	More bike paths and walking infrastructure	More space should be taken from parked and moving cars and given to improving urban walking and cycling infrastructure.	C & S
	Park and ride	Park and rides are needed on the edge of cities so drivers can switch to public transport or other sustainable modes.	C & S
Pricing and charges for transport	Taxation of polluting vehicles, tax incentives for cleaner vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	More disincentives to reduce the use of polluting trucks and river transport	Few details were given, but as a transit country, Luxembourg has a high share of truck traffic, and it is presumably for this reason that participants focused on how to manage truck transport.	S
Planning and operation of transport networks	PT network improvement both for local and regional trips and internationally	Investment in improved public transport capacity and speeds at the local, national and international levels, including more cross-border cooperation on rail investment.	S
Governance	No measures suggested		

[490] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Many of the proposals from Luxembourg citizens and experts require policy changes and regulations to be implemented. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [491]
Clean vehicles	No suggestions in this category		
Better public transport	PT integration	Better planning and coordination of public transport routes across the country and into neighbouring countries.	S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
	Less space in cities for parked and moving cars	Linked to the above, a general shift in the distribution of street space in cities was seen as desirable.	C & S
Pricing and charges for transport	No suggestions in this category		
Planning and operation of tspt networks	No suggestions in this category		
Governance	Financial or fiscal bonus for teleworking	Few details were provided but, linked to the point below, the participants felt that the experience of teleworking during the pandemic had been positive and should be retained and encouraged.	C & S
	Encouraging teleworking	See above	C & S
	Encouraging modal shift to rail freight	Again this comment reflects Luxembourg's role as a transit country. A regulatory approach was suggested.	S

[491] C – Citizens; S – expert stakeholders

Just Transition

Neither citizens nor stakeholders had detailed comments on the Just Transition in mobility. The issue of poor public transport in rural areas was raised, but the risk of social exclusion in many other countries did not emerge in Luxembourg. Stakeholders felt that subsidies for citizens to transition to low-carbon transport are insufficient, but they did not discuss the equity aspects of this point.

6.18.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[492] in Luxembourg that in their view can support the achievement of the EU's Green Deal. The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Luxembourg's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Luxembourg in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[493], was not available for Luxembourg. As a result, the following table compares the priorities of the EGD with Luxembourg's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP and Lithuania's Integrated NECP[494]. Luxembourg's Long Term Renovation Strategy (LTRS) does not provide information on the level or split of funding between different building typologies or sectors[495].

[492] A stakeholder meeting took place on 26 October 2022 and involved one representative from the national government, two members of academia and one representative of civil society.
[493] Ivanova, V. et al. (2021), see note 30, page 61.
[494] European Commission (n.d.), see note 128, page 165
[495] European Commission (n.d.), see note 129, page 165

Increasing renewable energy in buildings	Luxembourg's renewable energy contribution to the 2030 EU-level target is 25% of gross final energy consumption in 2030
Improving energy efficiency in buildings	In the plan, energy efficiency is considered as a top priority in the achievement of both energy and climate objectives. Luxembourg's national contribution to the 2030 EU-level target is set at a 40 to 44% reduction in final energy consumption, which translates to 3.06 Mtoe. The contribution in primary energy consumption has not been provided. Luxembourg does not explain the application of the 'energy efficiency first' principle in its plan. The plan provides many elements on buildings and includes the aim to increase the renovation rate to 3% and renovate all existing houses to net zero emissions by 2050.
Tax system for energy products aligned to the green transition	The plan includes a reduced VAT rate of 3% for renovation measures.
Provide funding for renovation of buildings	The overall amount of investment for the period 2021-2030 is not provided. The final plan also does not include a list of subsidies.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.4% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 0.8% medium, and 0.2% deep energy savings[496]. A good practice linked to the plan is the climate pact, in which Luxembourg shared best practices among its 98 municipalities, worked with local authorities to launch projects and mobilised EUR 55.2 million in investment, paving the road for implementation of the NECP. The current climate pact, which has expired in 2020, has continued under the name of Climate Pact 2.0 and will be further developed.
Create world-leading companies	The NECP contains ambitious national objectives and funding targets on research, innovation (R&I) and competitiveness. Luxembourg aims to become an international hub for start-ups specialised in climate solutions, and also plans to increase R&I spending and upgrade its related infrastructure. R&I spending is, however, quantified only for 2020 (planned 2.3-2.6% of GDP, up from 0.65% in 2018). There are also plans for training in SMEs and industry across all areas of energy efficiency and renewable energy as well as large-scale training programmes for tradespeople and engineers/architects.

[496] European Commission (2019), see note 31, page 61.

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Raise global ambition to tackle climate change	The plan includes a proposed measure to raise awareness that includes the appointment and promotion of a 'neighbourhood administrator' within the municipalities. This would include for example, the promotion of the sharing economy and urban farming projects, the organisation of an exchange platform or a repair café. There are other mentions of the need for education in general but not specific plans provided.
Improve health and well-being	The NECP contains a general section referring to interactions with air policy and stating that planned measures will be fully harmonised with the final national air pollution control programme (NAPCP).
Address inequality and energy poverty	On energy poverty, Luxembourg reports the number of households affected and the measures to reduce energy poverty.
Ensure a Just Transition that is fair, competitive, and green	The final plan considers the just and fair transition aspects and provides information on the social, employment and skills impacts of a transition to a climate neutral economy.
Mobilising industry for a clean and circular economy	The final NECP substantially develops the narrative of the circular economy compared to the draft version. The document describes several actions on the circular economy, moving from only waste management to also include resource management.

In general, the national stakeholders considered Luxembourg's national policies more ambitious than the EGD and observed that many of the EGD goals had already been achieved nationally. There is a good amount of funding available and public services already comply to a high standard. They were aware that Luxembourg is a small and relatively wealthy country and hence tackling the issues of climate change would be considered easier than some other Member States.

Existing policies include the following:

- Klimabonus (since May 2022) supports almost 100% of the population (property owners, tenants, companies, etc.)
- Municipal renovation subsidies
- Enoprimes
- The 'Pacte climat' at the local level focused on building renovation.
- Pre-financing is available for citizens who want to renovate their buildings

Furthermore, the national stakeholders agreed that financial, regulatory, legislative and political barriers are not an issue, as a result of the level of funding available, and that the authorities are willing to implement progressive policies.

Improving energy efficiency in buildings: Citizens mentioned that renovation is costly and energy prices are increasing, which does not leave much disposable income for energy

efficiency measures. They also mentioned there needs to be a balance between owners and tenants as the owner is the one who invests but the tenant is the one who benefits. National stakeholders had an alternate view that there was a good level of funding available from the state and that Luxembourg was a wealthy country and hence had greater opportunities than others to meet the goals of the EGD.

Regarding property owners, national stakeholders mentioned that there is an energy efficiency contract in place which holds owners accountable for the energy performance of their apartment/building. Citizens felt that there should be tighter restrictions on rental properties to encourage energy efficiency. As such, it is not clear whether the citizens were unaware of the existing restrictions or if the restrictions simply do not go far enough. Regardless, national stakeholders also felt that stricter measures could have a negative impact on the market which should be evaluated before any changes were made.

National stakeholders agreed with the citizens that despite the level of funding provided by the state, there is still an issue that property owners need to be incentivised further to engage in renovation work. One of the national stakeholders suggested outsourcing renovation at European level, focusing on private leasing to solve this issue. Another idea was to expand apartment buildings to create a further revenue stream for the owner and renovate the building at the same time.

National stakeholders mentioned that a potential negative effect of building renovation would be that citizens pay less attention to reducing their energy consumption. This would be similar to the commercial world for new buildings, where the energy-efficient building does not perform as expected as a result of user behaviour. As such, the national stakeholders felt that the EGD policies alone cannot be effective without a change in consumers habits.

National stakeholders also mentioned that the energy efficiency standard that needs to be met for the sustainability certificate should be linked to the size of the house.

Provide funding for renovation of buildings: even though there are a number of grants available as outlined by the national stakeholders, citizens mentioned that it is difficult to know what subsidies are available and also difficult to apply for them. They also felt there should be legal obligations to ensure that citizens who successfully apply for a grant do indeed receive the money of the grant (and not just the promise of a grant).

Renovate at least 3% of the total floor area of public buildings annually: National stakeholders mentioned that public buildings are already a priority and services are to a high standard.

Create world-leading companies: Citizens mentioned there is a lack of trust in the companies providing renovation and there should be an emphasis on education for construction professionals. National stakeholders had an alternate view that training and studies in Luxembourg are already efficient, and the education system is well-funded and gives good results. This should be examined further at a national level.

National stakeholders recognised there is a longer-term risk of labour shortage as the renovation wave continues and hence it is important to continue to invest and attract talent to the energy and construction professions. They also felt it is important to do so in a way to ensure there is no monopolisation from big corporations as a result of the green transition and that smaller companies do not disappear.

Raise global ambition to tackle climate change: Citizens were surprised and unaware that buildings accounted for 40% of global energy emissions. They also had very little knowledge of existing EU initiatives to reduce global emissions. They mentioned the importance of education for all on energy efficiency as well as available subsidies etc. National stakeholders also felt that further education and awareness around the topic of energy efficiency in buildings was needed. They suggested that data should be gathered to demonstrate the impact and this should be shared to incentivise others to carry out similar projects.

Improve health and well-being: National stakeholders mentioned the benefits of renovation on thermal comfort and health and that more public awareness should be provided on this topic to encourage private homeowners to renovate.

Address inequality and energy poverty: Citizens mentioned that there are inequalities in the access to financial support which should be addressed. National stakeholders disagreed and stated that this is already happening and that the Klimabonus is accessible for all. Further investigation as to why citizens felt this was a barrier should be investigated, for example, perhaps the citizens meant that the level of funding is not adequate for all.

Mobilising industry for a clean and circular economy: Citizens mentioned a negative consequence of using wood in buildings, which they said would lead to deforestation.

National stakeholders mentioned that it was important to ensure the materials used for renovation were not harmful to the environment.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. Despite the level of knowledge that was absorbed by both the citizens and the national stakeholders, there were not a significant number of actions suggested. A number of key areas of the EGD were also ignored, notably increasing renewable energy in buildings was not discussed at any level of detail.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Increasing renewable energy in buildings	No actions suggested
Improving energy efficiency in buildings	Regulate housing prices and insulation fees Create tighter restrictions on rental properties Energy performance standard modified with size of the house Enable reserve funds for homeowners dependent on energy efficiency Enable the introduction of the 'renovation passport' Improve and update the existing sustainability certificate Introduction of the smart readiness indicator
Tax system for energy products aligned to the green	Introduce a tax deduction for materials purchased

transition	
Provide funding for renovation of buildings	Create easier access to information and availability of grants Provide legal certainty for investors about grants and subsidies Limit the funding available based on quantity of the renovation material rather than house size
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	Education for energy and construction professionals Implement regulation to ensure smaller companies are not pushed out of the market
Raise global ambition to tackle climate change	Education and awareness-raising campaigns Education campaigns on innovation materials for energy efficiency projects
Improve health and well-being	Create a data platform where common data on the positive impacts of renovation can be disseminated
Address inequality and energy poverty	Create a pre-financing mechanism for renovation to ensure affordability for all
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	No actions suggested

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[497]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	There is a barrier between owners and tenants in that the owner pays for the renovation and the tenant benefits.	C
	Cheaper solutions are less efficient.	C
	Possible energy consumption increases by citizens using efficient energy systems (rebound effect[498]).	C
	There are different expectations and needs between inhabitants of blocks of apartments.	S
	Raw materials might not be sufficiently available, especially in the long term.	S
Tax system for energy products aligned to the	No barriers mentioned	/

[497] C – Citizens; S – expert stakeholders
[498] Cf. Galvin R. (2015). The Rebound Effect in Home Heating: A guide for policymakers and practitioners. BRI Research Series, Routledge.

green transition		
Provide funding for renovation of buildings	Renovation is costly and energy prices are increasing, which does not leave any income for renovation.	C
	Difficult to understand what subsidies are available and they are hard to apply for.	C
	Support might not be available to all social groups. For instance, there are no renovation subsidies for older people with a larger house with several empty rooms because they will not live in the house for the next 30 years.	S
Renovate at least 3% of the total floor area of public buildings annually	No barriers mentioned	/
Create world-leading companies	There is a lack of trust towards builders providing renovation. Users are afraid that there could be hidden costs or that the process could take longer than expected.	C
	There might not be enough companies or skilled workers to perform the required renovations, especially in boundary regions.	S
Raise global ambition to tackle climate change	There is a lack of knowledge of existing EU initiatives.	C
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	There are inequalities in the access to financial support.	C
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	Using wood in construction projects could lead to increased deforestation.	C
	Renovations could potentially harm air quality.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. The actions were quite diverse across most of the EGD themes.

Theme	Action name	Description	Idea Source[499]
Improving energy efficiency in buildings	Regulate housing prices and insulation fees	Regulate housing prices and insulation fees to ensure the market is not distorted and create certainty for the homeowner. For example, capping maximum rents should be introduced according to the value of the house.	C&S
	Create tighter restrictions on rental properties	Create tighter restrictions on rental properties to encourage energy efficiency (note: national stakeholders did not agree with this action and felt that this could have a negative market impact).	C
	Energy performance standard modified with size of the house	Link the size of the house to the standard that needs to be met.	C
	Enable reserve funds for homeowners dependent on energy efficiency	Reserve funds should be promoted for homeowners; the amount of the reserve fund depends on the house's energy efficiency.	S
	Enable the introduction of the 'renovation passport'	A 'renovation passport' should be created.	S
Tax system for energy products aligned to the green transition	Introduce a tax deduction for materials purchased granted at the store checkout	Tax deduction for materials for energy efficiency solutions (note: national stakeholders did not agree with this action and felt it could be subject to abuse).	C
Provide funding for renovation of buildings	Create easier access to information and availability of grants	Make information on grants and subsidies easier to find.	C
	Provide legal certainty for investors about grants and subsidies	Provide legal certainty for investors about grants and subsidies.	C&S
	Limit the funding available based on quantity of the renovation material rather than house size	Insulation subsidies should be granted based on m2, with a maximum surface limitation.	S
Create world-leading companies	Education for energy and construction professionals	Increase the level of training for construction and energy professionals to ensure the quality of the renovation provided (note: national stakeholders felt that the training programmes were already of a good quality).	C
Raise global ambition to tackle climate change	Education and awareness-raising campaigns	There should be education for all on energy efficiency as well as available subsidies etc. Videos and books about renovation should be easily accessible to the public to increase awareness.	C&S
Improve health and	Create a data	Data about the impacts of the	S

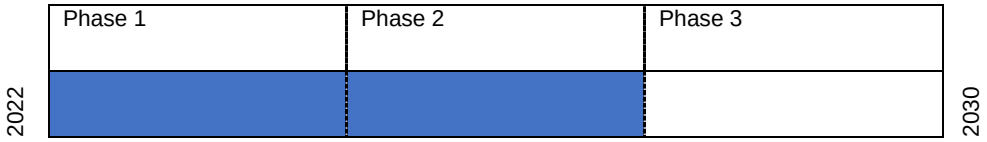
[499] C – Citizens; S – expert stakeholders

well-being	platform where common data on the positive impacts of renovation can be disseminated	renovation should be collected and made accessible to all stakeholders.	
Address inequality and energy poverty	Create a pre-financing mechanism for renovation to ensure affordability for all	Pre-financing should be available to citizens for renovation.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There were only a small number of actions suggested across a few of the EGD themes.

Theme	Action name	Description	Idea Source[500]
Improving energy efficiency in buildings	Improve and update the existing sustainability certificate	The existing sustainability certificate should be updated to be based on the size of the house.	S
Create world-leading companies	Implement regulation to ensure smaller companies are not pushed out of the market	Regulations should be implemented for renovation companies to protect small businesses and prevent them from being absorbed by more prominent companies.	S
Raise global ambition to tackle climate change	Education campaigns on innovation materials for energy efficiency projects	Information about innovative materials should be communicated through raising awareness campaigns, and training should be offered to construction professionals.	S

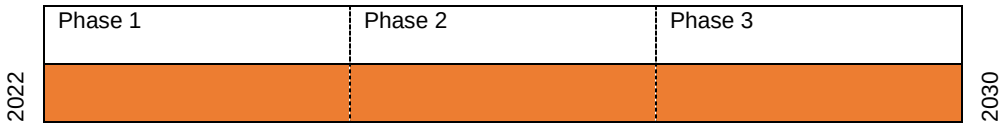
[500] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately. Only one action was suggested for the longer timeline.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[501]
Improving energy efficiency in buildings	Introduction of the smart readiness indicator	Smart readiness indicators should be implemented.	S

Just Transition

If subsidies are provided for all regardless of house size, there might be an incentivisation to live in larger houses, and as such the national stakeholders suggested that subsidies should be limited to the square metre of the renovation type, e.g. a maximum amount of insulation that a homeowner can receive funding for based on the square metres of the insulation provided and not on the exterior of the home.

To avoid larger companies creating a monopoly, support should also be given to smaller companies to enable them to operate in the market that will deliver the green transition.

Funding and subsidy schemes should also consider the number of occupants in the home distinguishing between houses with several rooms occupied by a single person because their children have left home or multifamily buildings with several families.

[501] C – Citizens; S – expert stakeholders

6.19 Malta

6.19.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[502] in Malta that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[503]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Malta's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Malta did not point to any relevant food policy. They instead pointed out the importance of the newly founded food agency. This is not necessarily representative of the food policy in Malta but can instead serve as a presentation of how visible current policies are to the stakeholders present.

- Malta Food Agency (foodagency.mt, 2021)[504] – A new agency set up in 2021 with the task of delivering public services in relation to food. The agency's responsibilities include implementation of governmental food policy; advising the government in sales and marketing of food; regulation of sales and marketing of food; and support for enterprises in the farming and fisheries food system.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key when it comes to food policy in Malta.

- Food and Nutrition Policy and Action Plan for Malta 2015-2020 (Government of Malta, 2014)[505] – The action plan aims to address a wide range of issues related to nutrition and food security, with the goal of improving dietary habits for health and well-being. The document identifies the need to develop capacity for research in food and nutrition as one of its priority action areas, namely, to ensure the development of a knowledge base in the field of nutrition research.

- National Agricultural Policy for the Maltese Islands 2018-2028 (Parliament of Malta, 2018)[506] – The plan aims to provide direction and recommendations for Malta's agricultural sector. The objectives include recommendations on issues from food

[502] A stakeholder meeting took place on 27 October 2022 and involved one academic representative.
[503] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[504] Cf. https://foodagency.mt.
[505] Government of Malta (2014). Food and Nutrition Policy and Action Plan for Malta 2015-2020. Available at: https://deputyprimeminister.gov.mt/en/strategy-development-and-implementation-unit/Documents/Strategies_and_Policies/Food_and_Nutrition_Policy_and_Action_Plan_for_Malta.pdf (Accessed on 25 November 2022).
[506] Parliament of Malta (2018). National Agricultural Policy for the Maltese Islands 2018-2028. Available at: https://agrikoltura.gov.mt/en/agricultural_directorate/Documents/nationalAgriculturalPolicy/napFinal.pdf (Accessed on 25 November 2022).

labelling and traceability to sustainability and resilience to climate change. The plan also proposes starting up Agricultural Research and Innovation Hubs (AGRIHUB), as platforms for strengthening the links between the research community and farmers, by giving innovators the opportunity to demonstrate their projects in practice.

General overview of actions per theme

The actions proposed by the Maltese citizens and stakeholders on transforming the current food system in Malta consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, without a particular emphasis on a single component. Finally, the actions the citizens proposed focus on immediate and midterm implementation periods, with implementation tools such as communication, education, interaction, and subsidies.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (10)	Skills training for farmers on sustainable production methods
	School visits to local farms
	Subsidies for community-based food production
	Subsidies for local sustainable farmers
	Financial incentives for farmers' cooperatives
	Subsidies for programmes offering student placements on sustainable farms
	Low-interest loans for farmers investing into sustainable food production methods
	Subsidies for farmers to install renewable energy capacities on their farms
	Subsidies for increase in production of indigenous foods
	Subsidies for urban farming
Sustainable food processing, distribution & retail (7)	Awareness campaigns on reading and understanding food labels
	Development of a certificate for restaurants using local food produce in their meals
	Development of a free shuttle bus service to farmers' markets
	Investments in development of food markets' infrastructure
	Investments in research on sustainable food packaging
	Subsidies for small-scale sustainable farmers to develop online web shops
	Regulation on mandatory use of English, Italian and Maltese on food product labels
Sustainable food consumption (7)	Development of platforms for finding discounted food and groups for food swapping
	Revision of food aid programmes to involve fresh and healthy food
	Educational stands at food markets on sustainable diets
	Promotional campaigns on plant-based diets
	Development of subscription systems for fresh fruit and vegetable boxes
	Development of green food procurement systems

	Government subsidies for Meals on Wheels
Food loss and waste reduction (2)	Promotional campaigns on taking restaurant leftovers home
	Financial support for food donation infrastructure
Ensuring food security (0)	
Combating food fraud (1)	Formation of a special authority monitoring misleading food labels
Across the entire food cycle (1)	Education on sustainable food systems

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

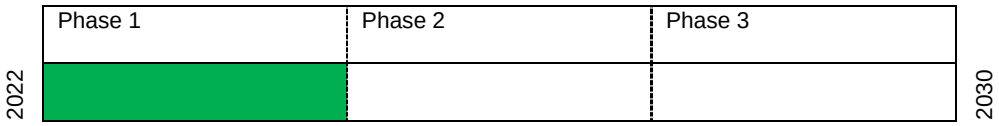
Theme	**Action**	**Idea Source**[507]
Sustainable food production	Malta's limited territory makes it difficult to produce food in sufficient quantity.	C
	Water for agriculture is becoming more difficult to access.	C
	Young and new farmers find it difficult to get access to agricultural land and subsidies.	C
Sustainable food processing, distribution and retail	Misleading food labels make it difficult for consumers to understand which products are genuinely healthy and sustainable.	C
	Artisanal, local, and seasonal food is often too expensive for consumers.	C
Sustainable food consumption	Teachers are not equipped to provide education on sustainable nutrition to students.	C
	Large groups of citizens do notunderstand the benefits of consumption of local produce.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in

[507] C – Citizens; S – expert stakeholders

Malta. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as educational stands on food markets, are easy to implement (low-hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as the formation of special bodies for monitoring food label fraud, may be more difficult to implement successfully, but can produce knock-on effects, such as more transparent food product information.

Theme	Action name	Description	Idea Source [508]
Sustainable food production	Skills training for farmers on sustainable production methods	Skill-based training programmes should be organised for farmers on sustainable production methods (e.g., organic agriculture, permaculture, use of natural fertilisers etc.).	C&S
	School visits to local farms	School visits should be organised to local farms to develop an awareness of food sources in children.	
Sustainable food processing, distribution & retail	Awareness campaigns on reading and understanding food label	Awareness campaigns should be organised to make it clear for citizens how to read food labels with understanding.	C
	Development of a certificate for restaurants using local food produce in their meals	A certificate should be developed to acknowledge restaurants using a certain percentage of local products in their meals.	C
	Development of a free shuttle bus service to farmers' markets	A free shuttle bus service should be organised to farmers' markets on Saturdays to make them more accessible.	C
Sustainable food consumption	Development of platforms for finding discounted food and groups for food swapping	New platforms should be developed to facilitate food swapping and finding discounted food.	C&S
	Revision of food aid programmes to involve fresh and healthy food	Food aid programmes should be revised to offer fresh and local food to the users (e.g., through a vouchers programme for food from food markets).	C
	Educational stands at food markets on sustainable diets	The Malta Food Agency should set up educational stands on markets informing people on how to maintain sustainable diets.	C
	Promotional campaigns on plant-based diets	Promotional campaigns should be organised to emphasise the importance of maintaining plant-based diets.	S
	Development of subscription systems for fresh fruit and vegetable boxes	Subscription models should be developed for fresh fruit and vegetable boxes provided by local sustainable producers.	S
	Development of green food	Food procurement systems should prioritise local and sustainable food	S

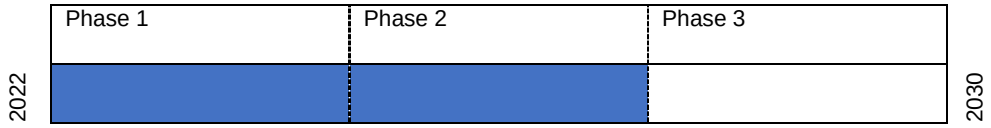
[508] C – Citizens; S – expert stakeholders

	procurement systems	producers.	
Food loss and waste reduction	Promotional campaigns on taking restaurant leftovers home	Promotional campaigns should be organised to encourage leftovers from restaurants to be taken home.	C
Combating food fraud	Formation of a special authority, monitoring misleading food labels	A special authority should be founded to monitor misleading claims on food labels.	C
Across the entire food cycle	Education on sustainable food systems	Educational workshops should be organised on sustainable food systems for diverse social groups (e.g., maintaining sustainable diets, promoting awareness on food sources etc.).	C&S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through means such as subsidies for farmers and local food producers, as well as research on various aspects of the food system. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [509]
Sustainable food production	Subsidies for community-based food production	Subsidies should be provided for community-based food production (e.g., urban and community gardening).	C
	Subsidies for local sustainable farmers	Subsidies should be provided for small-scale farmers to implement more sustainable food production methods.	C&S
	Financial incentives for farmers' cooperatives	Financial incentives should be provided for farmers' cooperatives (e.g., operational grants, subsidised access to food markets).	S

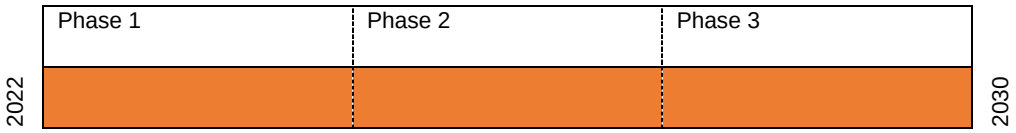
[509] C – Citizens; S – expert stakeholders

	Subsidies for programmes offering student placements on sustainable farms	Subsidies should be ensured for student placement programmes on sustainable farms (e.g., Maya organisation work).	C
	Low-interest loans for farmers investing into sustainable food production methods	Low-interest loans should be provided for farmers making investments into sustainable food production methods.	S
	Subsidies for farmers to install renewable energy capacities on their farms	Subsidies should be provided for farmers to install renewable energy capacities on their farms (e.g., solar panels).	C
	Subsidies for increase in production of indigenous foods	Subsidies should be provided to scale up the production of indigenous foods (e.g., capers, prickly pears, herbs).	C
	Subsidies for urban farming	Subsidies should be provided for urban farming (e.g., subsidies for rent of plots of land).	C
Sustainable processing, distribution, and retail	Investments in development of food markets' infrastructure	Investments in development of food markets' infrastructure should be made (e.g., sanitary infrastructure, heating).	C
	Investments in research on sustainable food packaging	Investments should be made in research on sustainable food packaging.	C
	Subsidies for small-scale sustainable farmers to develop online web shops	Subsidies should be provided for small-scale sustainable farmers to develop online web shops, to make their products more accessible.	S
Sustainable food consumption	Government subsidies for Meals on Wheels	Subsidies should be provided for programmes offering healthy meals to people who cannot make these themselves (e.g. Meals on Wheels).	C
Food loss and waste reduction	Financial support for food donation infrastructure	Financial support should be provided for increasing the efficacy of food donation systems (e.g. operational grants for food distribution NGOs, grants for distribution vehicles).	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. The action the citizens pointed out has to do with increasing the accessibility of food labels.

Theme	Action name	Description	Idea Source [510]
Sustainable food processing, distribution & retail	Regulation on mandatory use of English, Italian and Maltese on food product labels	Development of regulation on mandatory use of English, Italian and Maltese language on food product labels.	C

Just Transition

The costs of switching to sustainable production methods are disproportionally higher for small-scale food producers, than they are for large-scale industrial food production operations. This puts the small-scale producers at a risk of being excluded from the sustainable food system transition unless proper compensatory measures are put in place.

6.19.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[511] in Malta that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the

[510] C – Citizens; S – expert stakeholders
[511] A stakeholder meeting took place on 27 October 2022 involving one national authority, one research and education community member, one asynchronous civil society member.

thematic expert appointed by the European Commission[512]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Malta's policies on the EGD and Citizen and National Stakeholder Reports

Malta adopted its National Climate Change Adaptation Strategy in 2012, but this focused on sectors other than transport. Since then, it has adopted two strategy documents relating to the electrification of the vehicle fleet and in the late 2010s, it set a tentative target of having 5000 EVs running in the country by 2020 – a target which was exceeded in 2021 and now 0.6% of the fleet are battery electric vehicles[513]. Malta is spending EUR 110 million of Recovery Funds[514] on stimulating the uptake of EVs by the public sector and businesses and installing charging infrastructure; replacing polluting public transport vehicles; electrifying one of its ferry services; and implementing more pedestrian facilities and cycling infrastructure, particularly within the framework of the Valletta Sustainable Urban Mobility Plan (SUMP). In addition, free public transport will be extended to more groups of citizens, and there will be periodic awareness-raising campaigns on sustainable transport.

The workshops with citizens and stakeholders showed considerable support for many of the measures being funded through the Recovery Plan, although with some scepticism about the emphasis on EVs. In more detail:

- ***Citizens*** were of the strong opinion that public transport should be improved and reorganised and made accessible and affordable – it is currently uncomfortable, uses old vehicles, is unreliable, cannot access many areas due to limited road widths caused by parked cars, and it gets stuck in traffic. Specialised public transport for disabled and elderly people, and dedicated buses for schools and workplaces, were also discussed. In addition, park and ride was suggested. Citizens also wanted to see safe biking and safe accessible walking infrastructure and more pedestrian areas. They wanted to see more EV charging infrastructure, and possibly incentives to buy EVs, but expressed doubts about affordability, the ability of the electricity grid to cope with demand, the environmental benefits, and ethical and environmental issues around sourcing and disposing of batteries. They wanted to see more encouragement of or even requirements for home working and suggested that companies should be provided with tax incentives for offering their employees alternative sustainable transport options. Education and awareness campaigns about sustainable transport were also supported. Finally, they suggested that the demand or need for the use of private cars should be reduced but gave no further details.

- ***Stakeholders*** did not support citizens' views on EVs, feeling that they are now 'here to stay', but they wanted to see better end-of-life battery disposal. Otherwise, they supported the views expressed by citizens. In addition, they want better coordination between levels of government and improved procurement processes to speed the implementation of plans that are already adopted. They also wanted to see improved maintenance and management of the road network to reduce congestion (which includes clarification of responsibilities between government agencies). They were supportive of a 15-minute city and better walking and cycling infrastructure. They also suggested green travel plans for employers to promote carsharing, flexible working and works buses. They felt that Malta lacks a National Transport Strategy and that this is

[512] Prof Tom Rye, Molde University College, Norway.
[513] European Commission (n.d.). Vehicles and Fleet. Available at: https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/malta/vehicles-and-fleet (Accessed on 1 December 2022).
[514] European Commission (2022), see note 255, page 249.

required to set policies, objectives and measures to deliver more sustainable transport. Finally, at the national level, they wanted to see an increased annual tax on vehicles, related to pollution.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source[515]
Clean vehicles	EV purchase incentives	S
	EV charging infrastructure	S
Better public transport	Improved quality of all aspects of PT	C&S
	Free PT for all users	C
	PT integration	C
Spatial planning and city development	More bike paths	C&S
	15-minute city	C
	Better, safer and more accessible walking infrastructure – space, crossings and shade	C&S
Pricing and charges for transport	Taxation of polluting vehicles	S
	More disincentives to use polluting vehicles e.g. Low Emission Zones	S
	Tax incentives to employers who encourage sustainable transport	
Planning and operation of transport networks	PT network improvement	C&S
	Better road network management to reduce congestion from parking, collisions and obstacles	S
Governance	Collaboration between higher and lower levels of government, clarification of roles	S
	Reformed, simpler procurement legislation	S
	Better capacity to deliver in local and national administrations	S
	Green travel plans for employers	S
Greening transport in general	Education and awareness raising	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, instead, made several points, see in the table below. However, they did not relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or

[515] C – Citizens; S – Expert Stakeholders

specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

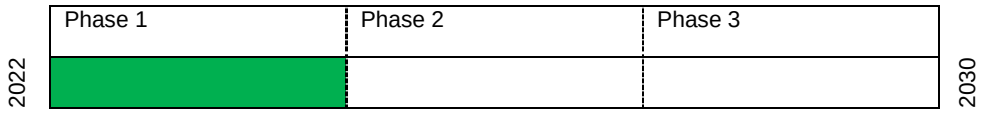
Theme	Action	Idea Source[516]
Governance	EU funding is available through many different channels, each with different funding cycles, rules and so on. This is inefficient and difficult for small administrations in a small island state to apply for.	S
Governance	Procurement is a major barrier for small local authorities in a small island state.	S
Governance	Implementation is a major barrier for small local authorities in a small island state – many lack capacity.	S
Governance	Lack of coordination between local and national level on, for example, agreeing design of new cycling infrastructure.	S
Pricing and charges for transport	Fossil fuel is quite cheap and it is not sensible that governments are now subsidising it.	S
Clean vehicles	Insurance costs are higher for EVs than for old fossil-fuel vehicles.	S
Clean vehicles	They do not perform well in hot climates; a/c consumes much battery life.	S
Clean vehicles	Battery disposal is a problem.	S
Spatial planning and city development	Sidewalks are often narrow, in poor condition, unshaded, and cluttered. Crossings are unsafe.	S
Operation of transport networks	Roads are extremely congested and often impassable for public transport due to parked cars, collisions, refuse collection and so on.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations and businesses, proposed by citizens and stakeholders in Malta. These mainly comprise communication and education activities. All these actions can be implemented straight away.

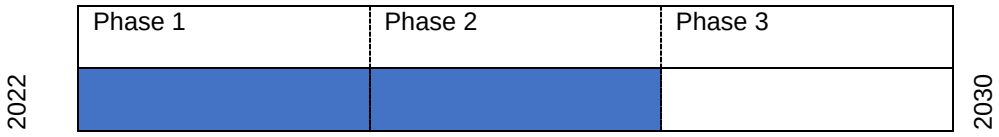
[516] C – Citizens; S – Expert Stakeholders

Theme	Action name	Description	Idea source[517]
Greening transport in general	Education	A strong educational campaign on how green transition can improve health and economic issues should be implemented, and rewards for those who comply must be included.	C&S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source[518]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	EV charging infrastructure	This infrastructure is lacking in Malta at present. Incentives needed for private property owners and local authorities to install these.	S
Better public transport	Improved quality of all aspects of PT	Investing in new, electric and more comfortable public transportation vehicles.	C&S
	Free PT for all users	Free public transport has already been introduced in Malta for residents. This could be publicised better and extended to visitors as some participants were not aware of it.	C&S
Spatial planning and city development	More safer cycling infrastructure	Although there are a few examples in Malta of bicycle infrastructure, these were seen as dangerous and discontinuous. Better cycle paths, protected from traffic, are required if people are to shift to cycling.	S

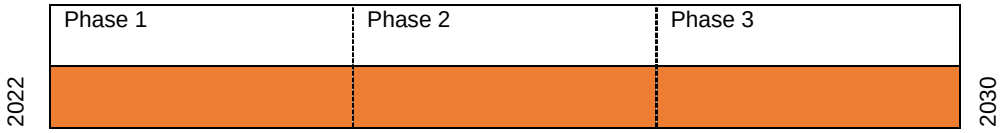
[517] C – Citizens; S – Expert Stakeholders
[518] C – Citizens; S – Expert Stakeholders

	Better, safer more accessible walking infrastructure – space, crossings and shade	The walking infrastructure in Malta at present is greatly lacking, according to participants. The pedestrian has very low priority for road space, and as a road user. Significant improvements are required to make walking comfortable, safe and available to all.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles should be introduced.	S
	More disincentives to use polluting vehicles e.g. Low Emission Zones	Some discussions occurred about the possibility of restraining private vehicle traffic, possibly based on emissions characteristics of vehicles.	S
	Tax incentives to employers who encourage sustainable transport	This idea was not elaborated upon, but there was considerable support for workplace-based efforts to encourage people to use other modes for their commute, and such incentives would encourage employers to adopt such measures.	S
Planning and operation of tspt network	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional and national level.	C&S
Governance	No measures suggested	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many of the proposals from Maltese citizens and experts require policy changes and regulation in order to be implemented. Some of the proposals, depending on the way in which they are developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better coordination at the EU level, which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source[519]
Clean vehicles	No suggestions in this category	/	
Better public transport	PT integration	Better planning and coordination of public transport routes, including ferries.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	C
Pricing and charges for transport	No suggestions in this category	/	
Planning and operation of tspt networks	PT integration	As well as being improved, city and regional bus services should be better linked to each other and to ferries, possibly with a single ticket.	
Governance	Better road network management to reduce congestion from parking, collisions and obstacles	Poor management of the space on the roads was seen as a major cause of congestion. Sometimes this seems to occur because there is a lack of clarity about which administration should be managing different elements of the road space.	S
	Collaboration between higher and lower levels of government, clarification of roles	Related to the point above, and also to the introduction of new cycling and walking infrastructure, agreement between the two levels of government is often required, but difficult to secure.	S
	Reformed, simpler, procurement legislation	Procurement legislation was seen as a barrier to the implementation of the measures needed for the transition to green transport.	S
	Green travel plans at employers and encouragement of working from home	Measures taken by employers, such as bike parking, showers, works buses and subsidies to use alternative modes to get to work, along with encouragement to work from home, were supported by the stakeholders.	S

Just Transition

Whilst citizens did not touch on this issue, stakeholders made several points. Participants pointed out that the mobility transition will come with a financial cost that they argued should be taken on by profit-making companies, not citizens. On the other hand, there is a need to communicate clearly the economic implications of the transition to citizens, how the burdens will be shared, and what compensation will be available.

[519] C – Citizens; S – Expert Stakeholders

There needs to be support and training for transitioning to the new electric vehicle economy. For example, most car mechanics are not trained to maintain electric vehicles, so training needs to be organised, and new equipment should be made affordable.

There should be a better balance in Malta between pedestrians and cars. Pedestrians and cyclists have very low priority on the road, and the share of public space used for cars is very high. Walking with a pushchair or wheelchair is not possible in Malta, given the current distribution and use of space between cars and pedestrians. Given the very poor quality, unreliability and low speed of public transport, there are no viable transport options other than the private car, particularly for those living in peri-urban and rural areas and the elderly population of Malta; however, these are also the people who are particularly at risk of exclusion in the green transition.

6.19.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[520] in Malta that in their view can support the achievement of the EU's Green Deal. The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the Green Deal that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Malta's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and one national stakeholder in Malta in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[521], was not available for Malta. As a result, the following table compares the priorities of the EGD with Malta's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP, Malta's Integrated NECP[522] and Malta's Long Term Renovation Strategy (LTRS)[523].

Increasing renewable energy in buildings	At a 11.5% share, Malta's level of ambition for renewable energy is unambitious.
Improving energy efficiency in buildings	For energy efficiency the contribution to the EU target is set in terms of primary energy intensity that should be reduced to 0.07 toe/ EUR in 2030. The review from the Commission staff reports this to be of very low ambition.
Tax system for energy products aligned to the green transition	Malta's LTRS outlines cash grants in the form of a tax credit for renovation projects.

[520] A survey was conducted and involved one member from the academia.
[521] Ivanova, V. et al. (2021), see note 30, page 61.
[522] European Commission (n.d.), see note 128, page 165.
[523] European Commission (n.d.), see note 129, page 165.

Provide funding for renovation of buildings	Malta's plan contains a full section on projected investment needs, expenditures and funding sources, however a detailed list of energy subsidies and actions – both undertaken and planned – to phase them out, in particular for fossil fuels, is not included in the final plan. Malta's LTRS outlines subsidies available for Glazing, Roof, PV, Solar, Water Heater and Heat Pumps. The grant generally covers a share of 40-50% of the investment cost. There are also free PV systems for voluntary organisations, grants for energy efficiency measures for the hospitality sector coupled with benchmarks and grants for energy efficiency measures of sports clubs.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.6% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 1.9% medium, and 0.4% deep energy savings[524].
Create world-leading companies	There are no quantified objectives and funding targets for research, innovation and competitiveness in the NECP, but future plans are in development. There is some mention of education and training programmes for professionals.
Raise global ambition to tackle climate change	Energy awareness campaigns are mentioned but in the context of better quality recycling, and educating those who live in energy poverty. Campaigns are also planned to entice households to invest in energy efficiency technologies along with the benefits of such measures.
Improve health and well-being	The final plan quantifies the air quality impacts of implementing the planned policies on air pollutants.
Address inequality and energy poverty	Malta reports a low number of households in energy poverty, significantly below the EU average.
Ensure a Just Transition that is fair, competitive, and green	The issue of a Just Transition has been integrated in the impact assessment of 22 policies and measures. This assessment focuses on several criteria, such as the policies' economic impact, technical constraints, social acceptability, legal and regulatory barriers and impact on quality of life.
Mobilising industry for a clean and circular economy	The transition to a circular economy is mentioned together with agriculture and waste management. However, concrete measures have not been described.

There was only one national stakeholder participating for Malta and they filled out the information via questionnaire; there was no group discussion or interview held.

[524] European Commission (2019), see note 31, page 61.

Increasing renewable energy in buildings: Citizens mentioned that public infrastructure should be utilised for micro-generation technologies. Other suggestions included solar canopies at bus stations, schemes for renting roof space for solar panels or street furniture to give energy back to the community. They also mentioned the need for a common EU policy to be established on renewable energy policy use.

Improving energy efficiency in buildings: Citizens mentioned that retrofitting old buildings is expensive and energy efficient solutions in general are expensive. Monetary incentives might not be enough for building owners and tenants to adopt renovation measures. The national stakeholder mentioned that there is greater traction for the green transition because of increasing energy prices, however, if prices drop in the future, will there still be the same willingness to engage. Efforts should be made to ensure this does not happen.

Citizens mentioned that ownership laws of buildings may prevent tenants adopting more sustainable solutions. The national stakeholder was of the opinion that private buildings needed defined benchmarks for energy rating and that rented properties must adhere to these benchmarks and be given e.g. two years to comply. To aid this, attractive incentives should be given to property owners beyond the minimum standard.

Citizens mentioned the need to re-establish urban planning needs, with clear and transparent guidelines and regulations.

Tax system for energy products aligned to the green transition: Citizens suggested that there should be tax breaks for individuals adopting energy renovation solutions.

Provide funding for renovation of buildings: The national stakeholder mentioned that current programmes for renovation are unfocused and sporadic and that there is no monitoring carried out to ensure they are achieving the impact they set out to achieve. This contradicts Malta's LTRS which outlines that financial incentive schemes have contributed to 74% of cumulative end use energy savings in the period 2014 to 2020, confirming their effectiveness.

The national stakeholder also mentioned there are plans to create a one-stop-shop functionality that would support citizens and provide technical know-how to energy and construction professionals carrying out energy efficiency projects. This is a positive move and could address the previous barrier identified.

Renovate at least 3% of the total floor area of public buildings annually: The national stakeholder mentioned there are multiple ministries working on the green transition, but their unity is not apparent. The public sector is currently not leading the way and is not meeting the goals set out by the Energy Performance of Buildings Directive (EPBD) for new buildings and for renovation of existing buildings there is insufficient effort to show the outcome of the renovation and lead by example. More could be done here.

Create world-leading companies: The national stakeholder mentioned that Malta does not currently have the skilled workforce to deliver the green transition and training programmes to improve its workforce capacity are urgently needed. Citizens mentioned that more R&D funding should be provided and there was a perception that R&D funding mainly goes to solar technology and not enough to other technologies in tidal or wind technologies. In general, both agreed that more training, education and investment is needed to improve the skilled workforce.

Citizens mentioned that policies are required to ensure energy efficiency construction and renovation is of good quality. The national stakeholder was of the view that there are a few high-powered businesses that have control over the Building Construction Industry and any new initiatives that might have a negative impact on their business is difficult to establish. There was no evidence provided to confirm this viewpoint.

Raise global ambition to tackle climate change: Citizens mentioned there should be more educational campaigns to learn how to contribute to energy efficient buildings.

Improve health and well-being: The national stakeholder mentioned that Malta has no standards or regulations regarding indoor comfort and indoor air quality, and while COVID-19 brought awareness around the importance of indoor air quality it has quickly been forgotten. There is an opportunity to highlight the positive impacts of renovation on indoor air quality and thermal comfort of buildings.

Mobilising industry for a clean and circular economy: The national stakeholder was concerned regarding the consequence of using certain materials for the green transition, which could have a potentially negative impact, for example, higher excavations for finding lithium for batteries and the effects they will produce on the environment.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There were no actions specifically outlined by the national stakeholder. As such, all suggested actions have come directly from the citizens workshops and the questionnaire filled out by the national stakeholder and interpreted by the Expert. Despite the fact there was no roadmap specifically created, there are actions suggested across most of the topics of the EGD.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Utilise public infrastructure for micro-generation Schemes for renting roof space for solar panels
Improving energy efficiency in buildings	Ensure compliance with the EPBD Defined benchmarks for energy rating of rented buildings
Tax system for energy products aligned to the green transition	Create tax breaks for individuals adopting energy renovation solutions Tax breaks for those achieving low energy certification for their building
Provide funding for renovation of buildings	Holistic subsidies for renovation Accelerate the one-stop-shop programme
Renovate at least 3% of the total floor area of public buildings annually	Cross-collaboration and networking between ministries
Create world-leading companies	Increase the investment in R&D funding Training and education for energy and construction professionals
Raise global ambition to tackle climate	Educational and awareness-raising campaigns

change	
Improve health and well-being	Awareness-raising campaigns concerning the positive impacts of renovation on health and well-being
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	Investigate policies to ensure there are no negative environmental impacts as a result of renovation

Barriers to each theme

As a result of the discussions with both citizens and the national stakeholders following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and national stakeholder groupings:

Theme	Barrier	Idea Source[525]
Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	Retrofitting old business is expensive and retrofit is expensive in general. Monetary incentives might not be enough for building owners and tenants to adopt renovation measures.	C
	Ownership laws of buildings may stop use of sustainable solutions, i.e. owner/tenant.	C
	Political will is insufficient to drive the green deal, and action plans are needed. For example, the long-term renovation strategy has no public action plan linked to it.	S
	Quite often, energy efficiency measures are not measurable, and it is hard for people to visualise the benefits	S
	The solutions installed are not tailor-made to the situation, for example, adding solar water heating to a school where the demand for hot water is minimal or changing bulbs from compact fluorescent lights to fancy LEDs when the main consumption is for hot water in homes.	S
	Long-term operation and maintenance of the installed solutions is not considered.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Incentive schemes support the energy efficiency products but not the preparatory and finishing works required to install that product, e.g., for roof and wall insulation or solar water heating.	S
Renovate at least 3% of the total floor area of public buildings annually	Quite often, energy renovation in public buildings is not a priority. There is no consistent plan to achieve near-zero energy status over an agreed timeframe.	S
Create world-leading	No barriers mentioned	/

[525] C – Citizens; S – expert stakeholders

companies		
Raise global ambition to tackle climate change	No barriers mentioned	/
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. These focused on improving and accelerating existing mechanisms further, education and training programmes and cross-collaboration between public bodies.

Theme	Action name	Description	Idea Source[526]
Increasing renewable energy in buildings	Utilise public infrastructure for micro-generation	Enable, for example, solar canopies at bus stations or street furniture to give energy back to the community.	C
Improving energy efficiency in buildings	Ensure compliance with the EPBD	Introduce stricter rules to ensure the EPBD is being complied with.	S
Provide funding for renovation of buildings	Holistic subsidies for renovation	It is better to have more subsidies to provide a holistic support measure to fewer beneficiaries rather than superficial subsidies to reach more beneficiaries.	S
	Accelerate the one-stop-shop programme	Accelerate the one-stop-shop approach to remove barriers with unfocused and sporadic renovation programmes.	S

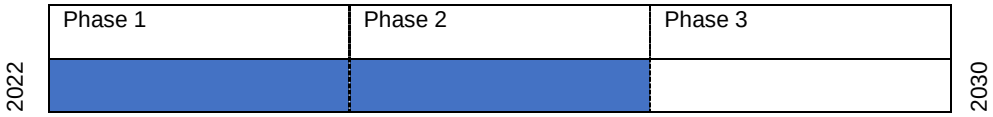
[526] C – Citizens; S – expert stakeholders

Renovate at least 3% of the total floor area of public buildings annually	Cross-collaboration and networking between ministries	Increase the unity across ministries working on the green transition.	S
Create world-leading companies	Increase the investment in R&D funding	Investment in R&D funding for all renewable energy technologies without favouring one over another.	C
	Training and education for energy and construction professionals	Create advanced training programmes for energy and construction professionals to attract workers into this space and ensure long-term availability of such professionals.	S
Raise global ambition to tackle climate change	Educational and awareness raising campaigns	More educational campaigns to learn how to contribute to energy efficient buildings.	C
Improve health and well-being	Awareness raising campaigns concerning the positive impacts of renovation on health and well-being	Create education and awareness around the positive impacts of renovation on health and well-being of homes.	S
Mobilising industry for a clean and circular economy	Investigate policies to ensure there are no negative environmental impacts as a result of renovation	Ensure that renovation does not have negative consequences on the environment.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



<u>Main instruments of implementation: education and awareness, energy audits, and workforce upskilling</u>

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. These focus on suggestions for tax breaks, introducing defined benchmarks for compliance of property owners and policies to enable increased solar production.

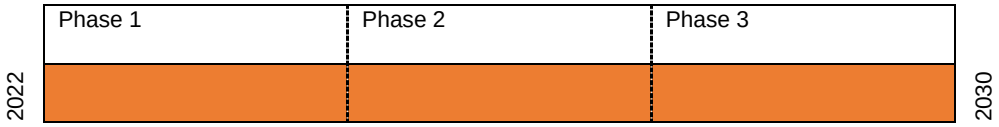
Theme	Action name	Description	Idea Source[527]
Increasing renewable energy in buildings	Schemes for renting roof space for solar panels	Create policies to enable renting of roof space for solar panels for those who cannot avail of solar technology due to the orientation of their own home or building	C
Improving energy efficiency in buildings	Defined benchmarks for energy rating of rented buildings	Create defined benchmarks for the energy rating of rented buildings that property owners must comply to. Give them adequate time to respond and increased incentives if they go beyond the minimum standard.	S
Tax system for energy products aligned to the green transition	Create tax breaks for individuals adopting energy renovation solutions	Those looking to invest in renovation should be able to avail of tax breaks as a result of the cost of the renovation.	C
	Tax breaks for those achieving low energy certification for their building	Introduce tax breaks for buildings that perform to a higher standard than others.	C

Actions requiring changes in regulations that will take longer to implement

There were no actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Just Transition

There was no discussion held by the national stakeholder on the Just Transition.

[527] C – Citizens; S – expert stakeholders

6.20 Netherlands

6.20.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in the Netherlands[528] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[529]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Netherlands' policies on the EGD and Citizen and National Stakeholder Reports

The following policies were pointed out by the participants of the stakeholder meeting in the Netherlands. These are incomplete but serve as an indication of the policies most visible to the stakeholders.

- The Common Agricultural Policy (CAP) was pointed out as a central policy affecting the food system in the Netherlands. From a national point of view, the existing policy is also seen as too limited as it does not address the need for a more sustainable agricultural system.

- At the local level, there are a few initiatives that the stakeholders pointed out. For instance, in Amsterdam, there is some policy on protein transition and the use of organic fertilisers.

Additionally, the overview of the national R&I food investment landscape carried out by the European Commission points to the following strategy as a key piece of food policy in the Netherlands.

- *Vision for 2025 on agriculture, nature and food* (Ministry of Agriculture, Nature and Food Quality, 2018)[530] - Strategy published in 2018 outlining the Netherlands' strategy for a transition to circular agriculture with food safety and quality as baseline conditions.

General overview of actions per theme

The actions proposed by the Dutch citizens and stakeholders on transforming the current food system in the Netherlands consist of seven categories, aiming at addressing specific

[528] A stakeholder meeting took place on 13 September 2022 and involved one national authority and two local authorities.
[529] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[530] Ministry of Agriculture, Nature and Food Quality, Government of the Netherlands (2018). Vision for 2025 on agriculture, nature and food. Available at: https://www.government.nl/ministries/ministry-of-agriculture-nature-and-food-quality/vision-anf (Accessed on 10 November 2022).

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components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food processing, distribution and retail. Finally, the proposed measures mainly focus on implementation tools such as regulative frameworks and legislation.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production (6)	Simplifying conditions for sustainable food production financing
	Increasing the compensations of farmers and food producers
	Incentives for local food production
	Technical support for small-scale, sustainable farmers
	Legislation restricting the use of antibiotics in food production
	Legislation restricting the use of pesticides in food production
Sustainable food processing, distribution & retail (9)	Making specialised shelves for local products in supermarkets
	Enlarging the letter size of food labels
	Price structuring to reflect the origin of food products
	Price structuring reflecting the environmental impact of products
	Further standardisation of food labels with other EU member states
	Making the environmental impact and costs more transparent on food labelling
	New regulation on excessive food packaging
	Regulation on single packaging alternatives
	Regulation on ingredients of processed foods
Sustainable food consumption (6)	Awareness campaigns making citizens more knowledgeable about the importance of consuming sustainable food
	Education on the adverse health and sustainability effects of eating meat
	Awareness campaigns on the need for a shift to a plant-based protein diet
	Awareness campaigns on decreasing the strain on natural resources in food production.
	Making local food products more distinguishable in markets
	Practical education on food consumption
Food loss and waste reduction (4)	Changing the cultural norms around food leftovers
	Legislation to make tap water more freely available in the hospitality industry
	Implementation of legislative proposals on food waste in Europe
	More flexible regulations on best-before dates

Ensuring food security (0)	
Combating food fraud (1)	Regulation clearly defining the characteristics of sustainable products
Across the entire food cycle (5)	Awareness campaigns on how the food system works as a whole
	Education on the origin of food products and the food production process to be introduced into schools
	Review the existing trade agreements
	Use of trade agreements as a point of leverage to implement the successful food system transformation solutions
	Regulation obliging large companies to encourage sustainable and healthy lifestyles

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Action	Idea Source[531]
Sustainable food production	Existing regulations in food production are often not implemented due to a lack of knowledge (e.g. regulation on using insects as animal protein feed).	S
	The supermarket competition on pricing puts small-scale and sustainable food producers in a disadvantaged position, considering the concentration of supermarket chains.	C
	Grants within food production often depend on the profitability of the business, which is a condition difficult to achieve for small-scale sustainable food producers. Funding for sustainable start-ups needs to be simplified.	S
Sustainable food processing, distribution & retail	Control mechanisms for food label claims are not implemented on the Dutch or EU level.	C
	The existing food labels are too complex to understand for consumers and not standardised at EU level.	C
	Some food labels (like the EU bio label) are complicated for producers to obtain (there can be a three-year gap between request and implementation).	C
	Supermarkets are stifling the transition to sustainable food products by maintaining low prices of unsustainable products, often imported from considerable distances, and keeping sustainable product prices high.	S
	Small-scale food businesses are facing disproportionally high distribution prices in the Netherlands, especially considering the low number of large-scale distribution centres across the country, which dictate the business conditions.	S
Across the entire food cycle	Prioritisation of the different components of the food system changes depends on the election cycle, both on a local and national level	S

[531] C – Citizens; S – expert stakeholders

	Current legislation on food in the Netherlands stifles innovation.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can primarily be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in the Netherlands. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All these actions can be implemented straight away. Some, such as awareness campaigns on sustainable food consumption, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as making local food products more available to consumers, may be more difficult to implement successfully but can produce knock-on effects in changing consumption patterns.

Theme	Action name	Description	Idea Source [532]
Sustainable food production	Simplifying conditions for sustainable food production financing	The government and sustainable food producers should negotiate more accessible funding for sustainable food production with banks in the Netherlands.	C
Sustainable food processing, distribution & retail	Making specialised shelves for local products in supermarkets	Each supermarket should have a specialised shelf showcasing locally produced food (examples of this already exist in Almere).	C
	Enlarging the letter size of food labels and making them more visible	Food labels should become more visible and accessible, mainly through the increase in font sizes and higher contrast.	C
Sustainable food consumption	Awareness campaigns making citizens more knowledgeable about the importance of consuming	Awareness campaigns should be organised to promote the consumption of sustainably produced food products.	C

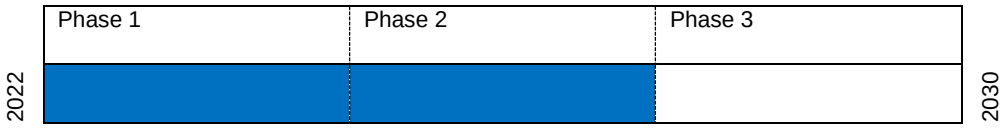
[532] C – Citizens; S – expert stakeholders

	sustainable food		
	Education on the adverse health and sustainability effects of eating meat	School education should include red meat consumption's adverse health and environmental effects.	C
	Awareness campaigns on the need for a shift to a plant-based protein diet	Awareness campaigns should be organised on the need to transition from animal- to plant-based protein.	C
	Awareness campaigns on decreasing consumption of natural resources in food production	Awareness campaigns should be organised to reduce the strain on natural resources (like soil and water) in food production.	C
	Practical education on food consumption	Education for all generations on food products sources, through school gardens, visits to farmers, waste plants etc.	C
	Making local food products more distinguishable in markets	Supermarkets should make it clear to consumers where local products come from (e.g. through maps showing locations of farms sourcing food products on the shelves).	C
Food loss and waste reduction	Changing the cultural norms around food leftovers	Restaurants and catering companies should work on the promotion of taking food leftovers home.	C
Across the entire food cycle	Awareness campaigns on how the food system works as a whole	Awareness campaigns should be organised explaining how the food system in the Netherlands functions. These campaigns should acknowledge the diversity of backgrounds of the people in the Netherlands.	C
	Education on the origin of food products and the food production process to be introduced into schools	School curricula should include lessons on the food systems, giving insight into the environmental impacts of food products (e.g. from transport, industrial production) as well as how to interpret food labels and sustainability claims.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mainly affect increasing the sustainability of food production through subsidies for farmers and local food

producers, as well as technical support for sustainable food production. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [533]
Sustainable food production	Increasing the compensations of farmers and food producers	Farmers and food producers should be compensated more fairly for their work, including special incentives for sustainable producers.	C
	Incentives for local food production	Neighbourhood initiatives to produce food locally (e.g. through community gardens and park orchards) should be incentivised. Furthermore, underused public spaces like roofs, vertical spaces and courtyards should be used to grow food.	C
	Technical support for small-scale, sustainable farmers	Small-scale farmers should receive technical support in accessing grants and loans, diversifying their crops, placing their produce on the market, and finding alternatives to single-use packaging.	C&S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the most extended implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation: new regulatory frameworks

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include regulation of sustainable food production, price structuring, labels on food products, and use of trade agreements in food system transformation to affect changes beyond the Dutch context.

Theme	Action name	Description	Idea Source [534]
Sustainable food production	Legislation restricting the use of antibiotics in food production	Legislation should be introduced, further limiting the use of antibiotics in food production.	C

[533] C – Citizens; S – expert stakeholders
[534] C – Citizens; S – expert stakeholders

	Legislation restricting the use of pesticides in food production	Legislation should be introduced, further limiting the use of pesticides in food production.	C
Sustainable food processing, distribution & retail	Price structuring to reflect the origin of food products	Supermarket prices should be regulated to reflect the origin of products in a way where local products have lower VAT, while products imported from more considerable distances have higher VAT.	C
	Price structuring reflecting the environmental impact of products	Prices of food products should reflect the environmental impact of products (e.g. through the introduction of a meat tax).	C
	Further standardisation of food labels with other EU Member States	There should be a further standardisation of food labels across the EU (e.g. authentic local origin labels).	C
	Making the environmental impact and costs more transparent on food labelling	Food labelling should make clear the environmental impact of the food products.	C&S
	New regulation on excessive food packaging	Strict regulations should be placed on the excessive use of packaging. Food deposit systems should be standardised and expanded.	C
	Regulation on single packaging alternatives	Regulation should be introduced, obliging supermarkets to provide packaging-free products for customers who bring reusable packaging.	C
	Regulation on ingredients of processed foods	Stricter regulations need to be introduced on processed foods' salt, sugar, and fat content.	C
Food loss and waste reduction	Legislation to make tap water more freely available in the hospitality industry	Legislation making tap water freely accessible across the hospitality industry needs to be expanded (e.g., in cafes, bars, restaurants and others).	S
	Implementation of legislative proposals on food waste in Europe	Food waste legislation should be further developed.	C
	More flexible regulations on best-before dates	Regulations on how best-before dates are used on food products should be more flexible to avoid wasting good food.	C
Combating food fraud	Regulation clearly defining the characteristics of sustainable products	Legislation clearly defining the criteria for sustainability labels needs to be developed.	C
Across the entire food cycle	Review the existing trade agreements	The existing trade agreements should be reviewed to make sure there is a level playing field when it comes to sustainable food production.	C
	Use of trade agreements as a point of leverage to implement the successful food system transformation solutions	Trade agreements should be used more proactively as a leverage point to get other countries to implement successful food system transformation solutions.	C

	Regulation obliging large companies to encourage sustainable and healthy lifestyles	Legislation should be introduced obliging large companies to encourage sustainable and healthy lifestyles.	C

Just Transition

The local farmers who take up sustainable food production are at risk of losing access to the market because of the unfair competition from supermarket chains that can import cheaper, less sustainably produced food products. Without legislation preventing this kind of practice (e.g. obliging supermarkets to sell a percentage of their produce from local sources), local and small-scale farmers are threatened with being excluded from the market.

The distribution centres in the Netherlands hold significant power in setting the price for produce transport, with considerable ability to undercut small food businesses, which are in a weak negotiating position compared to large companies. If the monopolistic position of logistics centres is not addressed, this might result in food system transformation being exclusive to large-scale producers and distributors.

The risk of higher prices of sustainable and healthy food products will disproportionally impact the socio-economically vulnerable groups. Compensating measures need to be introduced to combat this effect.

6.20.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Netherlands[535] that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[536]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Netherlands' policies on the EGD and Citizen and National Stakeholder Reports

The Netherlands has in the recent past, introduced several policies to reduce emissions from the transport sector. These are summarised in various documents: the National Climate Agreement[537], the National Mobility Vision[538], and the National Public Transport

[535] A stakeholder meeting took place on 27 November 2022 with two research and education community members.
[536] Prof Tom Rye, Molde University College, Norway.
[537] Government of the Netherlands (2019). Climate Agreement. Available at: https://www.government.nl/documents/reports/2019/06/28/climate-agreement (Accessed on 1 December 2022).

Strategy[539], for example. A significant change in policy took place in 2019 when for the first time, the annual national transport infrastructure budget was allowed to be used to manage demand for transport, and not only to construct or replace transport infrastructure. The national roads agency has a target to make all national road construction, maintenance, and operations (excluding users) carbon neutral by 2030[540]. The Netherlands already has the highest market penetration of EVs in the EU due to purchase incentives, early investment in a network of charging stations, and relatively short travel distances and high incomes, but it plans to increase this over the next seven years[541]. In addition, it has been investing in greater use of biofuels. The Netherlands is spending several hundred million euro of Recovery Funds on electrifying inland waterway vessels, digitalising and better connecting the railway network: and increasing the number of charging stations across the country[542].

The workshops with citizens and stakeholders revealed that they supported elements of the government's policy, but also questioned the focus on vehicles, particularly EVs, and wanted to see more emphasis on accessibility rather than mobility. They were also willing to see higher prices for air travel and to reduce car ownership, something that does not figure in national policy. In more detail:

- ***Citizens*** were strongly of the opinion that public transport should be improved, reorganised and made accessible and affordable in both urban and rural areas (they were concerned about the exclusion of rural residents in a green transport transition). They felt that it is unreliable and especially for rural areas poorly connected, and not integrated enough with shared mobility modes. They suggested Demand Responsive Transport for rural areas. They suggested a more locally based life, with facilities in the neighbourhood, and homeworking. Employers have a role – more flexible working (times, locations) can reduce travel demand.

  Citizens also felt that international train travel is difficult to get information and tickets for, and that it is often too expensive, but they said that if these factors were changed, they would be willing to reduce international air travel. In any case, they felt that taxation on airlines should be increased, and short distance flights should be banned. They expressed some scepticism about EVs – particularly the environmental friendliness of batteries, whether the electricity network can cope with demand, and the affordability of EV use as electricity prices rise.

- ***Stakeholders*** did not provide suggestions about specific measures to reduce carbon emissions from transport. A point they highlighted several times was the focus on

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[538] Government of the Netherlands (2019). Public Transport in 2040. Outlines of a vision for the future. Available at: Public Transport in 2040 - Government.nlhttps://www.government.nl › reports › 2019/05/13 (Accessed on 1 December 2022).
[539] Government of the Netherlands (2019). Schets Mobiliteit naar 2040: veilig, robuust en duurzaam. Available at: https://www.rijksoverheid.nl/documenten/rapporten/2019/06/07/schets-mobiliteit-naar-2040 (Accessed on 1 December 2022).
[540] Ministry of Infrastructure and Water Management (2020). Guidelines for making MIRT more sustainable. Documents available at: https://leerplatformmirt.nl/over-mirt/handreikingen/handreikingen-verduurzaming-mirt/ (Accessed on 1 December 2022).
[541] European Parliament (2021). Climate Action in the Netherlands. Latest state of play. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/696184/EPRS_BRI(2021)696184_EN.pdf (Accessed on 1 December 2022).
[542] European Commission (2022). Het Nederlandse Herstel- en Veerkrachtplan. Available at: https://open.overheid.nl/repository/ronl-abc474ae7a39fe82e5f6f276ab663739cdb56902/1/pdf/73962_FIN_Nederlands%20Herstel-%20en%20Veerkrachtplan_PDFA_TG.pdf (Accessed on 1 December 2022).

vehicles and mobility in EGD and related national documents on reducing emissions. They believed this to be wrong since it says nothing about reducing travel demand. Instead, they wanted to see a focus on accessibility of the goods, activities and services that people need. They commented much more on the barriers to the implementation of the EGD, and the Just Transition (see Sections 4 and 6 of this report).

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source**[543]
Clean vehicles	Energy needs planning	C
Better public transport	Better PT vehicles	C&S
	Cheaper international PT	C
	Better international PT connections	C
	PT integration, with other PT and with shared mobility	C
Spatial planning and city development	Live, work, shop locally	C
	Focus on accessibility (reduce need to travel)	S
Pricing and charges for transport	Taxation of flights	C
	Ban short distance flights	C
Planning and operation of transport networks	PT network improvement, especially rural areas	C
	Bike share schemes should be useable by families with small kids	C
Governance	Promotion of sustainable urban mobility plans (SUMPs)	S
	Employers required to offer home- and flexible working	C
Greening transport in general	*No suggestions in this category*	

Barriers to EGD implementation

Citizens mentioned barriers to EGD implementation related to poor international rail services, and EVs. Stakeholders made several additional points. These in the main do not, though, relate directly to the implementation of mobility-related aspects of the Green Deal (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart

[543] C – Citizens; S – expert stakeholders

Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Barrier	Idea Source[544]
Governance	EGD focuses too much on vehicle transport and too little on accessibility, liveability, and fairness. The EU has weak goals towards the car industry and there are always two approaches to regulations: strict when the auto industry is not so affected and slack when it is.	S
Governance	Relationship between cities and the national government on mobility is quite problematic because the government usually focuses on traffic flow and economic growth, whereas the cities focus on the quality of life and safety.	S
Governance	Insufficient sustainability measures have been implemented in the aviation and maritime sectors and a major issue will be how equity and strict climate policy can be combined for these sectors.	S
Governance	Port-related large fossil fuel lobby in the Netherlands and policies in favour of keeping Schiphol airport large, along with cheap flights and far too expensive public transport.	S
	Reducing the number of kilometres driven by fossil fuels vehicles is key to achieve a green transition, but not the current focus of policy.	S
	The low occupancy rate of cars (currently 1.38 people per car) and the load factor of trucks (48%) are seen as a huge waste and very critical points to be improved.	S
Governance	Privatisation of the rail system	S
Governance	Various investments in road infrastructure work against EGD goals.	S
Clean vehicles	Battery disposal and recycling, high cost of electricity	C
Better public transport	International links are poor, buying tickets and getting information is difficult, tickets expensive	C

[544] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

Instruments of implementation: communication and education

No actions were suggested in this category.

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.

Instruments of implementation: subsidies, investments, and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the column 'action name'.

Theme	Action name	Description	Idea source [545]
Clean vehicles	No measures suggested		
Better public transport	Better PT vehicles	Investing in new, electric, and more comfortable public transportation vehicles.	C&S
	Better international PT connections	International public transport connections are insufficient at present.	C
	Cheaper international PT	International rail travel should be easier to access and cheaper.	
Spatial planning, city developmen t	No measures suggested		

[545] C – Citizens; S – expert stakeholders

Pricing and charges for transport	Taxation of flights	Higher taxation of flights/airlines and banning of short distance flights.	C
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional, and national level.	C
	Bike share schemes for all	Should be usable by families with small kids – trailers, seats, kids' bikes.	C
Governance	No measures suggested		

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from the Netherlands' citizens and experts require policy changes and regulations to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [546]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles.	C
Better public transport	PT integration	Better planning and coordination of public transport routes, inclusion of DRT, integration with cycling and shared mobility.	C
Spatial planning and city developme nt	Live, work, shop locally	All the most critical services and infrastructure should be accessible in minutes over short distances by walking, cycling and/or public transport; increase densities.	C&S
	Focus on accessibility (reduce the need to travel)		

[546] C – Citizens; S – expert stakeholders

Pricing and charges for transport	Ban short-distance flights	Eliminate short flights – how short was not specified.	C
Planning and operation of tspt networks	No suggestions in this category		
Governance	Promotion of sustainable urban mobility plans (SUMPs)	At the regional level, cooperation between municipalities in implementing sustainable urban mobility plans (SUMPs) (for example, the development of bicycle infrastructure connecting municipalities).	S
	Employers required to offer home- and flexible working	Employers have a role in transport and congestion, by setting or relaxing start and finishing times, and by how much homeworking they permit. They should be more flexible.	C

Just Transition

Citizens touched on the Just Transition when they mentioned poor rural public transport and the risk that this could leave people isolated. The stakeholders were also concerned about the Just Transition: they felt that policies for emissions reduction in transport must be accompanied directly by equity impact analysis and mitigation. This would ensure that new sustainable options (e.g. shared mobility systems in cities, EVs) do not benefit only wealthy people who do not need them, while many lower-income groups are under-serviced. Accessibility instead of mobility should be considered the key policy indicator to assist in this impact assessment.

6.20.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in the Netherlands[547] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[548]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[547] A stakeholder meeting took place on 13 September 2022 involving one National government authority and one Research and Education Community member.
[548] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.

Summary of Netherlands' policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in the Netherlands in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[549], was not available for Netherlands. As a result, the following table compares the priorities of the EGD with Netherlands' national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP, the Netherlands' Integrated NECP[550] and the Netherlands' Long-Term Renovation Strategy (LTRS)[551].

Increasing renewable energy in buildings	The Netherlands' renewable energy contribution to the EU 2030 target is 27% of gross final energy consumption in 2030. The Netherlands has a strong ambition to become a leader in the deployment of hydrogen and expresses it in the target to install electrolyser capacity of 3-4 GW in 2030. The LTRS offers a VAT refund on solar panels to encourage their adoption.
Improving energy efficiency in buildings	On energy efficiency, the Netherlands' contribution to the EU target amounts to 46.6 Mtoe of primary energy consumption, which translates into 43.9 Mtoe of final energy consumption. The NECP fails to explain how the Netherlands will apply the 'energy efficiency first' principle. National objectives and funding targets related to research, innovation and competitiveness are very well aligned and consistent with the climate and energy objectives, such as increasing renewables production, reducing CO2 emissions or increasing renewable hydrogen generation.
Tax system for energy products aligned to the green transition	The NECP mentions a tax deduction of max 45% of the investment costs for investments that provide energy savings. The LTRS also proposes an increase for tax on gas and a reduction of tax on electricity as well as a reduced VAT rate for insulation and glazing from 21% to 6%.

[549] Ivanova, V. et al. (2021), see note 30, page 61.
[550] European Commission (n.d.), see note 128, page 165.
[551] European Commission (n.d.), see note 129, page 165.

Provide funding for renovation of buildings	The overall amount of private and public investment needs for 2019-2030 is estimated at €75bn (approx. 10% of GDP). There is a focus in the LTRS on rented buildings and enabling property owners to renovate their building. As such, funding for property owners has been provided to help make rented dwellings gas free and further funding for insulation and other sustainability measures is available. The Netherlands is also looking into a Performance Contract Menu which enables a performance contract for the management and upkeep of building-related installations of whole buildings. Other measures in the LTRS include a heating fund (€900m total funding) for homeowners with a max limit of €25,000 per home; the Renovation Fund Accelerator (€130m until 2024) for association housing to implement heat pumps and insulation; gas-free district programmes (€4m per test bed); €100m for sustainable installations such as heat pumps.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.8% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 2.2% medium, and 0.3% deep energy savings[552].
Create world-leading companies	There is €240m per year available for energy-related innovation. Measures in the areas of employment and skills are currently being prepared with the social partners or broader stakeholder involvement in relation to employment. The LTRS also reference training programmes to increase the skills of construction and energy professionals.
Raise global ambition to tackle climate change	The importance of citizens in achieving the green transition is mentioned in the NECP, with an acknowledgement of the need to create awareness among citizens and their personal role in achieving the transition. The plans include a public campaign and a network approach to encourage behavioural change. Furthermore, according to the LTRS, a digital platform is being developed to help homeowners on their journey towards making their home sustainable. This platform gives information on sustainability measures, savings effects, possibilities for subsidies and financing and the right level of insulation in order to prepare for living without gas.
Improve health and well-being	The plan provides information on the interactions with the air quality and air emissions policy. The Netherlands also has a Clean Air Agreement, which strives for a downward trend in emissions to the air in all sectors to achieve health gains of 50% by 2030 from emissions originating from Dutch sources compared with 2016.

[552] European Commission (2019), see note 31, page 61.

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Address inequality and energy poverty	The Netherlands reports low numbers of consumers affected by energy poverty and therefore does not consider that there is a need for a specific policy. However, there is support for households with a lower income as well as a scheme that prevents people who cannot pay their energy bill (or pay it on time) from being disconnected. In addition, there are plans for a housing cost-neutral approach to the transformation: after renovation tenants must not be worse off on balance than before. For homeowners, the goal is for monthly costs of servicing the energy-saving loan not to exceed the associated savings in energy costs[553].
Ensure a Just Transition that is fair, competitive, and green	The final plan considers the just and fair transition aspects and provides information on the social, employment and skills impacts of a transition to a climate-neutral economy.
Mobilising industry for a clean and circular economy	The plan fully integrates circularity and quantifies the GHG emissions reduction of the circular economy. It also includes specific targets on raw material reduction and circularity in industry with a goal of reducing primary material use by 50% in 2030.

Increasing renewable energy in buildings: Citizens cited an issue with solar panels in that they are providing more energy than the buildings need and hence are distorting the system. There also needs to be stricter regulations around solar panels to ensure they are good quality. They also cited the need for community energy schemes.

Improving energy efficiency in buildings: Citizens mentioned that renters cannot influence the energy efficiency of their own home, and this is a barrier to meeting the EGD goals. While the NECP and LTRS focussing heavily on enabling property owners to renovate, the national stakeholders mentioned that the subsidies are not enough and additional incentives are required. Citizens mentioned that it is also difficult to renovate a single apartment within a larger block. The NECP mentions that a 70% majority for renovation is needed, which could be the blocker. Citizens mentioned that energy savings can be made through behaviour change and this could be a possible solution.

Provide funding for renovation of buildings: Citizens mentioned that while funding is available, the subsidies can only be applied for once the renovation is complete and there is also no guarantee that you will receive them[554]. Renovation is a high-cost investment that not many can afford and only those who can afford to carry out the work can therefore carry it out. To encourage citizens to take up renovations, the national stakeholders suggested that the government introduce subsidy schemes that pre-finance the renovation work. This would allow the citizens not to pay the full cost of renovation in advance before they apply for the subsidies.

[553] More information on the Dutch subsidy schemes for sustainable households is available at https://www.dutchhousingpolicy.nl/topics/sustainable-households.
[554] See above, note 543, page 577.

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National stakeholders mentioned that while 100% funding schemes do not exist, there are some loans with low interest financing as low as 0%, which they deem positive[555].

National stakeholders mentioned that there are platforms available for citizens to assess how much a renovation is likely to cost them, what subsidies are in place to fund the renovation, and what economic returns they are likely to see. They suggested that the government should also help citizens to find contractors. This could be coupled with these existing digital platforms and municipality shops that offer advice and knowledge sharing on sustainable renovation materials, energy-saving measures, subsidies, solar panels etc.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt that public buildings should be retrofitted first. National stakeholders mentioned that there is an existing obligation for renovations and that subsidy schemes are available for social properties.

Create world-leading companies: The NECP and LTRS both reference training and skills programmes, and the national stakeholders were aware that there were some programmes available, but they did not have the full information. National stakeholders recommended the creation of an established EU-wide label for certified experts. They also mentioned the need for continuous professional development courses for energy and construction professionals. Such roles should also be encouraged and made attractive.

Raise global ambition to tackle climate change: National stakeholders mentioned the need for awareness campaigns concerning the sustainability of homes and highlighting the urgency for energy efficiency measures.

Improve health and well-being: National stakeholders mentioned that awareness campaigns should also promote the benefits on health and well-being.

Address inequality and energy poverty: Citizens mentioned that social housing should be a priority over other buildings. They also mentioned that it is not fair that a homeowner who invests in solar panels cannot be paid for the excess energy they produce.

Mobilising industry for a clean and circular economy: National stakeholders mentioned that knowledge should be shared about the sustainability of materials to help citizens make best choices while improving the energy efficiency of their homes. They also suggested the implementation of ‘building passports’ that would focus on circular aspects. This would promote the reuse and recycling of materials.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There were not a significant number of actions presented, however the suggested actions are of good quality and appropriate to the needs of the Netherlands to increase the adoption of the EGD, addressing the concerns of the citizens and based on the knowledge of the national stakeholders. A number of EGD topics however are not addressed.

[555] See above, note 543, page 577.

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Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Increasing renewable energy in buildings	Regulations around renewable energy technologies Energy community schemes Create regional energy strategies for heat networks Plans for neighbourhoods connected to heat networks Creation of modular, reusable heat pumps that can be self-installed
Improving energy efficiency in buildings	Promote behavioural changes for saving energy Regulations for renovation timelines Collective neighbourhood renovations Advance existing digital platforms to enable citizens renovate and build sustainable homes Standardised packages for renovation of different building archetypes Increase the minimum standard for a building's energy efficiency and mandate minimum standards for rental properties
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Introduce voucher schemes Subsidies for collective houses undergoing renovation
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	Invest in innovation for the construction sector Education and training for digitalisation of the construction sector Established quality mark for contractors
Raise global ambition to tackle climate change	Create energy awareness campaigns for sustainable renovations
Improve health and well-being	No actions suggested
Address inequality and energy poverty	Introduce a feed-in tariff for solar energy
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	Create mandates for building passports

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source [556]
Increasing renewable energy in buildings	When solar panels provide more energy than the building needs, the excess energy can distort the system.	C
	Grid operators work with many gas experts instead of heat experts.	S
	In the creation of heat networks, a lot of work is put on municipalities while these are facing a capacity shortage. On the other hand, the municipalities know best what happens in their neighbourhoods and how to reach out to citizens.	S
	An important precondition is making sure that the right infrastructure is put into place, for example when it comes to the electricity grid.	S
Improving energy efficiency in buildings	Tenants have little choice and are not able to participate in the decision-making concerning their homes.	C&S
	It is difficult to renovate a single apartment within a larger block.	C
	Due to their limited mandate, local governments cannot do much when it comes to forcing citizens to renovate. They can provide collective facilities, but obligations to participate should come from the national level.	S
	There is a lack of good information available on which systems give the best returns in terms of energy savings, but also sustainability of production.	S
	Citizens are least willing to change their behaviour with respect to energy-efficient buildings in comparison to the other themes of food and mobility.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Renovation is expensive, subsidies can only be applied for once the work is complete, as a result only those who can afford to pay for the work up front can access the subsidies.	C&S
	It is challenging to ensure that only the householders in need of renovation funding benefit from government subsidies. Subsidies do not always reach the right people.	S
Renovate at least 3% of the total floor area of public buildings annually	There is a shortage of products and materials.	S
	There is a limited capacity for municipalities to make tenders for heat networks	S
Create world-leading companies	Capacity shortage in construction and digital skills should be promoted more.	S
Raise global ambition to tackle climate change	As there is more demand than supply for solar panels, awareness campaigns might not result in an increased positive impact.	S
Improve health and well-being	Good insulation of buildings can also have adverse effects, for example air tightness without adequate ventilation.	S

[556] C – Citizens; S – expert stakeholders

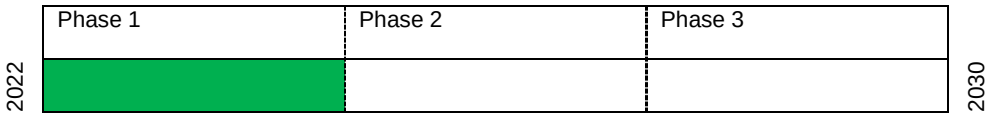
Address inequality and energy poverty	There is a risk of finger-pointing between national, regional, and local parties on issues such as energy poverty, although the connections among them have been strengthened by using a programme-based cooperation.	
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	No barriers mentioned	/

Categorised actions with descriptions

Actions requiring changes in regulation and legislation

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. These actions were diverse and covered a good number of the EGD topics.

Theme	Action name	Description	Idea Source[557]
Increasing renewable energy in buildings	Regulations around renewable energy technologies	Introduce regulations around renewable technologies to ensure the quality is to an efficient standard.	C
	Energy community schemes	Introduce mechanisms for energy communities.	C
	Create regional energy strategies for heat networks	Set up a regional energy strategy with a distribution of heat sources to realise more collective heat networks including financing and regulation.	S
Improving energy efficiency in buildings	Promote behavioural changes for saving energy	Saving energy can occur with behavioural changes; behavioural changes should be promoted and encouraged.	C
	Regulations for renovation timelines	Introduce stricter regulations for the timeline of renovating older buildings.	C
	Collective neighbourhood renovations	Stimulate collective renovations in neighbourhoods by the local and regional government. This would allow for more houses to be renovated and possibly at a lower cost because more	S

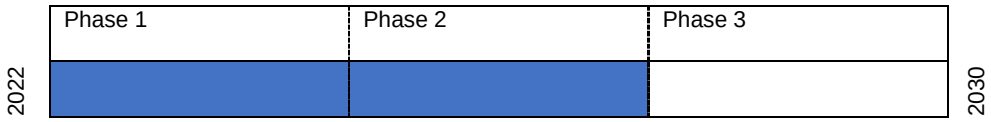
[557] C – Citizens; S – expert stakeholders

		properties are involved in the project.	
	Advance existing digital platforms to enable citizens renovate and build sustainable homes	Advance existing platforms to make the process easy for citizens to renovate and build sustainable homes including access to contractors who can deliver the work for them.	S
Provide funding for renovation of buildings	Introduce voucher schemes	Introduce a voucher system so that renovation can be paid for via vouchers and the homeowner does not have to have the finance available upfront.	S
Create world-leading companies	Invest in innovation for the construction sector	Increase the innovation capacity of the construction sector to enable energy efficiency solutions.	C
	Education and training for digitalisation of the construction sector	Educate and train construction and energy professionals in the areas of digitalisation in the construction sector.	S
Address inequality and energy poverty	Introduce a feed-in tariff for solar energy	It is unfair that this excess energy is not paid to the homeowner, as such a feed-in tariff should be introduced to ensure the homeowner is paid for excess energy fed back to the grid.	C
Mobilising industry for a clean and circular economy	Create mandates for building passports	Create a framework for building passports that are mandated for all existing buildings to stimulate re-use and circularity. These passports can be used to identify standard packages for renovations.	

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There are only a few actions suggested in this category, which focus on higher-level plans for neighbourhoods as well as standardised packages for renovation and awareness campaigns.

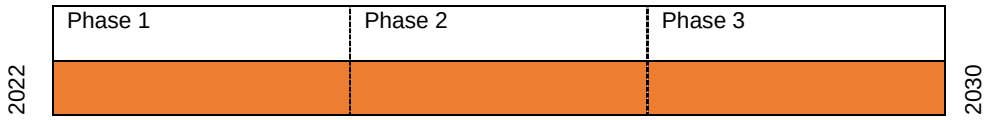
Theme	Action name	Description	Idea Source[558]
Increasing renewable energy in buildings	Plans for neighbourhoods connected to heat networks	Create a plan in which neighbourhoods should be connected to heat networks first. Prepare these neighbourhoods through awareness campaigns and provide them with financial support.	S
Improving energy efficiency in buildings	Standardised packages for renovation of different building archetypes	Launch standard packages of typical renovations and related methodologies for different building types to create easier access for homeowners.	S
Provide funding for renovation of buildings	Subsidies for houses undergoing renovation collectively	Increase the level of subsidy provided to a house if more than one house gets together to undergo the renovation works.	S
Raise global ambition to tackle climate change	Create energy awareness campaigns for sustainable renovations	Energy awareness campaigns to stimulate sustainable renovations are launched on a local, regional and national levels.	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. There were only a small number of actions in this category including some innovative ideas concerning the creation of modular, reusable heat pumps, which homeowners can install themselves. Other actions focused on creating stricter mandates for energy efficient buildings and establishing a quality label for energy experts.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[559]

[558] C – Citizens; S – expert stakeholders
[559] C – Citizens; S – expert stakeholders

Increasing renewable energy in buildings	Creation of modular, reusable heat pumps that can be self-installed	Modular, reusable, and less complicated heat pumps are available on the market. There are less complicated heat pumps that can be installed by citizens themselves and heat pumps based on modular systems that can be used next to a boiler.	
Improving energy efficiency in buildings	Increase the minimum standard for a building's energy efficiency and mandate minimum standards for rental properties	Introduce mandates for homeowners, property owners, and companies to renovate their buildings or build new constructions in a sustainable way, by having the energy labels E, F and G phased out. Property owners are no longer permitted to rent their houses with one of those labels.	
Create world-leading companies	Established quality mark for contractors	There is a quality mark for qualified sustainable installers and constructors.	

Just Transition

The national stakeholders mentioned that subsidy schemes are not affordable for those on lower incomes for a number of reasons. For example, those on lower incomes cannot afford to pay for the renovation upfront and then claim back the subsidy, nor can they afford to pay for the percentage of renovation that is not covered by the subsidy. A simple solution could be vouchers which are issued to the homeowner and can be used to pay for the work.

National stakeholders also mentioned that subsidies for energy-efficient technologies should also be available for new buildings, to ensure that they adopt the best technologies available and do not choose lower quality technologies because they cost less.

With respect to property owners, national stakeholders mentioned that they should be obligated to renovate without increasing the rent. Alternatively, the way that rent is calculated should be done fairly keeping the tenants in mind.

6.21 Poland

6.21.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Poland[560] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[561]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Poland's policies on the EGD and Citizen and National Stakeholder Reports

During the national stakeholder meeting, participants could not mention any relevant policies. However, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Poland.

- The 2030 Strategy for Sustainable Rural Development, Agriculture and Fisheries (Government of Poland, 2019A)[562]. The strategy focuses on four key areas, including new models for the organisation of production and markets, short market chains and fair competition; food quality and safety; innovation, digitisation, and industry 4.0 in the agri-food sector; risk management in the agri-food system.

Additionally, there are:

- The Act on Food Waste Prevention (Government of Poland, 2019B)[563], in force since 2019, which makes it obligatory for retail chains to donate food to non-profit organisations. The Act has regulated previous grassroots initiatives and contributed to an increase in the amount of food donated;

- A pilot project on Food Passportisation (Food From Poland – Polish Magazine for Professionals, 2020)[564] is implemented by the National Agricultural Advisory Centre and aims to build a system for monitoring food production by tracking the status of products at every stage of the supply chain.

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[560] A stakeholder meeting took place on 22 September 2022 and involved three national authorities, one research and education community member and one civil society member

[561] Dr Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.

[562] Government of Poland (2019). 2030 Strategy for Sustainable Rural Development, Agriculture and Fisheries. Available at: https://www.gov.pl/attachment/0a17c5b6-235a-4bff-a690-95478a62671b (Accessed 8 November 2022).

[563] Government of Poland (2019). The Act on Food Waste Prevention. Available at: https://isap.sejm.gov.pl/-isap.nsf/DocDetails.xsp?id=WDU20200001645 (Accessed on 8 November 2022).

[564] Food From Poland – Polish Magazine for Professionals (2022). Food passportisation to be introduced in Poland. Available at: http://www.foodfrompoland.pl/article-/art_id,35385-173/food-passportization-to-be-introduced-in-poland/ (Accessed on 8 November 2022).

General overview of actions per theme

The actions proposed by the Polish citizens and stakeholders on transforming the current food system in Poland consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on actions that aim to address food production, processing, distribution, and retail. Finally, the emphasised actions are to be implemented in the medium- and long-term periods.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production (7)	Promotional campaigns on urban farming
	Grassroots educational campaigns on food production
	Subsidies for agroforestry and other alternative forms of agriculture
	Subsidies for the education of agricultural advisors
	Tax incentives for organic food production
	Funding schemes for farmers to focus on the health characteristics of food
	Introduction of national comprehensive subsidies and support programme for farmers
Sustainable food processing, distribution & retail (9)	Promotional campaigns for restaurants to cooperate with local farmers
	Increasing access to local food
	Reduction of market fees for local farmers
	Financial support for the development of small food shops and markets
	Shortening supply chains
	Legislation defining phased reduction and eventual ban on plastic bags
	Increase in prices on food products with plastic packaging
	Fines for retailers using unnecessary food packaging
	Food labels to include the region of origin
Sustainable food consumption (2)	Education on environmentally sustainable diets
	Development of deposit schemes for food packaging
Food loss and waste reduction (4)	Educational campaigns on food waste
	Reduction of prices for products with a short shelf life
	Regulation on mandatory recycling infrastructure for food packaging in shops
	Revision of the Act Against Food Waste
Ensuring food security (1)	Establishment of a monitoring system for food production on a national level
Combating food fraud (1)	Stricter monitoring of the nutritional values of processed foods

Across the entire food cycle (1)	More inclusive stakeholder management and local context mindfulness in new food policy

Barriers to each theme

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Action	Idea Source[565]
Sustainable food production	The public administration lacks the organisational capacity to implement advanced activities in food system transformation (such as research and innovation projects).	S
	Not all food producers are ready to share the data on their food production processes.	S
	There are significant technical challenges in collecting and sharing food production data (e.g. accessing data from different institutions and actors and building a coherent data collection system).	S
Sustainable food processing, distribution & retail	Making food product data clear and understandable to consumers and other buyers in the food distribution chain (such as buyers and sellers abroad), including the environmental footprint of production, can be very challenging.	S
Sustainable food consumption	Challenges in gaining acceptance for new education programmes and awareness-building activities in Poland.	S
Food loss and waste reduction	The Act on Food Waste Prevention needs to be revised to avoid the donation of food products at their expiry date. Furthermore, it needs to allow donations of a more diverse set of food products.	S
	Stores currently try to sell the products until the expiry moment, donating them with too little time for donation organisations to distribute them.	C
	There are very different levels of awareness of food waste in Poland.	S
Combating food fraud	It is unclear how to track a food product through its production process and present that data.	S
Across the entire food cycle	There is a mismatch between the European strategies and programmes (e.g. EIT food[566]) and different countries' contexts and needs.	S
	There is a lack of financial support for educational and awareness-building programmes in food system transformation.	S

[565] C – Citizens; S – expert stakeholders
[566] Cf. https://www.eitfood.eu/.

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Poland. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All these actions can be implemented straight away. Some, such as awareness campaigns promoting urban farming, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as implementing stricter controls on the origin of organic products, can be more difficult to implement successfully but can have knock-on effects, such as reducing food fraud in the system.

Theme	Action name	Description	Idea Source[567]
Sustainable food production	Promotional campaigns on urban farming	Urban farming should be promoted through awareness campaigns.	C
	Grassroots educational campaigns on food production	More grassroots local movements should be mobilised to organise education on sustainable food production (e.g. gardens, urban farming).	C
Sustainable food processing, distribution & retail	Promotional campaigns for restaurants to cooperate with local farmers	Through awareness-raising campaigns, restaurants should be encouraged to buy more food products from local farmers.	C
	Increasing access to local food	Consumers should have more venues to shop for produce from local farmers.	S
Food loss and waste reduction	Educational campaigns on food waste	Educational public campaigns should be organised on how to store food and prevent food waste in homes, schools, and the workplace.	S
Combating food fraud	Stricter monitoring of the nutritional values of processed foods	Inspections on the nutritional values of processed food products should be more frequent.	C
Across the entire food	More inclusive stakeholder	All new legislation and guidelines on food policy in Poland should recognise the	S

[567] C – Citizens; S – expert stakeholders

cycle	management and local context mindfulness in new food policy	country's regional diversity.	

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production and sustainable food processing, distribution, and retail. Specifically, they include actions such as subsidies for alternative forms of agriculture, as well as reduction of market fees for local farmers. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[568]
Sustainable food production	Subsidies for agroforestry and other alternative forms of agriculture	The national government should provide subsidies for alternative and new forms of agriculture, while the regional-level governments should provide advice and education on specific methods.	S
	Subsidies for the education of agricultural advisors	Subsidies should be provided to train agricultural advisors who could provide farmers with tools and knowledge on new cultivation methods.	S
	Tax incentives for organic food production	Farmers growing organic crops should receive tax incentives.	C
	Funding schemes for farmers to focus on the health characteristics of food	Farming subsidies should be organised to promote farmers producing healthy and organic food instead of focusing on mass production.	C
	Introduction of national comprehensive	Farmers should have access to a comprehensive subsidy programme supporting their	C

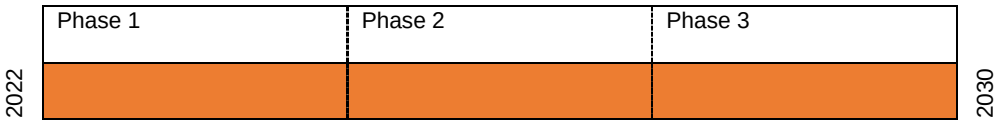
[568] C – Citizens; S – expert stakeholders

	subsidies and support programme for farmers	crop cultivation, skills development and equipment purchases.	
Sustainable food processing, distribution & retail	Reduction of market fees for local farmers	Fees farmers need to pay to sell their products on food markets should be reduced.	C
	Financial support for the development of small food shops and markets	Financial support should be given to initiatives attempting to start new food markets and small-scale local food stores.	C
	Shortening supply chains	Supply chains should be shortened, in part by improving access to local food, but also by working on linking existing initiatives in this area.	S
Sustainable food consumption	Education on environmentally sustainable diets	Civil society organisations and non-formal groups should be given grants to organise education on maintaining environmentally sustainable diets.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in product labelling, price structuring, and revision of existing policy. An example of these actions is the introduction of fines for retailers using unnecessary food packaging.

Theme	Action name	Description	Idea Source [569]
Sustainable food processing, distribution & retail	Legislation defining phased reduction and eventual ban on plastic bags	Plastic bags in supermarkets and food markets should be abolished in phases.	C
	Increase in prices on	Food products, including plastic	C

[569] C – Citizens; S – expert stakeholders

	food products with plastic packaging	packaging, should include extra fees.	
	Fines for retailers using unnecessary food packaging	Retailers using unnecessary packaging to protect food products or make them more attractive should be fined.	C
	Food labels to include the region of origin	Labels on food products should include the specific region of origin to help the consumers buy more local products.	C
Sustainable food consumption	Development of deposit schemes for food packaging	Deposit mechanisms for food packaging should be expanded and include monetary kickbacks for returned packaging.	C
Food loss and waste reduction	Reduction of prices for products with a short shelf life	Food products with short remaining shelf life should have obligatory price reductions.	S
	Regulation on mandatory recycling infrastructure for food packaging in shops	Shops should be obliged to include stations to recycle food packaging of different materials.	C
	Revision of the Act Against Food Waste	The Act Against Food Waste should be updated to allow for a more diverse range of food products to be donated and prevent the dumping of food products with immediate expiry dates.	S
Ensuring food security	Establishment of a monitoring system for food production on a national level	A monitoring system should be established to collect data on food production in Poland and analyse it to identify areas for sustainable transformation.	S

Just Transition

The new programmes and subsidies promoting the development of alternative forms of agriculture should be mindful of the local context and be flexible so as not to exclude diverse groups of food producers from the support available. For example, the country is home to diverse forms of agriculture, and farmers in different regions may need specific kinds of support when switching to organic farming or agroforestry.

6.21.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[570] in Poland that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[571]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[570] A stakeholder meeting took place on 22 September 2022 with two local authorities.
[571] Prof Tom Rye, Molde University College, Norway.

Summary of Poland's policies on the EGD and Citizen and National Stakeholder Reports

Poland's transport sector emissions grew by 84% over the 2005-2019 period, and the sector's share almost doubled from 9% to 17%, to a total of around 67 million tonnes of CO2e[572]. Its main policies are centred on decarbonising fuels and vehicles and shifting travel to public transport. Poland is spending EUR 7.5 billion of Recovery Funds[573] on doubling the number of zero-emission vehicles by 2026, modernising 478km of its rail network, introducing cleaner urban public transport vehicles, mode shift from road to rail, and enhancing road safety.

The workshops with citizens and stakeholders revealed agreement with the policy of improving public transport, particularly regional rail, and promoting cycling and micro mobility for urban transport. Conversely, there was relatively little emphasis on cleaner fuels and electrification of vehicles. There was more willingness amongst stakeholders to see restriction of private car traffic (access controls in cities, for example) than is found in national policy. In more detail:

Citizens were of the strong opinion that public transport should be improved and reorganised and made accessible in both urban and rural areas, using an app to integrate all modes of public transport, and (shared) micromobility. Cycling infrastructure should be improved to make it a safe and easy alternative, with restrictions on cars entering city centres. They wanted to see promotion of online shopping and dedicated shuttle buses for shopping malls, dedicated school buses, and employers playing a role in promoting green transport to their staff. The group was also in favour of green fuels for aircraft, and more charging infrastructure for EVs, but purchase incentives were not mentioned.

Stakeholders generally agreed with the suggestions from citizens, but also spoke in favour of traffic restriction measures in cities (including experiments with this policy). They also mentioned spatial planning policies such as transit-oriented development and limiting sprawl. They wanted to see safer conditions on roads for cyclists and pedestrians. They also had several suggestions related to governance.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[574]**

[572] European Parliament (2021). Climate action in Spain: Latest state of play. Available at https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690579/EPRS_BRI(2021)690579_EN.pdf (Accessed on 30 November 2022).
[573] European Commission (2022), see note 255, page 249.
[574] C – Citizens; S – expert stakeholders

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Clean vehicles	EV charging infrastructure	C
	Clean fuels for aircraft	S
Better public transport	Better PT vehicles	C&S
	Cheaper PT	C&S
	PT integration, including with micro mobility	C&S
Spatial planning and city development	More bike paths	C&S
	Transit-oriented development, limited sprawl	S
Pricing and charges for transport	Restraint of private motor vehicle traffic in city centres	C&S
	Promotion of car-sharing and carpooling through tax incentives	
Planning and operation of transport networks	PT network improvement, including regionally and internationally	C&S
	Park and ride	S
Governance	Getting employers to promote sustainable transport for staff	S
Greening transport in general	Education and awareness raising	S
	Exchange of experience	S

Barriers to EGD implementation

Citizens mentioned barriers to EGD implementation related to cycling, and clean vehicles. Stakeholders made several further points related to governance. These do not relate directly to the implementation of mobility-related aspects of the EGD (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final)); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

Theme	Barrier	Idea Source[575]
Planning and operation of transport networks	Danger of bicycle accidents; bicycles are not a solution for winter in Poland.	C
Planning and operation of transport networks	Building of bicycle paths should not be at the expense of road development.	C
Clean vehicles	Switching from fossil fuels in 30 years is not possible, renewable energies do not cover the energy needs and nuclear energy development is being blocked.	C
Governance	National conflicts between central and local authorities make financing and implementing projects more difficult e.g., decisions and actions of state agencies are not in line with law on public transport; law on electromobility is not adapted to the needs of local authorities; public transport infrastructure guidelines produced by the Ministry of Transport are outdated.	S

[575] C – Citizens; S – expert stakeholders

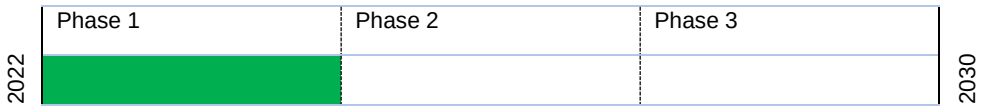
Governance	There is poor cooperation between local authorities. Local authorities could integrate transportation and establish joint investments but they do not do it. Lack of laws to get over this problem.	S
Governance	Lack of political will to implement car restriction measures (parking management, access control).	S
Governance	The EU cannot agree on a common rail policy which restricts international rail services.	S
Governance	EU funds are distributed at the regional level with a strong influence of national authorities, and this can be suboptimal from a functional urban region point of view.	S
Governance	EU and national regulations rarely consider the context of small and medium-sized municipalities, which in Poland differ drastically from large cities and regions in terms of financial, human, and expert resources.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Poland. These mainly consist of communication and education activities. All these actions can be implemented straight away.

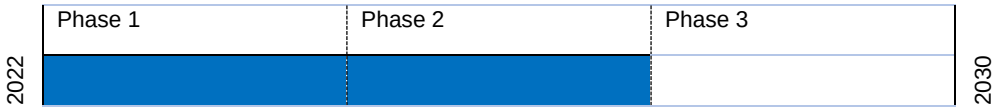
Theme	Action name	Description	Idea Source [576]
Greening transport in general	Education and awareness raising	The organisation of city/regional events with a sustainable mobility theme, like the Sustainable mobility week. Public campaigns, including via employers.	C&S
	Exchange of experience	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals.	S

[576] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments, and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea Source [577]
Clean vehicles	EV charging infrastructure	There is very little charging infrastructure in Poland at present.	S
	Clean fuels for aircraft	This was not explained in more detail but was identified as a priority.	
Better public transport	Better PT vehicles	Investing in new, electric, and more comfortable public transport vehicles.	C&S
	Cheaper PT	Public transport needs to be cheaper to be more attractive.	C
Spatial planning and city developme nt	More bike paths	Expansion of the urban bicycle system; investment in cycle lanes and adaptation of infrastructure.	C
Pricing and charges for transport	Promotion of car-sharing and carpooling	Employers and travellers should be given tax incentives for carsharing and carpooling, and for encouraging its use, through tax incentives.	C
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional and national level. Important role for regional rail, and for EU in achieving and driving forward a common policy on international rail.	C&S
	Park and ride	Required to complement public transport service for trips into city centres.	S
Governance	No measures suggested		

[577] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Poland's citizens and experts require policy changes and regulation to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform.

Theme	Action name	Description	Idea Source [578]
Clean vehicles	No measures suggested		
Better public transport	PT integration	Better planning and coordination of public transport routes, between operators and modes of public transport. Also, integration with bikes and shared micro mobility services.	C&S
Spatial planning and city development	Transit-oriented development (TOD) and limiting sprawl.	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	Restraint of private motor vehicle traffic	There should be measures to restrict personal car use, such as low emission zones in cities (which often include an element of pricing).	C&S
Planning and operation of tspt networks	No measures suggested		
Governance	Getting employers to promote sustainable transport for staff	This measure might require legislation or changes to regulations, but citizens in particular saw quite a strong role for employers in encouraging their employees to change mode of transport.	C

[578] C – Citizens; S – expert stakeholders

Just Transition

Just Transition was not discussed in detail. The stakeholders pointed out that there have been negative social experiences in the past in Poland related to economic transformation that show how social resistance could lead to failure to achieve the goals set in the EGD. The country also faces the considerable problem of transportation exclusion (due to lack of public transport service and walking and cycling infrastructure in peripheral and rural areas), which means that for many people cars are the only option for transportation, even if their incomes are not high.

6.21.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Poland[579] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[580]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Poland's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[581], Poland's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €36bn. This can be broken down as follows concerning the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	The NRRP allocates €300m to large enterprises for energy improvements, a portion of this is for renewable installations, but it is not specified how much.
Improving energy efficiency in buildings	According to the NRRP, 70% of single-family dwellings do not meet energy efficiency standards, and 3.5m houses use coal for heating. Targets include replacing inefficient heating in 860 000 single-family buildings and modernising 1 300 000m2 of usable floor space across 320 schools.
The tax system for energy products aligned with the green transition	Not specifically mentioned in the NRRP.

[579] A stakeholder meeting took place on 22 September 2022 and involved three Civil society representatives, one research and education community member, one private non-profit
[580] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[581] Ivanova, V. et al. (2021), see note 30, page 61.

Provide funding for the renovation of buildings	€3.9bn is provided for renovation. A large portion of this, i.e. €3.2bn, is for single and multi-family residential buildings, €300m is for energy improvements in large enterprises (including renewable installations), €290m is allocated to schools and €67m to local activity centres. Also mentioned is the Clean Air initiative that focuses on switching heating fuel in homes and covers up to 60% of the switching costs.
Renovate at least 3% of the total floor area of public buildings annually	Between 2012-2016, it is estimated that 1.5% of renovations in the residential sector were medium-depth, and there were no deep renovations. In the non-residential sector, those shares were 2.3% medium and 0.3% deep[582].
Create world-leading companies	The NRRP does not mention programmes for upskilling, training or accreditation in the renovation and new heat technologies supply chains.
Raise global ambition to tackle climate change	Not specifically mentioned in the NRRP.
Improve health and well-being	The NRRP includes a strong focus on renovation to improve air quality.
Address inequality and energy poverty	Several initiatives focus on energy efficiency in municipal flats at risk of fuel poverty, including the Subsidy Fund, Thermo-modernisation and Renovation Fund. The plan, however, does not include an assessment of energy performance, which could introduce energy poverty risks if measures are deployed in unsuitable properties.
Ensure a Just Transition that is fair, competitive and green	Not specifically mentioned in the NRRP.
Mobilising industry for a clean and circular economy	The NRRP includes measures for the project take up and support, including a 'green list' for construction materials and products and an energy calculator for beneficiaries.

The following compares the views of the citizens and the national stakeholders along with Poland's National Recovery and Resilience Plan (NRRP) in the context of the EGD. On the one hand, the aim is to understand where the strengths and weaknesses lie in the current national plans. On the other, the objective is to inform what citizens and national stakeholders suggest as actions to be taken to ensure the adoption of the EGD.

Increasing renewable energy in buildings: The NRRP has allocated funding for adopting renewable technologies within the industry. However, there is no mention of funding for private residential buildings. Citizens stated that installing solar photovoltaics (PV) is not affordable. They mentioned that there is no feed-in tariff (FIT) for the citizens to earn money, which suggests that funding for private residential buildings is also required to encourage the uptake of renewable energy in buildings. There also seems to be a blocker because the EU does not consider heat pump technology a green/renewable solution. National stakeholders questioned why this is the case, as Poland will not achieve an effective energy transition without energy recovery.

Improving energy efficiency in buildings: Despite the high ambition set out by the NRRP and the significant funds that are being put towards the energy efficiency of buildings, there

[582] European Commission (2019), see note 31, page 61.

is huge doubt from the citizens that the Polish government will do what is needed to achieve the EGD. They suggested that there should be stricter mandates from the EU to force the Polish government to act. According to the review of the NRRP within the Renovate2Recover report, there are also key challenges for accelerated rate and depth of renovation, including a lack of consistency between different support schemes, the separate treatment of heat and energy efficiency measures and difficulties in leveraging private funding. This was confirmed by the view of both citizens and national stakeholders.

Both citizens and national stakeholders also felt that more education on green building is needed to increase the adoption of energy efficiency improvements and technologies. This education should be from early years education upwards.

Citizens also felt there should be stricter regulations for new builds, e.g. *Passivhaus* standard. Specifically, they mentioned that passive buildings are a step beyond energy-efficient buildings; they consume less and can store heat and energy. The EU and national governments should encourage their construction via special incentives.

The tax system for energy products aligned to the green transition: There was not a specific mention by citizens or national stakeholders concerning the tax system for energy products. However, there was an interesting suggestion from the national stakeholders to amend cadastral tax (i.e. property tax) based on the energy performance of the building, e.g. the better the energy performance, the lower the property tax.

Provide funding for the renovation of buildings: While the NRRP outlines many available funding schemes such as the Clean Air initiative and the Subsidy Fund, Thermo-modernisation and Renovation Fund, citizens mention that renovation is not affordable, despite this available funding. Stakeholders consolidated this view stating that co-contribution of funding is a barrier and noted that while these programmes exist and are correctly designed, they are not enticing to citizens. Overall, however, there was a good alignment and awareness between the citizens and national stakeholders concerning the available funds for improving energy efficiency in buildings.

A positive note was that citizens felt those who could afford renovation would benefit financially through savings on their energy bills. If this positive impact could be disseminated to raise awareness around the benefits of renovation, this could also address the energy crisis because of the war in Ukraine, which the national stakeholders addressed.

Furthermore, citizens felt that there should be financial mechanisms to favour the construction of houses surpassing the minimum regulation's energy efficiency. There also needs to be more information and help on applying for the available subsidies, particularly for the elderly.

Renovate at least 3% of the total floor area of public buildings annually: Both citizens and national stakeholders agreed that public buildings should lead the way as examples for others to follow. The national stakeholders felt that the government should fund the municipalities to allow this to happen.

Create world-leading companies: National stakeholders recognised an acute lack of workforce to perform the required energy efficiency upgrades. About 50% of the renovation workforce are immigrants, as there are incentives to bring in foreign workers to carry out the work. However, this may not be a long-term solution as these foreign workers may not settle in Poland. They also mentioned a need to use industry training centres within the education system and a modernisation of working methods and the required materials and

technologies to enable renovation. There are no plans in the NRRP related to creating a skilled workforce to deliver energy efficiency building projects.

Raise global ambition to tackle climate change: Not mentioned by citizens, national stakeholders or the NRRP.

Improve health and well-being: National stakeholders suggested that information and education campaigns should promote the health benefits of renovation, especially children's health, along with the economic and environmental benefits. The NRRP strongly focuses on improving health and aligns with national stakeholders' views.

Address inequality and energy poverty: Not mentioned by citizens, national stakeholders or the NRRP.

Ensure a Just Transition that is fair, competitive and green: This was discussed by the national stakeholders but not by the citizens. National stakeholders felt there were a few measures to be taken to ensure a Just Transition, including better access to funding for all demographics and backgrounds and better support for those on lower incomes.

Mobilising industry for a clean and circular economy: Citizens or national stakeholders did not address this. However, there are plans in the NRRP to encourage 'green' construction materials that could contribute to a clean and circular economy.

General overview of actions per the theme

The following is a summary of the actions proposed by the national stakeholders during the workshops. The citizens suggested no direct actions. Overall, not many actions were suggested; the majority focused on energy efficiency improvements, increasing funding for private home/building owners, or creating an increased, skilled workforce.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Classification of energy recovery systems as green/renewable technologies Decommission coal-fired boiler plants
Improving energy efficiency in buildings	Education and information campaigns Promote economic benefits of energy efficiency projects Improved regulations at the local level One-stop shop for thermo-modernisation projects Replacement of heat source linked with thermos-modernisation Create stricter regulations for new buildings Refine targets and metrics for monitoring improvement Regulated building standards New policies for the improvement of existing buildings to a set of required standards

The tax system for energy products aligned with the green transition	Align property tax to the energy certification of the building
Provide funding for the renovation of buildings	Support mechanisms to access funding by all citizens Introduce levels of support schemes based on income thresholds Improved incentive schemes The fixed interest rate for thermo-modernisation investments Mandate fixed interest rates on loans relating to energy efficiency projects
Renovate at least 3% of the total floor area of public buildings annually	No specific actions mentioned
Create world-leading companies	Industry training centres Modernisation of working methods, materials and technologies
Raise global ambition to tackle climate change	No specific actions mentioned
Improve health and well-being	Education and information on other socio-economic benefits of energy efficiency projects
Address inequality and energy poverty	No specific actions mentioned
Ensure a Just Transition that is fair, competitive and green	No specific actions mentioned
Mobilising industry for a clean and circular economy	No specific actions mentioned

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers mentioned explicitly by each of the citizen and stakeholder groupings.

Theme	**Barrier**	**Idea Source** [583]
Increasing renewable energy in buildings	Heat recovery is not considered a green energy source by the European Commission.	S
	Solar panels are not profitable due to the lack of feed-in tariff (FIT)	C
Improving energy efficiency in buildings	Many solutions are politically unrealistic, requiring standards to be set and controlled. The electorate does not welcome this type of system, and without target setting and oversight, it is difficult to introduce an effective thermo-modernisation system.	S
	The lack of a uniform support system in which different types of buildings can count on different levels of support.	S
	The problem of building ownership. On the one hand, in so-called municipal buildings, there is no single voice for thermo-modernisation investments, on the other, many buildings and houses do not have defined ownership; this is especially true for the so-called 'post-German property'.	S
	The problem of listed buildings, or buildings otherwise regarded as monuments, that cannot be retrofitted easily.	S
	Some programmes, e.g. the Clean Air programme, allow the replacement of a heat source without the need for the	S

[583] C – Citizens; S – Expert Stakeholders

	thermo-modernisation of buildings.	
	Dispersion of services - the customer must know how to carry out a thermo-modernisation project, where to get a loan and where to find the right company to carry out the project.	S
	The average profile of the applicant to the thermo-modernisation programme is someone from the lower end of the socio-economic spectrum and unfamiliar with regulations and support programmes. Support is needed.	S
The tax system for energy products aligned with the green transition	No specific barriers mentioned	/
Provide funding for the renovation of buildings	The non-transfer of the National Recovery Plan fund by the EU is linked to the failure to implement the requested judicial reforms in Poland[584].	S
	Excessive bureaucracy in support programmes	S
	Lack of funds on the part of recipients to cover the so-called 'own contribution' required in all existing thermo-modernisation programmes.	C&S
	The need to take out loans at uncertain and variable interest rates.	S
	No state collateralisation of loans; inflation demonstrates the level of this risk.	S
	Current energy prices do not motivate investment in thermo-modernisation; it is difficult to ask people to think ahead when most energy resources are in short supply. They think first of spending money to buy raw materials rather than investing in infrastructure.	S
	The impossibility of borrowing in the case of houses/buildings without a defined property right.	S
Renovate at least 3% of the total floor area of public buildings annually	Lack of confidence in the Polish government to achieve the targets.	C
Create world-leading companies	Lack of trained staff for energy advice, project execution and implementation.	S
Raise global ambition to tackle climate change	No specific barriers mentioned	/
Improve health and well-being	No specific barriers mentioned	/
Address inequality and energy poverty	No specific barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No specific barriers mentioned	/
Mobilising industry for a clean and circular economy	No specific barriers mentioned	/

[584] Although the European Commission had approved Poland's National Recovery Plan (KPO) on 1 June, the bloc did not transfer the due EUR 35.4 billion, claiming that Poland has not met its commitments regarding judicial reforms. Cf. Liboreiro, J. (2022, August 29). EU Council sued for approving Poland's €35-billion covid recovery fund. Euronews. Retrieved 6 October 2022, from https://www.euronews.com/my-europe/2022/08/29/eu-council-sued-for-approving-polands-35-billion-covid-recovery-fund.

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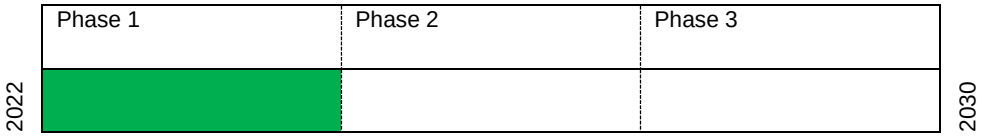
Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main policy instruments of implementation: education and training

Actions that can be carried out now with minimal support suggested by the national stakeholders and the citizens are outlined in the following table. There were not many measures suggested that could be carried out in the short term. The suggested actions focus on education and information campaigns and improved support mechanisms to access funding.

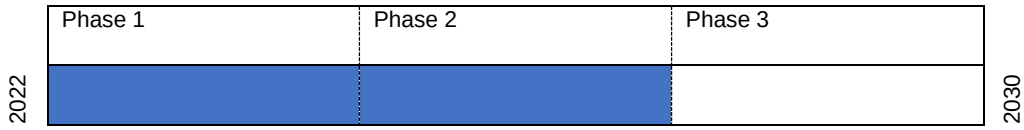
Theme	**Action name**	**Description**	**Idea Source** [585]
Improving energy efficiency in buildings	Education and information campaigns	More education and information are needed to educate the citizens, e.g. door-to-door campaigns.	C&S
	Promote economic benefits of energy efficiency projects	Promote the financial savings that can be gained from renovation projects.	C
Provide funding for the renovation of buildings	Support mechanisms to access funding by all citizens	More information and help on getting subsidies, particularly for the elderly.	C
Improve health and well-being	Education and information on other socio-economic benefits of energy efficiency projects	Focusing the energy efficiency discourse not on the available funding but on the benefits to those willing to perform retrofitting, for example, health benefits.	S

[585] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: better policy and regulation, further funding for citizens and increased access to a skilled workforce

The national stakeholders and citizens also suggested actions that can be carried out in the medium term but need government support to implement further. These focused on actions to improve energy efficiency in buildings through better policy and regulation, further funding for citizens and increased access to a skilled workforce.

Theme	Action name	Description	Idea Source [586]
Increasing renewable energy in buildings	Classification of energy recovery systems as green/renewable technologies	Classification of heat recovery as a green or transitional energy source as the EU does not consider heat pumps, for example, as a renewable energy source.	S
Improving energy efficiency in buildings	Improved regulations at the local level	A greater range of regulations at a local level as one size does not fit all.	C
	One-stop shop for thermo-modernisation projects	Creation of a system of comprehensive thermo-modernisation services from design to application for a loan and implementation of the thermo-modernisation project.	S
	Replacement of heat source linked with thermos-modernisation	For any thermo-modernisation project, make it an obligation to also replace the heat source.	S
	Create stricter regulations for new buildings	Stricter regulations for new buildings, e.g. introduce Passivhaus standard for new buildings.	C
	Refine targets and metrics for monitoring improvement	Set targets based on actual energy outputs and not just on the delivery of a thermos-modernisation upgrade, e.g. reward small efforts well.	S
Tax system for energy products aligned to the green transition	Align property tax to the energy certification of the building	Introducing the promotion of certification systems and aligning to the property (cadastral) tax to encourage the adoption of energy efficiency projects.	S
Provide funding for	Introduce levels of	Introduction of income thresholds in	S

[586] C – Citizens; S – expert stakeholders

the renovation of buildings	support schemes based on income thresholds	support programmes.	
	Improved incentive schemes	Effective incentive systems should be designed keeping in mind that for each obligation, there is an instrument needed.	S
	Fixed interest rate for thermo-modernisation investments	On the issue of financing renovation, the experts noted that the government had committed itself to a fixed interest rate for t1hermos-modernisation investments, which should be reviewed to make it more attractive to citizens of all walks of life.	S
Create world-leading companies	Industry training centres	Creation of industry training centres to create a skilled workforce.	S
	Modernisation of working methods, materials and technologies	Modernisation of working methods, materials and technologies to ensure the availability of the tools and techniques required to deliver energy-efficiency projects.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation: policy change

Actions that will take longer to implement were few, with only one suggestion from the national stakeholders to prioritise and accelerate the mandatory renovation of public buildings.

Theme	Action name	Description	Idea Source [587]
Increasing renewable energy in buildings	Decommission coal-fired boiler plants	Encourage the adoption of energy efficiency projects and building integrated renewables.	C
Improving energy efficiency in buildings	Regulated building standards	Create an obligation to bring buildings up to the designated standards.	S

[587] C – Citizens; S – expert stakeholders

	New policies for the improvement of existing buildings to a set of required standards	The government should design a comprehensive policy to bring buildings to technical standards within a specified period and support it with appropriate instruments (funds and consulting).	S
Provide funding for the renovation of buildings	Mandate fixed interest rates on loans relating to energy efficiency projects	Mandating fixed loan rates for energy efficiency projects enables security in the renovation project from the stakeholder.	S

Just Transition

National stakeholders stated that support programmes must consider the diversity of buildings and address those in need of renovation first and provide the available support to the relevant groups. Relevant groups should include social housing, older buildings requiring conservation, buildings inhabited by elderly people etc.

To encourage adoption and ensure fairness in the long term, the government should mandate fixed-term interest rates for the term of the loan for the energy efficiency upgrade.

There is no income threshold for thermo-modernisation projects, which should be introduced to enable those on lower incomes to participate in energy efficiency projects.

Introducing one-stop shops would enable all citizens, regardless of demographic or socio-ethnic background, to avail of energy efficiency projects.

6.22 Portugal

6.22.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[588] in Portugal that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the thematic expert appointed by the European Commission[589]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Portugal's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Portugal did not point to any key food policies on a national level. They rather focused on existing frameworks working on food policy, mentioning that they are struggling to see visible national sustainable food system policy.

- Foodlink (A2S.pt, 2022)[590] – A network to promote food transition in Lisbon metropolitan area. The network gathers 25 different organisations focusing on promoting healthy food consumption, the Mediterranean diet and combating food waste.

- Sustainable Cities Food Network (Feeding Sustainable Cities, 2018)[591]. The network serves as a forum for actors and sectors involved in ensuring the sustainability of food systems in Portugal.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policies within food policy in Portugal.

- Integrated Strategy for the Promotion of Healthy Eating (Government of Portugal, 2017)[592] – Intersectoral strategy that presents 51 measures to promote healthy food consumption in the country. Seven different ministries work in its implementation and monitoring, including the Ministries of Health and Agriculture, Forestry and Rural Development.

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[588] A stakeholder meeting took place on 11 October 2022 and involved a representative from a regional government, three representatives from academia and one representative from civil society.
[589] Dr. Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[590] Cf. https://a2s.pt/foodlink-rede-para-a-transicao-alimentar-na-area-metropolitana-de-lisboa-lancada-a-7-de-junho/.
[591] Cf. https://feedingsustainablecities.wordpress.com/.
[592] Government of Portugal (2017). Integrated Strategy for the Promotion of Healthy Eating. Available at: https://dre.pt/application/conteudo/114424591 (Accessed on 22 November 2022).

- National Strategy to Fight Food Waste (National Commission for Combatting Food Waste, 2017)[593] – The strategy aims to mitigate food waste along the food value chain, from the producer to the consumer. It integrates three strategic objectives: prevention, mitigation, and monitoring. Its action plan presents 14 measures to fight food waste. Various ministries, including Environment and Agriculture, Forestry and Rural Development, local authorities and non-profit organisations were involved in the implementation of the plan.

General overview of actions per theme

The actions proposed by the Portuguese citizens and stakeholders on transforming the current food system in Portugal consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food processing, distribution, and retail. Finally, the proposed actions are mainly focused on short-term, immediate implementation tools such as communication, education, and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (5)	Organisational support for associations of sustainable food producers to exchange knowledge
	Distribution of toolkits and training material on incorporating biodiversity protection into food production processes
	Promotional campaign on urban farming
	Subsidies for urban and community farming
	Investments in research of new methods in sustainable food production
Sustainable food processing, distribution & retail (8)	Awareness campaigns promoting direct food purchases from local and sustainable food producers
	Development of special sections in stores with seasonal and local products
	Subsidies for small stores selling local and sustainable food products
	Shortening the supply chain
	Investments in development of sustainable food distribution methods
	Regulation expanding the deposit schemes for returns of food packaging
	A taxation system establishing prices of food products corresponding to their environmental impact
	Regulation making environmental impact score on food product labels mandatory
Sustainable food consumption (1)	Educational workshops on healthy diets and cooking healthy meals
Food loss and waste	Educational workshops on household food waste reduction

[593] National Commission for Combatting Food Waste (CNCDA) (2017). Estratégia Nacional e Plano de Ação de Combate ao Desperdício Alimentar. Available at: https://www.gpp.pt/images/MaisGPP/Iniciativas/CNCDA/ENCDA.pdf (Accessed on 22 November 2022).

reduction (4)	
	Development of a database on food waste sources across the country
	Regulation on reduction in food waste across the food chain
	Establishment of a new tax for food-based businesses that do not actively work to reduce their food waste
Ensuring food security (0)	
Combating food fraud (1)	More stringent monitoring of food production processes
Across the entire food cycle (2)	Focus on development of more strategic and long-term food system transformation strategies
	Development of platforms for citizens to share the best solutions and successes on food system transformation through individual action

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Action**	**Idea Source** [594]
Sustainable food production	Small-scale sustainable food producers find it difficult to access EU agricultural funds, compared with large-scale food production businesses.	S
Sustainable food processing, distribution, and retail	Small-scale food producers find it difficult to compete in the public procurement competitions, due to the bureaucratically and technically complex processes.	S
Across the entire food cycle	There is a lack of communication and knowledge about financing programmes, mapping of actors involved in the food systems, and data.	C
	There is a lack of a vision of how a sustainable food system in Portugal should look.	C
	The complex issues of a food system transition are not approached in a cross-sectoral way, but rather through silos.	S
	Food policy is not made in a participatory way, through including various groups.	S

[594] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Portugal. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns on urban farming, are easy to implement (low hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as work on incorporating biodiversity promotion in food production, may be more difficult to implement successfully, but can produce knock-on effects.

Theme	Action name	Description	Idea Source [595]
Sustainable food production	Organisational support for associations of sustainable food producers to exchange knowledge	Collaboration platforms should be developed for sustainable food producers to facilitate their exchanges on best practices in production, placing products on the market, and reaching out to customers.	C
	Distribution of toolkits and training material on incorporating biodiversity protection into food production processes	Biodiversity protection should be incorporated into food production, through distribution of toolkits and organisation of training activities.	C
	Promotional campaign on urban farming	Promotional campaigns should be organised to stimulate urban farming.	C
Sustainable food processing, distribution & retail	Awareness campaigns promoting direct food purchases from local and sustainable food producers	Awareness campaigns should be organised to encourage citizens to purchase their food products directly from local and sustainable food producers when possible.	C

[595] C – Citizens; S – expert stakeholders

	Development of special sections in stores with seasonal and local products	Stores should open special sections dedicated exclusively to local and seasonal food products.	C
Sustainable food consumption	Educational workshops on healthy diets and cooking healthy meals	Educational workshops should be organised by municipalities on healthy diets and cooking meals with fresh, seasonal and organic food, while avoiding food waste.	C
Food loss and waste reduction	Educational workshops on household food waste reduction	Educational workshops should be organised on the topic of reducing household food waste (e.g., through reusing food scraps and proper portioning).	S
	Development of a database on food waste sources across the country	A database should be created on food waste sources in the different regions and municipalities of the country, as well as different sectors, to understand how to best tackle the issue.	S
Combating food fraud	More stringent monitoring of food production processes	More stringent monitoring of sustainability of food production processes should be implemented by the responsible agencies.	C
Across the entire food cycle	Focus on development of more strategic and long-term food system transformation strategies	The strategies for sustainable food system transformation should be developed for longer periods with a political consensus, to avoid constant *fresh starts*.	S
	Development of platforms for citizens to share the best solutions and successes on food system transformation through individual action	Platforms should be developed for citizens to share individual actions and successes more easily in sustainable cooking, food waste prevention, and similar actions.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through measures such as subsidies for

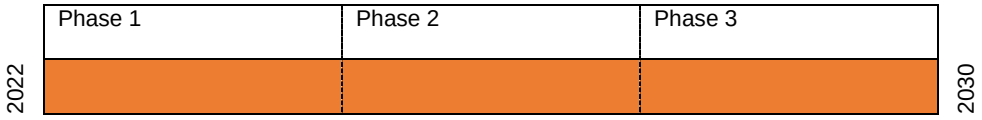
local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [596]
Sustainable food production	Subsidies for urban and community farming	Subsidies should be provided for citizens taking up urban and community farming.	C
	Investments in research of new methods in sustainable food production	Investments should be made in new methods of innovative sustainable food production (e.g., carbon farming, vertical farming).	C
Sustainable food processing, distribution & retail	Subsidies for small stores selling local and sustainable food products	Small stores selling local and sustainable food products, as well as sustainable food vendors should be subsidised (e.g., through rent subsidies).	C
	Shortening the supply chain	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g., reducing shipping routes, food processors and others).	C
	Investments in development of sustainable food distribution methods	Investments should be made in development of more sustainable food distribution methods (e.g., investments in bulk deliveries, use of electric vehicles etc.)	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include development of regulations on food waste, food labels, as well as development of new taxation instruments.

[596] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea Source [597]
Sustainable food processing, distribution & retail	Regulation expanding the deposit schemes for returns of food packaging	Regulation should be adopted to expand the use of deposit systems to new types of food packaging.	C
	A taxation system establishing prices of food products corresponding to their environmental impact	A taxation system with higher taxes on products with a high environmental impact (meat, non-seasonal produce) should be established.	C
	Regulation making environmental impact score on food product labels mandatory	Regulation should be introduced making environmental impact information mandatory on food labels (e.g., information on the CO2 footprint of a product).	C
Food loss and waste reduction	Regulation on reduction in food waste across the food chain	Regulation should be introduced on reduction of food waste across the food chain (e.g. food production, distribution, consumption).	C
	Establishment of a new tax for food-based businesses that do not actively work to reduce their food waste	A new tax should be imposed on food-based businesses that do not actively work to reduce their food waste generation.	S

Just Transition

The sustainable food system should provide access to healthy and sustainable food for all citizens, including those from more vulnerable socio-economic backgrounds, which will require committed government action.

The policy-making process in sustainable food system transformation should be inclusive to make sure that the interests of potentially vulnerable groups are properly represented: for example, including small-scale sustainable food producers in consultations on agricultural subsidies. Similarly, food policy should recognize the regional differences within the country.

6.22.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens or stakeholders[598] in Portugal that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and

[597] C – Citizens; S – expert stakeholders
[598] A meeting took place on 11 October 2022 and involved a participant from the national and local government, a participant from a non-governmental state agency, a participant from academia and a participant from a civil society organisation.

stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[599]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Portugal's policies on the EGD and Citizen and National Stakeholder Reports

Portugal has in the recent past introduced several policies to reduce emissions from the transport sector. In September 2019 it submitted its long-term strategy for low-emission development (LTS) to the UNFCCC Secretariat. This detailed a wide range of existing policies: improvements to sustainable urban mobility through mobility planning and investment in cycling, walking and public transport; decarbonisation of the fleet by moving to electricity and other fuels; eco-driving training and awareness raising campaigns about sustainable mobility; and increasing the proportion of biofuel in fossil fuels. The 2019 document committed the country to continuing and strengthening these policies. Portugal is spending EUR 1 063 billion of Recovery Funds[600] on delivering new metro, light rail and bus rapid transit schemes in Lisbon and Porto and buying electric buses for various cities' fleets; stimulating the take-up of EVs by public sector organisations; and reorganising public transport governance to make it more able to deliver an integrated system. Alongside the recovery funds, the government is investing its own resources in 15 000 new charging points for EVs.

The workshops with citizens and stakeholders showed that they are broadly supportive of national and EU policy, although there is some scepticism about the environmental friendliness of EVs. The stakeholders placed more emphasis than current government policy does on the land-use planning system as a means of reducing trip lengths and therefore CO2 emissions from transport. In more detail:

- ***Citizens*** suggested many measures. They first highlighted the need for regional and local land-use planning policies that are supportive of low-carbon transport: construction of large (free) car parks around central cities; vehicle access controls and pedestrian streets in historic centres; and the planning of facilities where they are easily accessed (not as now with schools that are miles away from anywhere for instance). They also suggested incentives for organisations and companies that encourage telework and differentiated entrance hours, including incentives to attend public services virtually/ shop online.

They were in favour of incentives for electric cars but related to the region's/local needs and depending on the nature of the public transport network in that area (for dispersed rural areas, it could be more efficient to provide shared electric vehicles than build a full conventional public transport network). There was also support for more alternative fuels (e.g., green hydrogen, electricity, ethanol) with affordable prices and conditions.

In relation to public transport, citizens wanted to see free (zero fare) public transport that is more efficient, on time, more secure and more comfortable, running at higher frequencies and speeds, on denser networks. School transport services should be free for all students. The participants wanted better regulation and integration of PT, including micro mobility and DRT, and shared cars, scooters, and bikes. In one subgroup (#3), all participants stated that they were willing to opt for public transport instead of private car if it meant adding up to 30 minutes travel time per day, or less.

599 Prof Tom Rye, Molde University College, Norway.
600 European Commission (2022), see note 255, page 249.

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Finally, they wanted to encourage more citizen involvement in developing mobility solutions and better and easier access to mobility information. A basic course should be developed for schools and companies: environmental education and citizenship.

- ***Stakeholders*** generally agreed with the points raised by citizens, but also added that priority lanes should be introduced for buses and trams, and there should be improved cycling and rail infrastructure, all within the context of the Sustainable Urban Mobility Plans (PLUS) guidelines. They also highlighted that housing policies should be aligned with walking, cycling and public transport policies so that housing is well-located and generates trips for these modes.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders as well as the experts' opinion.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[601]**
Clean vehicles	Low emission vehicle (LEV) purchase incentives	C&S
	LEV fuelling infrastructure	S
	Waste, especially battery, disposal	S
Better public transport	Better PT vehicles	C&S
	Free PT	C
	Dedicated PT for schools	C
	PT integration	C
	PT regulation and governance so system is publicly controlled	S
Spatial planning and city development	More, safer, bike paths	C&S
	Park and rides	C
	Pedestrianisation and traffic calming in inner cities	C
	15-minute city	S
Pricing and charges for transport	Incentives to companies offering telework	S
Planning and operation of transport networks	PT network improvement	C&S
	Promotion of shared mobility and its integration with public transport	C
	Access controls to inner cities for private motor vehicle traffic	C
Governance	Implementation of sustainable urban mobility plans (SUMPs) according to national guidance	S
	Regulating to enable more telework	S
	Align location policy for housing and key services with transport policy	S

[601] C – Citizens; S – expert stakeholders

Greening transport in general	Awareness raising and information about sustainable transport	S
	Environmental education and Citizenship course	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These in the main do not relate directly to the implementation of mobility-related aspects of the EGD (for example nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local level and included:

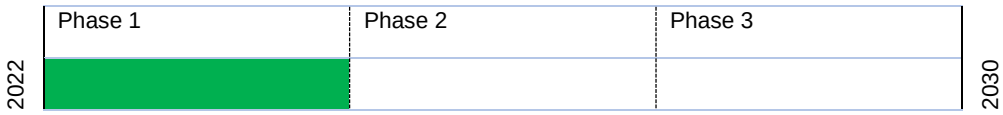
Theme	Action	Idea Source[602]
Governance	Major government spending on roads and the new Lisbon airport is directly contrary to EGD.	S
Clean vehicles	Electric cars are not accessible to most citizens; high costs of charging electric vehicles; environmental impact of millions of used batteries in the future is difficult to assess.	S
Spatial planning and city development	Topography of major Portuguese cities is a disincentive to cycling and walking; and their age means that there are many narrow streets, which are difficult to remodel for active travel.	S
Better public transport	Public transport in many Portuguese municipalities is run for profit by private sector operators.	S
Greening transport in general	Lack of information for the public about green transport solutions.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Instruments of implementation: communication and education

[602] C – Citizens; S – expert stakeholders

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Portugal. These mainly consist of communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [603]
Greening transport in general	Awareness-raising information and participation about sustainable transport	As well as awareness-raising campaigns to put the argument for changes in consumption and lifestyles, a need was also seen for more information about green transport choices, and more public participation in designing policies and measures to implement.	C
	Environmental education and citizenship course	It was suggested that both school children/ students and employees of organisations would benefit from such a course, which would explain the reasons for the EGD and the kind of changes in behaviour that are needed to achieve its goals.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.

Instruments of implementation: subsidies, investments, and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description	Idea source [604]
Clean vehicles	Low-emission vehicle (LEV) purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	LEV fuelling infrastructure	There is simply insufficient fuelling and charging infrastructure for low-emission vehicles in Portugal at present. Participants wanted to ensure that a range of engine technologies is catered for.	C
	Waste, especially	Whilst no solution was suggested, it was pointed	C

[603] C – Citizens; S – expert stakeholders
[604] C – Citizens; S – expert stakeholders

	battery, disposal	out that this will be a major stream of dangerous waste in future and that steps should be taken now to be able to manage it.	
Better public transport	Better PT vehicles	Investing in new, electric, and more comfortable public transport vehicles.	C&S
	Free PT	Participants felt that all public transport in Portugal should be free.	C
	Dedicated public transport for schools	To reduce lifts to school by car, this measure was suggested: essentially, school buses.	
Spatial planning and city development	More, safer, bike paths	The current bicycle infrastructure in most Portuguese cities is substandard, discontinuous, and unsafe, and so not an incentive to cycle.	S
	Park and rides	These should be installed on the approaches to cities, where people can park their cars and continue by public transport.	C
	Pedestrianisation and traffic calming in inner cities	Participants wanted to see more of these measures. Many streets in Portuguese cities remain dominated by parked cars, with relatively little pedestrian space.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
Planning and operation of tspt networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional, and national level.	C&S
Governance	No measures suggested	/	/

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus having the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Portugal citizens and experts require policy changes and regulation to be implemented. Some of the proposals, depending on the way in which they are developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [605]
Clean vehicles	No suggestion in this category	/	
Better public transport	PT integration	Better planning and coordination of public transport routes, and integration with micro-mobility and shared mobility services.	C&S
	PT regulation and governance so system is publicly controlled	Outside major cities bus transport in Portugal is currently provided in a deregulated market by private companies. This situation should change. Regional transport organisations should control public transport in their area.	S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	No suggestion in this category	/	/
Planning and operation of tspt networks	Promotion of shared mobility and its integration with public transport	The various forms of shared micro- and standard mobility, such as shared electric scooter, or carsharing, all have something to add to the public transport market. They should be properly integrated.	S
	Access controls to inner cities for private motor vehicle traffic	This measure can be pursued to improve the quality of life in inner cities.	C
Governance	Implementation of sustainable urban mobility plans (SUMPs) according to national guidance	This was felt to be an important step in ensuring that local transport meets the needs of the EGD. Portugal has had its own SUMP Guidance for some time now.	S
	Regulating to enable more telework	Regulation to require employers to offer the option of part time telework was supported, after a generally positive experience of telework during the pandemic.	C
	Align urban planning and location policy for housing and key services with transport policy	The links between spatial planning and transport were recognised clearly and participants wanted to see locational decisions taking into account transport objectives and impacts so that, for example, major new public services like hospitals and schools are located in places that are accessible by a range of modes of transport.	S

Just Transition

Only stakeholders really touched on the issue of a Just Transition, and only then rather briefly. They were concerned that the emphasis in the transition on EVs risks excluded many people because of the high cost of the vehicles and the electricity to charge them. In addition, they felt that there is a risk that people living in rural and peri-urban areas, without

[605] C – Citizens; S – expert stakeholders

a car or with a very old car, could be excluded by the transition to cleaner vehicles, unless public transport is significantly improved.

6.22.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders606 in Portugal that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission607. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Portugal's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Portugal in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[608], was not available for Portugal. As a result, the following table compares the priorities of the EGD with Portugal's national energy and climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP, Portugal's Integrated NECP[609] and Portugal's Long Term Renovation Strategy[610].

Increasing renewable energy in buildings	Portugal's renewable energy contribution to the EU level 2030 target is 47% of gross final energy consumption in 2030.

[606] A stakeholder meeting took place on 11 October 2022 and involved one representative from the national government, one from the local government, one from a non-profit association, one from a state administration and one from academia.
[607] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[608] Ivanova, V. et al. (2021. See note 30, page 63.
[609] European Commission (n.d.), see note 128, page 165.
[610] European Commission (n.d.), see note 129, page 165.

Improving energy efficiency in buildings	For energy efficiency, the contribution to the EU-level 2030 amounts to 21.5 Mtoe of primary energy consumption, translating into 14.9 MToe of final energy consumption. Portugal describes the integration of the Energy Efficiency first principle as one of its priorities in terms of decarbonisation. The overall ambition is set at set at a 35% reduction in energy consumption in 2030 compared to the 2007. This includes the inclusion of promotion of self-consumption and creation of renewable energy communities. There are also plans for increasing the renewable generation of heating and cooling, for example a target of 51% biomass in 2030, co-generation prioritised for energy intensive industries and an increase in the contribution of heat pumps and solar technologies in residential buildings. There is also a plan to increase the amount of renewable based gases for heating.
Tax system for energy products aligned to the green transition	The plan includes tax incentives for reducing the use of fossil fuels.
Provide funding for renovation of buildings	The plan clearly identifies investment needs per sector (electricity, transport, buildings, industry and other) until 2040-2050. The overall additional investments required for the decade 2021-2030 to achieve carbon neutrality by 2050 are estimated at €11-15 billion (1 billion per year). There is limited information about how in the policies and measures the investments will be allocated and articulated with the national investment plan. Portugal also has plans for the implementation of an electronic platform-based one-stop shop for managing the licensing of projects. According to Portugal's LTRS there is €26bn investment planned for residential dwellings between now and 2030 and €18.5bn for non-residential between now and 2030. The funding is split into the following categories: passive envelope, lighting, efficient systems, solar thermal, solar photovoltaic and PV and improved thermal comfort.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 1.3% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 5.1% medium, and 0.8% deep energy savings[611].
Create world-leading companies	The plan includes specific relevant targets for investment in research and innovation related to energy and climate objectives including a target of target of 3% of its GDP in research and innovation by 2030. Industries to be targeted include decarbonisation, digitalisation (industry 4.0) and circularity. There is also a mention to develop educational initiatives on the mitigation of climate change. This includes vocational training as well as training for technicians and specialists in the field of construction and NZEB

[611] European Commission (2019), see note 31, page 61.

	buildings and other technical specialists.
Raise global ambition to tackle climate change	The plan proposes awareness campaigns for sustainable production and consumption as well as leveraging the role of local energies and climate agencies for awareness actions. There are also plans to support and develop new platforms to promote energy literacy.
Improve health and well-being	The plan provides broad information on the interactions with air quality and air emissions policy.
Address inequality and energy poverty	The plan provides neither an assessment of the number of households in energy poverty nor an indicative objective for its reduction.
Ensure a Just Transition that is fair, competitive, and green	The final plan considers some of the just and fair transition aspects and provides information on the social, employment and skills impacts of a transition to a climate neutral economy, such as for example employment and skills in green and energy intensive sectors.
Mobilising industry for a clean and circular economy	The plan clearly presents the interaction between climate and circular economy objectives including with an attempt of quantification of the GHG emissions reduction of the circular economy.

Portugal is a country with extensive regions that have political autonomy, Portugal has five Coordination and Regional Development Commissions (in Portuguese CCDR) besides two autonomous regions (Azores and Madeira), with full political autonomy.

Increasing renewable energy in buildings: National stakeholders felt there should be more innovation and financing of measures that promote self-consumption in buildings. This is mentioned by the NECP but there are no clear strategies identified.

Improving energy efficiency in buildings: Citizens suggested that both passive and active measures should be suggested. Passive measures include one-off measures which are implemented and require no further action from the citizen, for example retrofitting the building envelope with an increased level of insulation. Active measures are measures which the citizens must take on a regular basis, for example only using appliances during off-peak hours when there is less strain on the distribution grid. They also suggested that there should be more community projects. They also thought that there should be laws for older leases that promote the adoption of energy-efficiency measures.

National stakeholders mentioned there is difficulty in implementing innovative solutions due to decision-makers' prejudices, and innovative building designers are constrained by building codes. Advancements are only therefore made when there is an innovative and receptive mayor.

Provide funding for renovation of buildings: National stakeholders confirmed that currently in Portugal there is 100% full cost incentive systems for the public administration and 85% cost incentive for citizens and the private sector. They felt that governments should finance renovation for all at the 100% threshold. Citizens mentioned there is a lack of information on existing incentive schemes and that they need to be simplified.

Renovate at least 3% of the total floor area of public buildings annually: Citizens felt that public buildings should lead the way. National stakeholders agreed but mentioned that

the limited budgets available create constraints. This was contradictory however to the discussions that also mentioned that 100% of costs are covered for renovation of the public sector in Portugal. It is thus not clear what the constraints are. The national stakeholders also mentioned it is difficult to renovate older buildings, which constitute the bulk of state-owned properties. For older buildings there are constraints including lengthy and complex contracting procedures, as these buildings could include heritage aspects. As such, this creates an increased administrative burden which could impact the budgets available to renovate these buildings.

Create world-leading companies: National stakeholders suggested that to increase the skilled workforce, sectoral programmes need to be scaled and incorporated into the national qualifications catalogue (CNQ) that is created and managed by the National Agency for Qualification and Vocational Education. They also mentioned there are projects in place to support professional training centres but the impact on current policies is unknown.

Raise global ambition to tackle climate change: Citizens mentioned that there needs to be education regarding energy efficiency technologies, for example media campaigns. National stakeholders agreed with this view citing that the media campaigns should promote energy saving and green and sustainable buildings.

Address inequality and energy poverty: Citizens mentioned that fair prices should be promoted, especially to more vulnerable groups.

Mobilising industry for a clean and circular economy: Citizens mentioned that technologies with a lower carbon footprint should be adopted for the green transition. Furthermore, alternative solutions such as nature-based solutions should be explored.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. There were a considerable number of actions suggested by the national stakeholders. The majority of these were categorised as actions that can be carried out now with minimal support, however some of these suggested measures would possibly require government support or would take longer to implement. Even though there are a wide number of actions suggested, categories including renovating at least 3% of the floor area, improving health and wellbeing, addressing energy poverty and ensuring a Just Transition was not covered.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Promote active measures across renewable energy communities Long-term commitment to renewables

Improving energy efficiency in buildings	Improved legislation to increase the energy efficiency of existing buildings Enable consumption monitoring of existing buildings Initiate one-stop shops Create incentives for older leases that promote the adoption of energy efficiency measures Enable cross-collaboration between countries on energy efficiency measures Enable tenants to benefit from the renovation of their homes Sustainable financing in home loans Legislation to design buildings in an energy-efficient and sustainable way Enable a city-university led approach Monetise the additional benefits of energy efficiency that enhance the return-on-investment ratio through VAT and other tax benefits Ensure contribution of passive measures
Tax system for energy products aligned to the green transition	Link property tax legislation with energy efficiency measures
Provide funding for renovation of buildings	Simplify existing incentive schemes Create incentives for materials with a good ecological footprint Create 100% renovation schemes for all Create budgets for renewable energy in buildings
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	Create regional training centres EU-wide energy efficiency expert Include the priorities of the EGD in University curriculums
Raise global ambition to tackle climate change	Education on the use of electricity from clean sources
Improve health and well-being	No actions suggested
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	No actions suggested
Mobilising industry for a clean and circular economy	Ensure local materials with a low-carbon footprint are used in energy efficiency projects Ensure whole-life practices for the construction of buildings Ecological construction awards

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[612]

[612] C – Citizens; S – expert stakeholders

Increasing renewable energy in buildings	No barriers mentioned	/
Improving energy efficiency in buildings	Politicians are unwilling to test new formulas and there is difficulty in implementing innovative solutions due to decision-makers' prejudices.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	Lack of information on existing incentive schemes.	C
	The energy-efficiency renewal schemes are not accessible to everyone.	S
	Regulatory barriers prevent the incentive from being paid upfront.	S
	The level of funding is not high enough, for example the efficiency voucher (EUR 1 500) is a minimum and insufficient amount; this is the lumpsum amount that is given to each property owner to replace windows for efficient models, with an energy class equal to 'A+'.	S
Renovate at least 3% of the total floor area of public buildings annually	There are lengthy and complex contracting procedures for public administration entities.	S
Create world-leading companies	No barriers mentioned	/
Raise global ambition to tackle climate change	Media campaigns lacking consistency and continuity of a message extended over time.	S
	In media campaigns, the 'innovation' message can create uncertainty and rejection.	S
	Media campaigns with a paternalistic tone cause rejection and low adherence.	S
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	Possibility that some groups will be left behind in the green transition.	S
Mobilising industry for a clean and circular economy	Potential unintended damage to the environment as a result of renovation.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. There were a significant number of actions suggested with a good level of descriptive detail. These covered

everything from energy-efficiency measures, improving incentive schemes, increasing awareness and creating training.

Theme	Action name	Description	Idea Source[613]
Increasing renewable energy in buildings	Promote active measures across renewable energy communities	Renewable energy communities are community-based initiatives. They can be understood as social niches, as they comprise specific and organised subsets that is a key condition for their economic and social sustainability. The organisation and management capacity of this niche is a critical aspect, as there is often heterogeneity in the niche in relation to its actors, their motivations, energy literacy as well as the technology used, and the conditions of installation and operation.	S
Improving energy efficiency in buildings	Improved legislation to increase the energy efficiency of existing buildings	Improve legislation to increase the energy efficiency of existing buildings.	C
	Enable consumption monitoring of existing buildings	Encourage consumption reduction through consumption monitoring (for example through energy communities) and use data analysis to encourage behaviour change in energy consumption.	S
	Initiate one-stop shops	Municipalities could create and promote one-stop shops staffed with specialised 'brokers' that can help complete energy-efficiency application forms and increase their probability of success.	S
	Create incentives for older leases that promote the adoption of energy efficiency measures	Create incentives for older leases that promote the adoption of energy efficiency measures.	C
	Enable cross-collaboration between countries on energy efficiency measures	Increase the opportunities to systematically compare with statistics from other countries on energy efficiency and make this information publicly available to all citizens in all Member States.	S
	Enable tenants to benefit from the renovation of their homes	Tenants should also benefit from the renovation of their homes. This is, for example, the case of Lisbon Municipality affordable income programme, the creation of a municipal card in which consumption reduction is converted into mobility credits, cultural services, etc.	S
	Sustainable financing in home loans	Create regulations for the financial sector for sustainable financing in home loans that could have a positive impact on energy-efficiency construction.	S
Tax system for	Link property tax	Property tax legislation is decided at	S

[613] C – Citizens; S – expert stakeholders

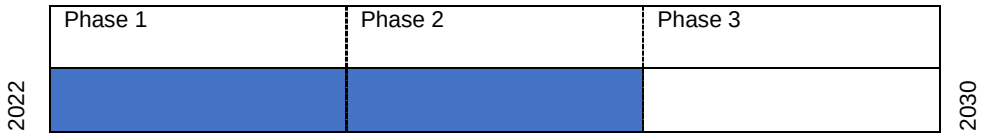
energy products aligned to the green transition	legislation with energy efficiency measures	national level. In Portugal, the property tax (IMI) is an important instrument and specific changes in legislation can empower municipalities to apply discounts associated with energy efficiency. Moreover, to encourage energy consumption reduction through consumption monitoring (through energy communities) and use data analysis to encourage behaviour change through the application of IMI differentiators and other fees.	
Provide funding for renovation of buildings	Simplify existing incentive schemes	Simplify existing incentive schemes as citizens felt they were difficult to understand.	C&S
	Create incentives for materials with a good ecological footprint	Promote the adoption of materials with a reduced ecological footprint compared to other alternatives (e.g. cork) through incentives through regional funding programmes.	S
	Create 100% renovation schemes for all	Make renovation schemes 100% funded by regional programmes aligned with the metropolitan areas and associated development policies and energy-efficiency priorities.	S
	Create budgets for renewable energy in buildings	Make energy renewal accessible to all through the allocation of significant budgetary weight.	S
Create world-leading companies	Create regional training centres	Retraining of technical staff in the industry, through regional training centres; updated training programmes for the most common workforce in the region, including reskilling of construction technicians.	S
	EU-wide energy efficiency expert	Create an EU-wide efficiency-energy renovation specialist label.	S
Raise global ambition to tackle climate change	Education on the use of electricity from clean sources	The national government can encourage the use of electricity from clean sources instead of gas. Mass media and social media campaigns with successful examples of energy efficiency adoption and the savings they afford could be effective at the national level.	C&S
Mobilising industry for a clean and circular economy	Ensure local materials with a low-carbon footprint are used in energy efficiency projects	Promote the use of traditional and local materials that have a low ecological footprint (specific materials are used for each region) and that have could a positive economic impact on the local economy and reward their use with differential municipal fees.	S
	Ensure whole-life practices for the construction of buildings	National legislation can also be created to support waste reduction in construction, the adoption of other more efficient construction technologies, and the promotion of a national manual of best practices in the design of the entire life cycle of the building energy-efficiently and sustainably.	S
	Ecological construction awards	Create construction awards for the most regionally adapted houses. This could	S

		be used to promote the use of locally produced materials with a local tradition, with a low ecological footprint and using specific materials adapted to each region. This will also have a positive impact on the local economy.	

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There were less actions suggested in this category, covering suggestions to improved legislation, cross-collaboration between cities and universities and enabling the monetisation of the additional benefits of energy efficiency.

Theme	Action name	Description	Idea Source[614]
Improving energy efficiency in buildings	Legislation to design buildings in an energy-efficient and sustainable way	Create legislation to design buildings in an energy-efficient and sustainable way throughout the building's life cycle, through a manual of industry best practices.	S
	Enable a city-university led approach	Municipalities can promote the study of the impact of the proliferation of Local Accommodation in the adoption of energy efficiency measures in collaboration with universities or other entities.	S
	Monetise the additional benefits of energy efficiency that enhance the return-on-investment ratio through VAT and other tax benefits	Promote energy efficient construction through national sectoral associations as having a higher profit value per square metre, as the property can be sold at a higher value due to its improved energy efficiency. Regulations applicable to the financial sector for sustainable financing in home loans	S

[614] C – Citizens; S – expert stakeholders

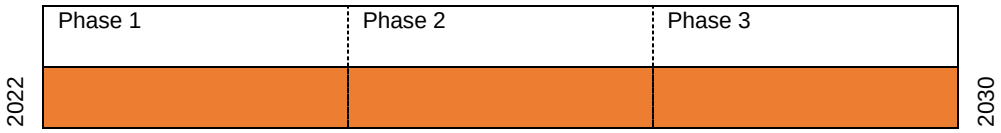
		could also have a positive impact.	
	Ensure robustness of energy efficiency measures	Create certified bodies internationally and in the EU to ensure the robustness of energy efficiency measures through certification.	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. These were also a small number of actions, including longer term commitment form governments for renewables along with the increasing of priorities in the university curriculums for the EGD.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[615]
Increasing renewable energy in buildings	Long-term commitment to renewables	Governments must commit to long-term renewable schemes and ensure renovation is accessible to everyone through significant funding at the national level, and simplify existing funding systems, i.e., less bureaucracy and more transparency in eligibility requirements - adapting incentives to regional characteristics.	S
Create world-leading companies	Include the priorities of the EGD in University curriculums	Designers and architecture schools have a big gap in their academic curriculum in terms of energy-efficiency buildings. These subjects are not core or mandatory and universities should be adapting to the opportunities created by the EGD.	S

Just Transition

National stakeholders mentioned that funding for renovation was too low to enable a Just Transition, however there was no discussion on the negative impacts for provision of 100%

[615] C – Citizens; S – expert stakeholders

renovation to all. The general feeling however was that renovation is only for the very rich or the very poor and there are hidden costs that make it difficult to afford complete renovation. They also felt it was important that property owners did not offset the cost of renovation to their tenants. Another comment related to renewable energy and only those who could afford the maintenance of renewable technologies can afford to implement them.

6.23 Romania

6.23.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[616] in Romania that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[617]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Romania's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Romania did not point to any key food policies on a national level. This does not necessarily reflect the state of policy but can rather serve as an indication of the lack of policies visible to the stakeholders present.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Romania.

- National Rural Development Programme for 2014-2020 (Ministry of Agriculture and Rural Development, 2014)[618] is a plan managed by the Ministry of Agriculture and Rural Development. The key priorities in the area of food systems are the following objectives: (2) enhancing farm viability and competitiveness; (3) promoting food chain organisation; (5) promoting resource efficiency and supporting the shift towards a low-carbon and climate-resilient economy.

- Strategy for the development of the agri-food sector in the medium and long term 2020-2030 (Ministry of Agriculture and Rural Development, 2015)[619]. The Strategy develops the approach to food systems innovation, focusing on issues such as competitiveness and sustainable development of rural areas, food safety, and environmental protection.

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[616] A stakeholder meeting took place on 30 September 2022 with one academia/research representative.
[617] Dr Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[618] Ministry of Agriculture and Rural Development, Government of Romania (2014). National Rural Development Programme for 2014-2020. Available at: https://www.madr.ro/docs/dezvoltare-rurala/programare-2014-2020/PNDR_2014_EN_-_2020_01.07.2014.pdf (Accessed 15 November 2022).
[619] Ministry of Agriculture and Rural Development, Government of Romania (2015). Strategy for developing the agri-food sector in the medium and long term 2020-2030 Available at: http://www.madr.ro/docs/agricultura/strategia-agroalimentara-2020-2030.pdf (Accessed on 15 November 2022).

General overview of actions per theme

The actions proposed by the Romanian citizens and stakeholders on transforming the current food system in Romania consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food processing, distribution and retail. The proposed actions are mainly focused on actions that can be implemented straight away through implementation tools such as communication, education, and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (5)	Ensuring the availability of farm animal vets in rural areas
	Advice for sustainable food producers interested in establishing cooperatives
	Incentives for urban farming
	Subsidies for small-scale sustainable food producers
	Development of a national strategy promoting small-scale sustainable food producers
Sustainable food processing, distribution & retail (7)	Educational workshops on reading food labels with understanding
	Public procurement should prioritise local and sustainably produced food.
	Municipal support and promotion of small-scale healthy food vendors
	Financial support for sustainable food producers to participate in food markets
	Shortening supply chains
	Regulation on food product labels, including a certificate on the ethical and environmental impact of the product
	Regulation on food labels, including a QR code with additional information on the production process of the food product
Sustainable food consumption (1)	Development of an interactive app connecting consumers and local food producers
Food loss and waste reduction	
Ensuring food security	
Combating food fraud (1)	More stringent monitoring of the quality of products with the *bio* label
Across the entire food cycle (1)	Establishment of a national programme on food education

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Action	Idea Source[620]
Sustainable food production	For small-scale food producers, EU funding for sustainable production and innovation in agriculture is difficult to access.	C
Sustainable food processing, distribution & retail	Certification of traditional food products is often a prohibitively long and difficult process. Furthermore, the producers are not sufficiently supported by the government.	C
	Local food products are generally not visible in supermarkets.	C
	Food product labels are physically small and difficult to read, especially for the elderly.	C
Sustainable food consumption	Consumers are mostly unaware of the environmental impact of their dietary choices.	S
	Education on sustainable food products is lacking for most of the population.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Romania. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as educational workshops on reading food labels, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as more stringent monitoring of organic food products, may be more difficult to implement successfully but can produce knock-on effects in increasing the general food quality of products.

Theme	Action name	Description	Idea Source [621]
Sustainable food	Ensuring the availability of farm	Farm animal vets should be made more accessible to farmers to maintain higher	C

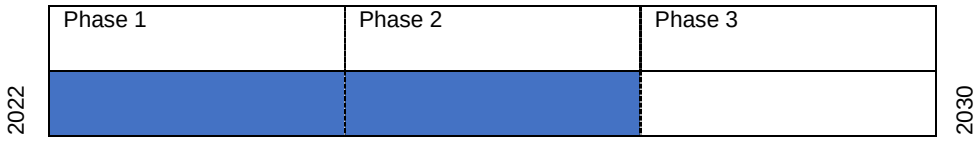
[620] C – Citizens; S – expert stakeholders
[621] C – Citizens; S – expert stakeholders

production	animal vets in rural areas	animal welfare standards (e.g. through mobile vet clinics).	
	Advice for sustainable food producers interested in establishing cooperatives	Municipalities should advise sustainable local food producers on how to organise into cooperatives.	C
Sustainable food processing, distribution & retail	Educational workshops on reading food labels with understanding	Municipalities should organise free educational workshops on how to read and understand food labels.	C
	Public procurement should prioritise local and sustainably produced food	Public procurement should emphasise local and sustainably produced food products instead of focusing on affordability.	S
	Municipal support and promotion of small-scale healthy food vendors	Small-scale food vendors selling healthy and sustainable food should receive technical support from municipalities (e.g. administrative support in licencing) and advertisement (e.g. on the municipality website and bulletin boards).	C
Sustainable food consumption	Development of an interactive app connecting consumers and local food producers	An interactive app should be developed, granting consumers easy access to purchasing food products from local and sustainable food producers.	C
Combating food fraud	More stringent monitoring of the quality of products with the *bio* label	Monitoring the quality of products with *bio* and *organic* labelling should be more stringent and frequent.	C
Across the entire food cycle	Establishment of a national programme on food education	A national education programme for schools should be developed, covering all aspects of food systems (e.g. origin of food, maintaining healthy diets, and reducing food waste).	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern

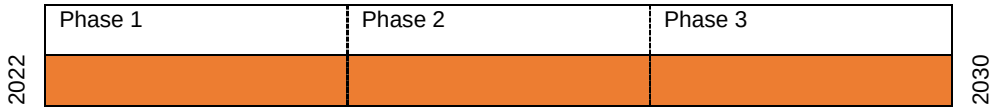
increasing the sustainability of food production through subsidies and incentives for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [622]
Sustainable food production	Incentives for urban farming	Incentives for new urban farmers (tool packages, financial grants, subsidised plot rental rates).	C
	Subsidies for small-scale sustainable food producers	Small-scale sustainable food producers should be supported through easy-to-access and timely allocation of agricultural subsidies.	C
Sustainable food processing, distribution & retail	Financial support for sustainable food producers to participate in food markets	Municipalities should subsidise the participation of sustainable food producers in food markets.	C
	Shortening supply chains	Subsidies to support reducing the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C&S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include the development of new strategies promoting sustainable food production, as well as regulations on food labels.

Theme	Action name	Description	Idea Source [623]

[622] C – Citizens; S – expert stakeholders
[623] C – Citizens; S – expert stakeholders

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Sustainable food production	Development of a national strategy promoting small-scale sustainable food producers	A national strategy should be developed to support small-scale sustainable food producers in different regions.	C
Sustainable food processing, distribution & retail	Regulation on food product labels, including a certificate on the ethical and environmental impact of the product	Food product labels should include certificates on the ethical (animal welfare and workers' conditions) and environmental (CO2 emissions, water use) impact of food products.	C
	Regulation on food labels, including a QR code with additional information on the production process of the food product	Food product labels should include a QR code and important certificates on a product's sustainable, ethical, and health characteristics. This will make the physical food label easier to read and understand.	C

Just Transition

The sustainable food system transition comes with the danger of making healthy and sustainable food products unaffordable for the most socio-economically vulnerable groups, barring them from accessing the high-quality food they need. Compensatory measures need to be developed to avoid this.

6.23.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[624] in Romania that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[625]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Romania's policies on the EGD and Citizen and National Stakeholder Reports

Romania has, in the recent past, introduced several policies to reduce emissions from the transport sector. The National Action Plan on Climate Change 2016-2020 is the most recent document summarising these policies[626]. Its three main objectives are to develop and stimulate the use of climate-friendly transport by pricing (higher fuel taxes and parking fees, for example), to manage transport demand in urban areas, and to reverse the long-term

[624] A stakeholder meeting took place on 30 September 2022 and involved a representative from a local development agency and a representative from a civil society organisation.
[625] Prof Tom Rye, Molde University College, Norway.
[626] Government of Romania (2015). Romania - 2016-2020 National action plan on climate change. Available at https://documents.banquemondiale.org/fr/publication/documents-reports/documentdetail/254931468188327164/romania-2016-2020-national-action-plan-on-climate-change-summary-report (Accessed on 26 November 2022).

decline of the country's railways. Now, from 2022, Romania is spending EUR 5.5 billion of Recovery Funds on improving its rail infrastructure and purchasing lower-emission trains; buying 3 200 electric minibuses for school transport; buying new zero-emission vehicles for public transport in major cities; expanding the metro in Cluj Napoca and Bucharest; and installing over 30 000 EV charging stations across the country[627]. In addition, individual and corporate purchasers of EVs will enjoy subsidies.

The workshops with citizens and stakeholders revealed support for EU and government policies on carbon reduction in transport, apart from some doubts among citizens about the environmental benefits of EVs. There was also more readiness for taxes on polluting travellers and vehicles and a great desire for more transparency from the government about how EU and national finances are spent in this policy area. In more detail:

- ***Citizens*** were very supportive of education and awareness programmes to try to bring about behaviour change to more sustainable modes of transport, but also of greater transparency from public authorities so that citizens understand why changes are happening. They felt that exchanging experience programmes with other countries would also be useful. They also strongly believed that public transport should be improved, reorganised, and made accessible and affordable, and safer cycling infrastructure should be provided. They pointed out that this should be done in the context of effective metropolitan sustainable urban mobility plans (SUMPs), which were argued to be restrictions on the use of cars in urban areas and city centres. They wanted to see increased taxes on polluting cars and the end of the import of cheap and very polluting second-hand cars to the country. They were somewhat sceptical about the environmental benefits of EVs mainly because of the electricity generation mix.

- ***Stakeholders*** (one from civil society and one from a regional authority) generally agreed with the suggestions from citizens but also wanted to see much greater investment in charging and parking facilities for EVs. They also thought that the 15-minute city was a concept worthy of investigation, although they were uncertain that it would be applicable in the Romanian context.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need government support to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	**Action**	**Idea source[628]**

[627] European Commission (2022). Recovery and resilience plans for Romania. Available at https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/recovery-and-resilience-plan-romania_en (Accessed on 26 November 2022).
[628] C – Citizens; S – expert stakeholders

Clean vehicles	EV purchase incentives	C&S
	More EV charging and parking opportunities	S
	Old vehicle buyback programme	S
Better public transport	Better PT vehicles	C&S
	PT integration	S
	Cheaper PT	C&S
Spatial planning and city development	More bike paths	C&S
	15-minute city	C
Pricing and charges for transport	Taxation of polluting vehicles	S
Planning and operation of transport networks	PT network improvement	C&S
	Investment in regional and long-distance rail	S
Governance	Coordination of and support for sustainable urban mobility plans (SUMPs)	S
	More transparency in how grants are spent and projects funded	S
	Faster implementation of major projects	S
Greening transport in general	Education and awareness raising	S
	Exchange of experience	S

Barriers to EGD implementation

Citizens did not have any views on barriers to EGD implementation. Stakeholders, however, made a few points. These do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final)); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Action	Idea source[629]
Governance	Lack of political stability at the national government level, namely that policy priorities change frequently.	S
Clean vehicles	Low incomes make EVs unaffordable.	S
Planning and operation of transport networks	Lack of transparency and capacity slows the delivery of major infrastructure projects that would otherwise help green the transport sector.	S
Governance	Lack of consensus on regional development between the State, local authorities and other actors involved.	S

[629] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Romania. These mainly comprise communication and education activities. All these actions can be implemented immediately.

Theme	Action name	Description	Idea source 630
Greening transport in general	Education and awareness raising	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution, especially in schools from an early age.	C&S
	Exchange of experience	Exchange projects to share best practice between Romania and other Member States and between different public administrations in Romania, providing expertise, advice and consultations in reaching mobility goals.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term.

[630] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea source [631]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, and providing financial incentives to buy e-vehicles. The perception of both citizens and stakeholders was that current purchase incentives make very little difference to the price and, therefore, the attractiveness of EVs.	C&S
	More EV charging and parking opportunities	There is currently very little provision for EV charging and parking in Romania.	S
	Old vehicle buyback programme	Stakeholders suggested that government could give incentives in the form of a buyback programme for private individuals to dispose of their old cars to increase take-up levels of EVs.	S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public transport vehicles.	C&S
	Cheaper PT	Most participants thought it should be cheaper as part of a general public transport upgrade, particularly in rural areas.	C&S
Spatial planning and city developme nt	More bike paths	Differentiation of bicycle paths and their development according to their purpose (inter-city, central areas where the traffic is highest, etc.)	S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local and regional	S
	Investment in regional and long-distance rail	Similar to the above, but this time the rail was mentioned specifically.	S
Governance	No measures suggested		

[631] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Many of the proposals from Romanian citizens and experts require implementing policy changes and regulations. Depending on how they are developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [632]
Clean vehicles	EU-wide register of second-hand vehicles	There was a lot of concern about the 'dumping' of old and dirty second-hand cars on the Romanian market, and stakeholders suggested that an EU-wide database of second-hand cars might make it easier for consumers to check how polluting the car they are considering buying is.	S
Better public transport	PT integration	Better planning and coordination of public transport routes is required as part of a general improvement to public transport. In suburban and rural areas, much public transport is privately operated; it was argued that intelligent transport systems could help to integrate these operations with publicly provided public transport.	C&S
Spatial planning and city developmen t	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport. Stakeholders were not certain that this could be achieved in Romania but wanted its applicability further researched.	S
Pricing and charges for transport	No suggestions in this category	/	
Planning and operation of test networks	No suggestions in this category	/	
Governance	Coordination of and support for sustainable urban mobility plans	Both groups of contributors wanted to see more effective metropolitan-level mobility plans and felt these could be facilitated by	C&S

[632] C – Citizens; S – expert stakeholders

	(SUMPs)	better central government support and financing.	
	More transparency in how grants are spent and projects funded	Both citizens and stakeholders were concerned that there was a lack of transparency in the spending of public money. This reduces trust in the green transition.	C&S
	Faster implementation of major projects	Stakeholders felt that slow decision-making, procurement and contracting processes slow the implementation of major projects necessary for the transition to low-carbon transport.	S

Just Transition

Stakeholders expressed some concern about a Just Transition in mobility. This is primarily related to the possible exclusion of people in rural areas dependent on public transport and the exclusion of the vast majority of people from EV purchases, given the high EV price. Beyond these points, there was little other discussion on the Just Transition.

6.23.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Romania[633] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[634]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Romania's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[635], Romania's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €29.2bn. This can be broken down as follows concerning the European Green Deal (EGD) priorities.

Increasing renewable energy in buildings	The focus on renewable energy is on the larger industry with €0.1bn allocated. That includes renewables and other energy efficiency measures.

[633] A stakeholder meeting took place on 30 September 2022 and involved one Civil society representative
[634] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[635] Ivanova, V. et al. (2021), see note 30, pahe 63.

Improving energy efficiency in buildings	The NRRP will include a National Buildings Registry and €5m towards implementing the Energy Building Passport along with Digital Renovation Passports and Logbooks. Under the 'Fund for Renovation Wave', the target is to reduce 30% of primary energy consumption. The expectation is to deliver a total CO2 savings of at least 0.13 m. tons and total primary energy savings of at least 0.03 Mtep in the residential sector and at least 0.07 m. tons and total primary energy savings of at least 0.02 Mtep in the public sector.
The tax system for energy products aligned with the green transition	Not specifically mentioned by the review of the NRRP.
Provide funding for the renovation of buildings	€2.2bn allocated for the 'Fund for Renovation Wave', which includes €1.1bn for multi-family residential properties and €1.17bn for public buildings. There is also €0.2bn allocated towards a financial instrument for energy efficiency for SMEs and individuals. There is also €0.1bn allocated for larger industry covering energy efficiency and renewable energy.
Renovate at least 3% of the total floor area of public buildings annually	A study for the EC estimates that only 1.3% of renovations in the residential sector were medium depth and 0.1.% deep renovations[636]. For the non-residential sector, only 1.9% were medium and 0.4% deep. However, Romania's target is to surpass the current expectation and achieve a 3-4% deep renovation rate by 2030.
Create world-leading companies	€10m allocated to strengthen the professional capacity of specialists and construction workers for buildings with increased energy performance. This will include creating at least eight centres within universities to provide specialised courses in the field of energy efficiency performance and at least ten certification schemes for professionals in the field of construction.
Raise global ambition to tackle climate change	Not specifically mentioned by the review of the NRRP.
Improve health and well-being	Improving indoor air quality on the back of renovation projects is also mentioned as part of the plan.
Address inequality and energy poverty	20% of the funding for multi-family building renovation will target buildings occupied by economically disadvantaged communities.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned by the review of the NRRP.
Mobilising industry for a clean and circular economy	The use of low-carbon materials and of non-toxic, recyclable and biodegradable construction products is also mentioned as part of the plan.

Only one national stakeholder partook in the workshop. However, it was reported that this stakeholder did have a very good knowledge of the Romanian situation. The following compares the views of the citizens and the national stakeholder along with Romania's

[636] European Commission (2019), see note 31, page 61.

National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is first to understand where the strengths and weaknesses lie in the current national plans; and, secondly, to inform the actions to be taken to ensure the adoption of the EGD from the views of the citizens and national stakeholders.

Increasing renewable energy in buildings: Citizens believed all new buildings should have some renewable energy source. There is some allocation of funding mentioned in the NRRP for renewables, but it seems to be limited to funding measures for large industries. The national stakeholder noted that governments should commit to renewable energy schemes in the long run, which suggests there has been a lack of commitment and perhaps a lack of trust in investing in such technologies as a result.

They also mentioned that there should be more education and awareness on empowering citizens to become prosumers and understanding what that means, i.e. a citizen that both consumers and produces energy. However, there also seems to be a limit on the regulations for prosumer systems with a cap of 200kW (order 143 Dec 2021, GEO 15 2022). It is suggested this should be re-examined to encourage the adoption of renewable technologies to enable more prosumers. In addition, a tax deduction for the first 24 months for those looking to become prosumers could incentivise further uptake of renewable energy in buildings.

There is also a need for suppliers to have the tools ready to support the prosumers. There seems to be a lot of work to do from the top down concerning regulation and the bottom up concerning education and awareness to increase the adoption of renewable energy technologies in buildings.

Improving energy efficiency in buildings: According to the Renovate2Recover report, the main barriers to realise the transformation of the building stock are limited information about the building stock (lack of a national registry of buildings) and the lack of understanding of energy consumption and potential savings.

This is consolidated nicely with the citizens' views that buildings should be periodically checked and the national stakeholders' perspective, who mentioned that the state should thoroughly inspect buildings to ensure they meet the existing standards and the need for energy-efficient certified buildings.

The NRRP has plans to implement Building Passports, Digital Renovation Passports and Building Logbooks, which will ensure that buildings are regularly checked concerning energy consumption. As such, all are nicely aligned in their view of what is needed, which would suggest that implementing the NRRP will have a positive impact.

The tax system for energy products aligned to the green transition: The national stakeholder suggested that local councils should take action to approve initiatives concerning the local tax system. There are no plans specifically mentioned by the NRRP.

Provide funding for the renovation of buildings: There is significant funding available for both public and private buildings from the NRRP, and it is well allocated across different industry sectors. In addition, the national stakeholder suggested that those looking to downsize should receive better incentives.

Renovate at least 3% of the total floor area of public buildings annually: Romania's targeted renovation rate of 3-4% of the building stock is ambitious. The national stakeholder felt that public buildings should lead by example. In addition, private owners of buildings

used by public institutions should be responsible for keeping these buildings in shape. However, public building owners and private owners of buildings used by public institutions should have easier access to financing mechanisms. Further challenges identified by the Renovate2Recover report include labour market constraints, lack of incentives for energy renovation, access to financing products and low mobilisation of private financing, and deployment of smart and energy efficiency technologies. These also need to be addressed to achieve the ambitious target.

Create world-leading companies: Citizens felt there should be more funding for R&D activities to enable world-leading companies for energy efficiency renovation of buildings. The national stakeholder also mentioned this.

The national stakeholder further mentioned many issues surrounding creating the skillsets required to implement energy efficiency in building projects. There is a lack of qualified workers, and those who receive qualifications tend to leave to go elsewhere. More work at the government level to keep these workers is needed. Furthermore, funding applications must be submitted by certified workers, and if these certified workers are few, this leaves a gap in the market to deliver energy efficiency projects. The national stakeholder suggested that the policy allow non-certified workers to apply for funding. However, it should be noted that this could lead to an issue with the quality of the work implemented.

The national stakeholder also suggested that new roles should be created for professionals responsible for installing renewable energy systems. The NRRP allocates €10m for upskilling and training of construction and energy professionals; however, the Renovate2Recover report would question if this goes far enough, given that €10m year on year between now and 2030 is estimated to be needed to achieve the objectives for energy efficiency projects.

Raise global ambition to tackle climate change: This was not mentioned by the NRRP, citizens or the national stakeholder.

Improve health and well-being: The national stakeholder mentioned there should be education and awareness around the fact that energy efficiency will also positively impact indoor air quality and comfort for the citizens. Citizens should be educated on this concept and inspired to use clean and renewable energy. The NRRP also mentions that this should be promoted as part of renovation projects which shows good alignment.

Address inequality and energy poverty: This was not addressed in any detail by the citizens or the national stakeholder. The NRRP does, however, mention funding allocations to those in poor areas.

Ensure a Just Transition that is fair, competitive, and green: This was not addressed in detail by the citizens or the national stakeholder.

Mobilising industry for a clean and circular economy: Citizens mentioned that rainwater recycling should be included as an energy efficiency measure in buildings. The NRRP mentions clean and circular economy somewhat with respect to the use of low-carbon and non-toxic materials. The national stakeholder focused on the ability of citizens to become prosumers to encourage clean energy.

General overview of actions per theme

The following is a summary of the actions proposed by the national stakeholders and citizens during the workshops.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Long-term commitment to renewable energy schemes Guidelines for financing renewable energy sources
Improving energy efficiency in buildings	'Greenest building' contest Education and awareness campaigns concerning available existing schemes, such as the Environmental Fund Agency Education and awareness campaigns concerning the benefits of energy efficiency Smart public lighting systems Increased funding available for Environmental Fund Agency Initiatives Education and awareness campaigns concerning clean energy Further education and awareness on the benefits of energy efficiency renovation for citizens to encourage the adoption Increased technology development for automated energy control
Tax system for energy products aligned to the green transition	Tax incentives for renovation projects
Provide funding for the renovation of buildings	Energy efficiency mandates for those owning buildings used by public institutions Incentives for citizens to downsize Increased financial funds for people on low-income thresholds Increased financial funds for all types of residential building types 100% financing for energy efficiency projects
Renovate at least 3% of the total floor area of public buildings annually	Education for local authorities on how to access structural funds Increased training for construction and energy professionals to create a skilled workforce
Create world-leading companies	Clear guidelines for qualifications for skilled workers Create energy efficiency expert-certified role Increased professional development and continuous professional development courses available to the construction and energy workforce
Raise global ambition to tackle climate change	No action was mentioned
Improve health and well-being	No action was mentioned
Address inequality and energy poverty	No action was mentioned
Ensure a Just Transition that is fair, competitive and green	No action was mentioned
Mobilising industry for a clean and circular economy	No action was mentioned

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[637]
Increasing renewable energy in buildings	No barriers were mentioned.	/
Improving energy efficiency in buildings	The concept of reducing emissions is not explained enough to citizens; at the national level, the concept of CO2 should be explained with the help of the media.	S
Tax system for energy products aligned to the green transition	No barriers were mentioned.	/
Provide funding for the renovation of buildings	Funding is available for renovating multi-apartment buildings, but getting approval depends on the owners' association.	S
Renovate at least 3% of the total floor area of public buildings annually	No barriers were mentioned.	/
Create world-leading companies	For energy efficiency renovation, certain levels of qualifications are required. However, many within the labour force do not have the financial means to attain these qualifications. As there is a shortage of skills, the work is therefore carried out by construction workers who do not have the necessary qualifications and hence this is illegal. These workers do have the skills to get the job done, it is just the official qualification they are missing.	S
	Many companies invest in qualifying their employees but once qualified, they leave the company.	S
Raise global ambition to tackle climate change	No barriers were mentioned.	/
Improve health and well-being	No barriers were mentioned.	/
Address inequality and energy poverty	No barriers were mentioned.	/
Ensure a Just Transition that is fair, competitive and green	No barriers were mentioned.	/
Mobilising industry for a clean and circular economy	No barriers were mentioned.	/

[637] C – Citizens; S – Expert Stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: education and awareness campaigns, guidelines, incentives, funding, and improved guidelines for obtaining qualifications.

Actions that can be carried out now with minimal support suggested by the national stakeholder and the citizens are outlined in the following table. There is a wide mix of suggested actions, most coming from the national stakeholder. They include education and awareness campaigns, guidelines for renewable energy, long-term commitments to renewable energy schemes, mandates for private building owners who rent to public institutions, incentives for downsizing and funding for those on lower incomes, and improved guidelines for obtaining qualifications for energy efficiency projects.

Theme	Action name	Description	Idea Source[638]
Increasing renewable energy in buildings	Long-term commitment to renewable energy schemes	Governments should commit to renewable energy schemes in the long run.	S
	Guidelines for financing renewable energy sources	Guidelines should be created for financing renewable sources.	S
Improving energy efficiency in buildings	'Greenest building' contest	A local contest for the 'greenest building' to create social competition and encourage the adoption of energy efficiency in building measures.	C
	Education and awareness campaigns concerning available existing schemes, such as the Environmental Fund Agency	Many funding and tools are available to citizens, e.g. the Environmental Fund Agency (AFM), and these should be promoted to citizens via education and awareness campaigns.	S
	Education and awareness campaigns concerning the benefits of energy efficiency	More awareness campaigns should be implemented to promote energy efficiency in buildings.	S
	Smart public lighting	There is a need to switch to smart public	S

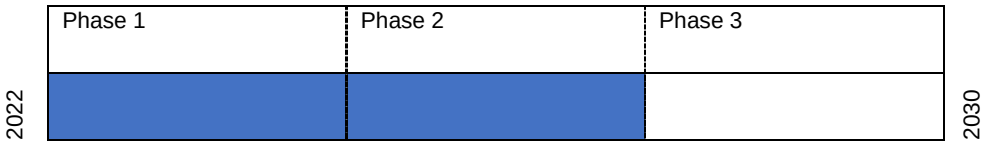
[638] C – Citizens; S – expert stakeholders

	systems	lighting systems, i.e. high-performance systems with remote management that can change the light intensity in periods of low traffic to reduce consumption.	
Provide funding for the renovation of buildings	Energy efficiency mandates for those owning buildings used by public institutions	The owner of buildings used by public institutions should be responsible for keeping the building in the best shape, ensuring the highest level of energy efficiency. There should be easier access to financing tools for the owner to keep the buildings energy-efficient.	S
	Incentives for citizens to downsize	Citizens downsizing and living in smaller apartments should receive better incentives.	S
	Increased financial funds for people on low-income thresholds	Building renovation should be accessible to everybody through special funds for people with financial difficulties.	S
	Increased financial funds for all types of residential building types	Financial support should be given to people who live in houses, as the existing measures are generally focused on those who live in blocks of flats.	S
Create world-leading companies	Clear guidelines for qualifications for skilled workers	The government should make clearer how the people working in the energy efficiency sector can obtain qualifications.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: education of national authorities

The national stakeholder and citizens also suggested actions that can be carried out in the medium term but need government support to implement further. These were not many, but they had some good suggestions for educating local authorities and supporting them in applying for structural funds.

Theme	Action name	Description	Idea Source[639]
Improving energy efficiency in buildings	Increased funding available for Environmental Fund Agency Initiatives	More support, both strategically and financially, should be given by the Environmental Fund Agency to initiatives.	S
	Education and awareness campaigns concerning clean energy	Awareness campaigns on energy efficiency should be implemented to help citizens better understand the concept of reducing emissions. This means using clean, renewable energy and not using no energy at all.	S
Renovate at least 3% of the total floor area of public buildings annually	Education for local authorities on how to access structural funds	More local authorities should learn how to access structural funds using the financial instruments available.	S
Create world-leading companies	Increased training for construction and energy professionals to create a skilled workforce	More workforces should be trained through courses offered at the national level, and professional education must be developed.	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation: tax incentive schemes, training courses

There were also a few actions that will take longer to implement suggested. This included harder-to-implement measures such as tax incentive schemes and 100% financing for energy efficiency projects. Other suggestions included an EU-certified energy efficiency expert role and increased availability of CPD courses for existing workers.

Theme	Action name	Description	Idea Source[640]
Improving energy efficiency in buildings	Further education and awareness on the benefits of energy efficiency renovation for citizens to	Citizens should reduce energy consumption by investing in adequate insulation, double glazing, solar panels, etc. They need to understand that a bigger investment today will bring huge	S

[639] C – Citizens; S – expert stakeholders
[640] C – Citizens; S – expert stakeholders

	encourage adoption	benefits tomorrow.	
Tax system for energy products aligned to the green transition	Tax incentives for renovation projects	Tax reduction for five years should be granted to those who have properly insulated their house/apartment.	S
Provide funding for the renovation of buildings	100% financing for energy efficiency projects	100% financing renovation programmes should be implemented.	S
Create world-leading companies	Create energy efficiency expert-certified role	The professional role of renovation expert should be created.	S
	Increased professional development and continuous professional development courses available to the construction and energy workforce	Professional education should be provided to create a skilled workforce.	S

Just Transition

The national stakeholder observed that only those who could afford the maintenance of renewable energy technologies could afford them. Furthermore, hidden costs of renovation make financing difficult for citizens.

Renovation programmes are currently not seen as inclusive. The current focus for funding schemes is on apartments in urban areas rather than houses or rural areas. In addition, property owners should not pass on renovation costs to the tenants.

6.24 Slovakia

6.24.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[641] in Slovakia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States. They are complemented by the analysis of the

[641] A stakeholder meeting took place on 26 September 2022 and involved one from academia, one national authority and one civil society member.

thematic expert appointed by the European Commission[642]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Slovakia's policies on the EGD and Citizen and National Stakeholder Reports

The following policy was pointed out by the participants of the stakeholder meeting in Slovakia. While it does not present an exhaustive list, it can serve as an indication of the most visible policies to the stakeholders.

- The national 'Quality mark' programme (znackakvality.sk, 2022)[643], guarantees the quality of food products. There is some doubt, however, on how well-known this labelling is and whether it would need more promotion.

General overview of actions per theme

The actions proposed by the Slovak citizens and stakeholders on transforming the current food system in Slovakia consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on actions that aim to address food processing, distribution, and retail. The most emphasised actions are to be implemented in the short-term periods.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (7)	Increasing the number of inspections for fishers and hunters
	Developing communication platforms for sustainable food producers to exchange best practices
	Subsidies for projects aiming to improve the effective use of land
	Prioritising subsidies on crops that are consumed in Slovakia
	Technical and financial support for beekeeping
	Investments in smart agrotechnology
	Increasing support for urban farming
Sustainable food processing, distribution & retail (15)	Promotion of environmentally sustainable and healthy food advertising
	Promotional campaigns for food products without packaging
	Development of regional platforms showcasing product offers from small local producers
	Ensure enough space for small-scale food producers' products in big supermarkets

[642] Jacqueline Broerse, Professor of Innovation and Communication in the Health and Life Sciences at Vrije Universiteit Amsterdam.
[643] Znackakvality.sk (2022) Značka Kvality. Available at: https://znackakvality.sk/sk/znacka-kvality (Accessed on 11 November 2022).

	Data collection on tracking recycling of food packaging
	Administrative support for small food shops and farmers
	Explore measures to increase the processing of domestically consumed food products within Slovakia
	Expansion of monetary kickback systems for recycling food packaging
	Subsidies for local farmers and food producers to improve their chances of getting into a market
	Funding for research on the development of more sustainable food packaging
	Regulation on the amount of plastic in packaging
	Development of new food label warnings for products including potentially harmful chemicals or preservatives
	Legislation on purchase quotas and fair purchase prices of local and sustainable food products for supermarkets
	Regulation on including carbon and water footprint of food products on food labels
	Introduction of a tax on unsustainable food product packaging
Sustainable food consumption (2)	School education on how sustainable food consumption reduces pollution
	Repeal of the ban on vegan products being named by their non-vegan equivalents
Food loss and waste reduction (4)	Awareness campaign on individual responsibility in reducing food waste
	Subsidies for cities and towns to develop a smart waste system tracking amounts of food waste
	Regulating the effective use of food waste
	Regulation on food waste reduction across the food system
Ensuring food security (0)	
Combating food fraud (2)	Strict food quality controls, emphasising quality compared to other EU countries
	Establishing a public database of food suppliers
Across the entire food cycle (1)	Awareness campaign on the importance of food system transition

Barriers to each theme

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Action**	**Idea Source**[644]
Sustainable food processing, distribution & retail	Confusing food labels discourage consumers from informing themselves about food product healthiness and environmental impact.	S
Sustainable food consumption	With more food products being produced sustainably, food product costs increase for consumers.	C&S
	Large groups of society are unconvinced of the need to invest more money in more sustainable food products.	S
Combating food fraud	Lack of legislation preventing companies from misleading consumers on food product claims.	C&S

[644] C – Citizens; S – expert stakeholders

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Across the entire food cycle	Unclear division of responsibilities between the different government bodies regarding sustainable food system transition.	C
	EU legislation gets translated into national law without considering the local context.	C
	Single-market rules prevent the protection of the national food industry, even when it's often more sustainable.	S
	Food policy development is often an exclusive process, with many key stakeholders being left out.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Slovakia. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All of these actions can be implemented straight away. Some, such as awareness campaigns promoting food waste reduction, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as exploring measures for an increase in food production, can be more difficult to implement successfully but can have knock-on effects, such as increased control over the food production process.

Theme	Action name	Description	Idea Source [645]
Sustainable food production	Increasing the number of inspections for fishers and hunters	There should be more inspections on fishers and hunters to ensure they are not putting too much strain on the wildlife populations.	C
	Developing communication platforms for sustainable food producers to exchange best practices	Online and in-person platforms for the exchange of best practices should be made for sustainable food producers.	S
Sustainable	Promotion of	Supermarket chains should be	C

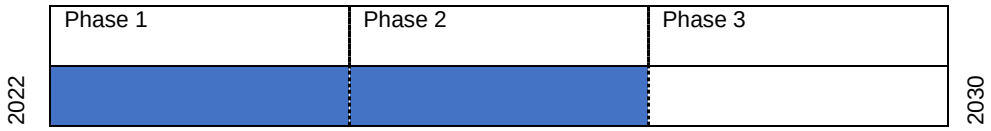
[645] C – Citizens; S – expert stakeholders

food processing, distribution & retail	environmentally sustainable and healthy food advertising	encouraged by public agencies and civic groups to focus their food advertising on environmentally sustainable and healthy food.	
	Promotional campaigns for food products without packaging	Promotion of food products without packaging when possible.	C
	Development of regional platforms showcasing product offers from small local producers.	Regional platforms (such as websites and social media channels) should be made to showcase food products from local and sustainable producers.	C
	Ensure enough space for small-scale food producers' products in big supermarkets	Supermarket chains should ensure dedicated spaces to showcase small-scale and local food producers' products.	C
	Data collection on recycling of food packaging	Data should be collected on a national level to assess what types of food packaging get recycled and the areas for improvement.	C
	Administrative support for small food shops and farmers	The local governments should support small food shops and small-scale farmers through accountancy and logistics advice.	C
	Explore measures to increase the processing of domestically consumed food products within Slovakia	Public agencies should assess the opportunities to return some food processing operations to Slovakia to avoid exports of primary food products and imports of final food products.	S
Sustainable food consumption	School education on how sustainable food consumption reduces pollution	Educational programmes in schools on how food consumption patterns influence waste generation (e.g. wastewater, soil pollution etc.).	C
Food loss and waste reduction	Awareness campaign on individual responsibility in reducing food waste	Awareness campaigns on reducing food waste on a personal level, targeting diverse social and age groups.	C
Combating food fraud	Strict food quality controls, emphasising quality compared to other EU countries	Expanding food quality controls to more products, comparing the quality to products in other EU countries, to address the West-East differences.	C
	Establishing a public database of food suppliers	Development of a publicly available database listing food suppliers and results of food quality inspections on their products.	C
Across the entire food cycle	Awareness campaign on the importance of food system transition	Awareness campaigns should be organised on what a food system transformation is and why it is important.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production and sustainable food processing, distribution, and retail. Specifically, they include actions such as subsidies for projects increasing the effective use of land, as well as reduction of administrative loads for local farmers. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [646]
Sustainable food production	Subsidies for projects aiming to improve the effective use of land	Projects improving the effective use of land (e.g. by using agricultural land for beekeeping, diversifying crops, or introducing new methods of crop cultivation) should be subsidised.	C
	Prioritising subsidies on crops that are consumed in Slovakia	Agricultural subsidies should target crops that are most used for consumption within Slovakia.	C
	Technical and financial support for beekeeping	New beekeepers should receive financial and technical support (e.g. know-how from other beekeepers) to start new hives.	C
	Investments in smart agrotechnology	Investments should be made in new agricultural technologies (e.g. improving the management of pesticide control, reducing water use etc.).	C
	Increasing support for urban farming	Urban farmers should receive financial support, as well as organisational support, through sharing of best practices with more experienced urban farmers and those from other countries.	C
Sustainable food processing, distribution & retail	Expansion of monetary kickback systems for recycling food packaging	Recycling food packaging and reusable food packaging returns at supermarkets should be rewarded with monetary kickbacks.	C
	Subsidies for local	Local farmers and food producers should	C

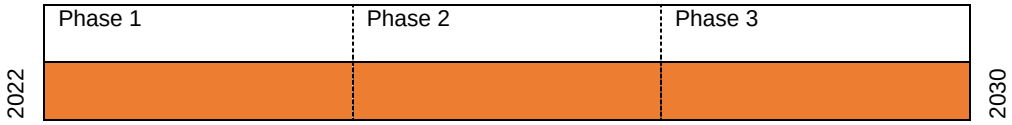
[646] C – Citizens; S – expert stakeholders

	farmers and food producers to improve their chances of getting into a market	receive subsidies to help place their products on the market at more competitive prices.	
	Funding for research on the development of more sustainable food packaging	More investments should be made in research on the development of sustainable food packaging materials.	C
Food loss and waste reduction	Subsidies for cities and towns to develop a smart waste system tracking amounts of food waste	Cities and towns should receive funding from the national government to develop smart waste systems, tracking the amounts of food waste thrown away and getting an insight on how to reduce it.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Theme	Action name	Description	Idea Source [647]
Sustainable food processing, distribution & retail	Regulation on the amount of plastic that can be used by food producers on packaging	The amount of plastic in food packaging should be strictly regulated, depending on the food product category.	C
	Development of new food label warnings for products including potentially harmful chemicals or preservatives	Products including potentially harmful chemicals and preservatives should be forced to include more visible label warnings.	C
	Legislation on purchase quotas and fair purchase prices of local and sustainable food products for	Legislation should be introduced for supermarkets to maintain quotas on locally sourced, sustainable products and to maintain fair purchase prices for them.	C

[647] C – Citizens; S – expert stakeholders

	supermarkets		
	Regulation on including carbon and water footprint of food products on food labels	Regulation to ensure inclusion of carbon and water footprint of food products on food labels on a national level.	C
	Introduction of a tax on unsustainable food product packaging	A tax should be introduced on food products with unsustainable packaging (e.g. single-use packaging) and used to fund research on new sustainable (e.g. biodegradable and reusable) packaging.	C
Sustainable food consumption	Repeal of the ban on vegan products being named by their non-vegan equivalents	Previously adopted bans on vegan products using traditional product naming (e.g. oat *milk*, vegan *burger*) should be repealed since this practice is working against a shift to sustainable food systems.	S
Food loss and waste reduction	Regulating the effective use of food waste	Regulation on the effective use of food waste should be introduced (e.g. using food unsuitable for human consumption as animal feed).	C
	Regulation on food waste reduction across the food system	Food waste should be regulated across all stages of the food system (including production, processing, retail, and consumption).	S

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in product labelling, price structuring, and revision of existing policy. An example of these actions is revising the ban on vegan products using traditional (non-vegan) naming.

Just Transition

When discussing the fair transition in sustainable food systems, particular focus and attention should be given to the pricing of food products, especially when it comes to more vulnerable social groups, as they are likeliest to lose access to sustainable and healthy food products.

The participants also highlighted the need for inclusion and connecting stakeholders of food systems. Ultimately, a fair transition will be possible only with a clear and functioning regulatory/legal system that clarifies the roles of different actors and simultaneously protects the most vulnerable social groups from any adverse outcomes of the transition.

6.24.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[648] in Slovakia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[649]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Slovakia's policies on the EGD and Citizen and National Stakeholder Reports

Emissions in the transport sector in Slovakia increased by 7% from 2005 to 2019 and accounted for 20% of total emissions in 2019 – a trend was seen in other economies where heavy industry is gradually reducing its emissions, but transport remains a challenging sector[650]. The Slovak government's main approach to cutting emissions in transport is through biofuels, improving public transport, and making EV charging easier. Slovakia is spending EUR 804 million of Recovery Funds on replacing polluting public transport vehicles and increasing the speed and coverage of local public transport, especially tram lines; investing in its rail network to boost speeds and connections; and extending the network of charging stations across the country[651]. The legal framework for installing charging infrastructure will also be modified to speed up the process.

The workshops with citizens and stakeholders revealed the following:

- ***Citizens*** strongly believed that public transport services should be better integrated (including park and ride sites), with a single ticket available for a much larger area and by an app. Rural public transport should be improved by using demand-responsive transport and smaller vehicles. Buses should be converted to hydrogen or electricity. Cycling infrastructure should be improved to make it a safe and easy alternative, and this should be done quickly. Across the country, the planning and delivery timescale for new transport infrastructure has to be sped up. The group was also in favour of purchase subsidies for EVs and improved charging infrastructure, although there was some scepticism about the environment-friendliness of battery production. They wanted to see subsidies or incentives for people using cleaner modes for commuting and legislation to make obtaining permission to work from home much easier.

- The one ***stakeholder*** generally agreed with the suggestions from citizens and did not suggest any further actions or measures.

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[648] A meeting took place on 26 September 2022 involving one participant from academia.
[649] Prof Tom Rye, Molde University College, Norway.
[650] European Parliament (2021). Climate Action in Slovakia. Latest State of Play Available at: https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)698767 (Accessed on 28 November 2022).
[651] European Commission (2022). Plán Obnovy. Cestovná mapa k lepšiemu Slovensku. Available at: https://www.planobnovy.sk/site/assets/files/1019/kompletny-plan-obnovy.pdf (Accessed on 28 November 2022).

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source[652]
Clean vehicles	EV purchase incentives	C
	Energy needs planning	C
	Investment in charging infrastructure	C
Better public transport	Clean PT vehicles	C
	PT ticketing integration (and app)	C
	PT service integration	C
Spatial planning and city development	More bike paths	C
Pricing and charges for transport	Tax breaks for commuting by sustainable modes	C
Planning and operation of transport networks	PT network improvement	C
Governance	Speeding up planning processes for new infrastructure	C
	Working from home made easier	C
Greening transport in general	Education and training in sustainable mobility	C

Barriers to EGD implementation

Citizens and the stakeholder only raised two barriers to implementation. These do not relate directly to the implementation of mobility-related aspects of the Green Deal (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final)); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Action	Idea source[653]
Governance	Insufficient finance for rail investment	S
Governance	Length of time taken to deliver new infrastructure	C

[652] C – Citizens; S – expert stakeholders
[653] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

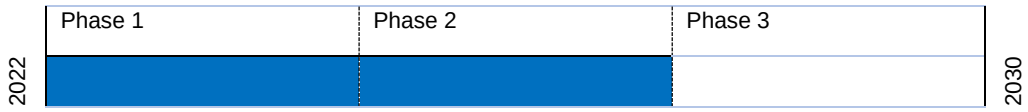
Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Austria. These mainly comprise communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [654]
Greening transport in general	Education	The stakeholder believed there is a lack of trained staff in administrations and consultancies in Slovakia to respond to the low-carbon transport agenda. Therefore, more training and education are needed.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer-term are written in italics in the 'action name' column.

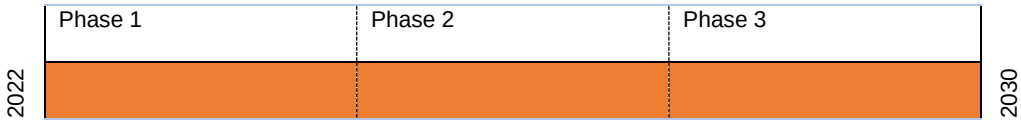
[654] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea source [655]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles	C
	EV charging infrastructure	This is minimal in Slovakia, so it needs to be expanded.	
Better public transport	Cleaner PT vehicles	Investing in new, electric and more comfortable public transport vehicles – particularly replacing old buses.	C
Spatial planning, city development	More bike paths	Few details were given but in general, the current cycling infrastructure was perceived to be lacking.	C
Pricing and charges for transport	No measures suggested	/	/
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national levels.	C
Governance	No measures suggested	/	/

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Many proposals from Slovakian citizens and experts require implementing policy changes and regulations. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

[655] C – Citizens; S – expert stakeholders

Theme	Action name	Description	Idea source [656]
Clean vehicles	Energy needs planning	At the EU level, energy needs planning, mainly due to the increased use of e-vehicles.	C
Better public transport	PT ticketing integration (and app)	Integrated public transport tickets covering a wider area and available electronically were requested.	C
	PT service integration	Better planning and coordination of public transport routes, particularly providing more integrated service into rural areas (perhaps demand responsive), and also linked to park and ride sites on the edges of urban areas.	C
Spatial planning and city developmen t	No suggestions in this category		
Pricing and charges for transport	Tax breaks for commuting by sustainable modes	No further details were provided.	C
Planning and operation of tspt networks	No suggestions in this category		
Governance	Speeding up planning processes for new infrastructure	These are perceived to be too slow in Slovakia at present.	C
	Working from home made easier	Legislation is needed to require employers to consider requests for working from home and education required about its benefits.	C

Just Transition

The Just Transition was only very briefly discussed. There was concern that poor rural public transport leaves people without a car isolated; that a policy focusing on EVs risks excluding much of the population because of the cost of these vehicles; and that if the EGD pushes up the cost of transport, it is vulnerable people who will feel this most.

6.24.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Slovakia[657] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the

[656] C – Citizens; S – expert stakeholders
[657] A stakeholder meeting took place on 26 September 2022 and involved 2 National authorities, 2 regional authorities, 1 research and education community members , 1 asynchronous Civil society member, 1 asynchronous regional authority

thematic expert appointed by the European Commission[658]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Slovakia's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?,* commissioned by the Renovate Europe campaign[659], Slovakia's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €6.6bn. This can be broken down as follows concerning the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	The NRRP mentions building integrated renewables as part of the solution to reduce primary energy savings by 30% but no explicit detail on which systems are being encouraged or promoted. Other sources include project such as ERDF funded Project 'Green to Households' has co-funded 18 000 installations of small sources of renewable energy in households across Slovakia. These include more than 5 000 solar collectors, 3,500 heat pumps, 1 500 biomass boilers and 3 000+ photovoltaic systems[660].
Improving energy efficiency in buildings	The NRRP plans to renovate at least 30,000 single-family buildings and 117 000m2 of historic buildings by 2026 to achieve at least 30% primary energy savings. Energy performance improvements will come from fabric upgrades, energy use optimisation and the installation of renewables. Improvements will be verified from energy performance certificates.
Tax system for energy products aligned to the green transition	Not specifically mentioned.
Provide funding for renovation of buildings	€528m is allocated to energy efficiency in homes and €200m for the renovation of historical public buildings. €17.8m is allocated for the renovation of hospitals and medical services stations, €700k for health centres, €18m for courts, €10m for public force buildings and €1.2m for fire stations. €817m allocated for new hospitals which will have to achieve a BREEAM Excellent rating from the BRE rating system[661]. €21m is allocated for technical assistance including the creation of administrative centres including regional one-stop-shops.
Renovate at least 3% of the total floor area of	An EC study has estimated that 1% of residential

[658] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[659] Ivanova, V. et al. (2021), see note 30, page 61.
[660] Dimitrova M., TheMayor.eu (2018). Project 'Green to the Households' will finance powering with renewable energy across Slovakia. Available at: https://www.themayor.eu/en/a/view/project-green-to-the-households-will-finance-powering-with-renewable-energy-across-slovakia-1019 (Accessed on 4 January 2023).
[661] For the sustainability assessment rating system, cf. https://bregroup.com/products/breeam/how-breeam-works/#:~:text=The%20BREEAM%20ratings%20range%20from,assessment%20and%20its%20BREEAM%20rating.

public buildings annually	sector renovations from 2012-2016 were medium depth and 0.1% were deep renovation. The non-residential sector achieved 3.4% medium renovation and 0.5% deep renovation[662].
Create world-leading companies	Basic upskilling activities are carried out within architects and civil engineering chambers. Further programmes for upskilling are not part of the plan.
Raise global ambition to tackle climate change	Not specifically mentioned.
Improve health and well-being	Measures to improve the quality of the indoor environment will also be supported alongside climate change adaptation measures such as rainwater capture, green roofs, and others.
Address inequality and energy poverty	Energy poverty is addressed through targeted marketing activities and technical assistance in regions with a high incidence of energy poverty.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned.
Mobilising industry for a clean and circular economy	All measures within building investment require that at least 70% (by weight) of non-hazardous construction and demolition waste produced on site is ready for re-use, use, recycling, and further recovery of the material.

The following compares the views of the citizens and the national stakeholders along with Slovakia's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders in order to inform the actions to be taken to ensure adoption of the EGD.

Increasing renewable energy in buildings: National stakeholders noted that there is a scheme to encourage uptake of building integrated renewable generation, i.e. the 'Green for Households' scheme[2]. However, there was no mention of whether they thought this scheme was good or bad or any positive or negative stories related to it. Citizens did not mention renewable energy at all, which suggests further education on available technologies along with the economic and environmental benefits of renewables in buildings is needed.

Improving energy efficiency in buildings: There was not a lot of discussion between either citizens or national stakeholders on how to improve energy efficiency in buildings. Some discussion was held with the national stakeholders regarding the need for more support for 'green growth' and not enough for degrowth or optimising existing consumption and also a programme Live sparingly[663], which is a governmental subsidy scheme to increase energy efficiency in old residential buildings and to support the construction of new zero-energy residential houses.

Tax system for energy products aligned to the green transition: Not mentioned by citizens, national stakeholders or the NRRP.

[662] European Commission (2019), see note 31, page 61.
[663] More information is available on https://byvajteusporne.sk/.

Provide funding for renovation of buildings: Citizens felt that there is not enough availability of financial sources for renovation projects and that energy efficiency technology was seen to be expensive and can take time. They felt there should be more extensive financial support and they should also be more accessible to citizens. National stakeholders disagreed with the statement that funding for the renovation projects should cover 100% of expenses due to the concerns of misusing the funds more when personal savings are not used.

National stakeholders also mentioned that rules on state aid are complicated for companies that want to do renovation projects, discouraging these companies from even trying to apply. However, it should be noted that funding for projects implementing the EGD is not considered as state-aid, which suggests a lack of awareness at the policy implementation level for rolling out the EGD.

One national stakeholder felt that there was too much emphasis on funding expensive longer-term solutions such as hydrogen, leaving fewer resources for other green options that could be achieved quickly and could support the poorest.

Regarding private buildings, national stakeholders stated that there is currently a lack of coordination of projects at different levels, and the regional level of this coordination needs to be improved. However, the NRRP states that regional one-stop shops are going to be rolled out from 2022 onwards, which suggests there is a lack of communication at the national stakeholder level or a lack of awareness on what has been planned. Citizens suggested that the government should create an app to show the citizen how they can save if they undertake a renovation or energy efficiency project. This is something that could potentially be included in the one-stop-shop approach to encourage uptake.

National stakeholders mentioned other barriers to accessing funding, for example in projects that use state procurement, companies can only use experts who are employed full-time. This situation should be changed as renovations are mostly seasonal work.

Renovate at least 3% of the total floor area of public buildings annually: Both citizens and national stakeholders agreed that public buildings should be used as exemplars for renovation projects. However, the review of the NRRP, undertaken by Slovakian National Partner, Budovy pre budúcnost' (Buildings for the Future)[664], outlined that there is a lack of technical assistance for both homeowners and municipalities, which is one of the main challenges to increasing the rate and depth of renovation. One national stakeholder also felt that Slovakia currently lacks regional and local capacities to roll out EGD and assist in reaching its goals, which consolidates this view.

Create world-leading companies: National stakeholders mentioned there is a lack of providers for energy efficiency projects and citizens mentioned there is not enough skilled workers. Both of these views are confirmed by the NRRP which states there is plans for upskilling apart from what already exists within engineering and architectural chambers.

Raise global ambition to tackle climate change: Not mentioned by citizens, national stakeholders or the NRRP.

Improve health and well-being: One national stakeholder recognised that the EGD can have many positive impacts including cleaner air, cleaner water, healthier soils, and

[664] More information is available on https://bpb.sk/?lang=en#home.

increase in biodiversity. Citizens mentioned that lower energy bills and higher comfort is an opportunity that should be taken advantage of to encourage renovation projects. The NRRP also mentions the importance of additional benefits of renovation on health and well-being suggesting that this topic is being well covered at national level and a good understanding by all.

Address inequality and energy poverty: Citizens and national stakeholders did not address inequality and energy poverty in their discussions despite the review of the NRRP which highlighted that energy poverty is addressed through targeted marketing activities and technical assistance in regions with a high incidence of energy poverty. There was a small mention by the national stakeholders in relation to energy security as a result of the war in Ukraine.

Ensure a Just Transition that is fair, competitive and green: National stakeholders mentioned the need for all members of society to have the same access to good quality professionals carrying out renovation works, otherwise it could lead to negative impacts, for example mould on walls due to poor insulation retrofit.

Mobilising industry for a clean and circular economy: This was also not discussed by citizens or national stakeholders however it does seem to be well addressed by the NRRP.

General overview of actions per the theme

The following is a summary of the actions proposed by the national stakeholders during the workshops. The citizens suggested no direct actions. Overall, not many actions were suggested; the majority focused on energy efficiency improvements, increasing funding for private home/building owners, or creating an increased, skilled workforce.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Awareness campaigns regarding local projects Improved short-term process for renovation Policy for every renovation project to include a renewable energy component
Improving energy efficiency in buildings	Education programmes in schools to understand basic energy-efficiency measures Social media campaigns regarding energy efficiency in buildings Mandate that energy, climate, and security be topics of prime-time public media debates Energy app to identify how to save energy and the benefits of renovation Policy to ensure more green areas of both new projects and renovations Funding to exchange heat sources from carbon-intensive to other options Building passports for energy efficiency

Tax system for energy products aligned to the green transition	Tax reduction for buildings that support renewable energy
Provide funding for renovation of buildings	Improved process for access to funding for small companies Greater and easier access to funding for renovation projects Financial supports for renovation Coordinated approach for funding for energy efficiency related projects
Renovate at least 3% of the total floor area of public buildings annually	Target specific cohorts of buildings Prioritise and accelerate legislation to make the renovation of public buildings compulsory
Create world-leading companies	Certification and standardisation for construction and energy experts carrying out renovation projects Increased educational programmes for energy efficiency academic courses
Raise global ambition to tackle climate change	
Improve health and well-being	Education regarding additional benefits to renovation such as improved indoor environment
Address inequality and energy poverty	No specific actions mentioned
Ensure a Just Transition that is fair, competitive and green	No specific actions mentioned
Mobilising industry for a clean and circular economy	No specific actions mentioned

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified, these were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[665]
Increasing renewable energy in buildings	No specific barriers mentioned	
Improving energy efficiency in buildings	Citizens can find it hard to change their behaviour about saving energy.	S
	Lack of free advisory services.	S
	Renovations of historical buildings are problematic as these should keep their historical features while being renovated, making the projects more complicated.	S
	Disagreements between the owners of the property.	C
	Energy efficiency technology can be expensive.	C
Tax system for energy products aligned to the green transition	No specific barriers mentioned	
Provide funding for renovation of buildings	Substantial administrative obstacles in procurement processes.	S

[665] C – Citizens; S – Expert Stakeholders

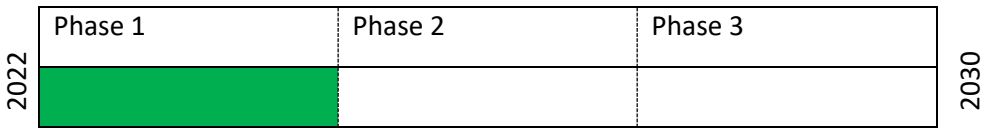
	Low information on energy efficiency projects and the existing funding schemes.	S
	Not good enough specification of funding schemes, e.g. specifications that lead to excluding some potential applicants.	S
	Complexity and complications of processes and paperwork needed for the renovation projects and to receive funding.	S
	Low flexibility for funding: rules for receiving funding are stringent. Because renovations are usually long-term projects, things can change over time, leading to problems with the continuation of the financing.	S
	Lack of long-term planning of funding schemes from a state level.	S
	Low availability of financial sources.	C
Renovate at least 3% of the total floor area of public buildings annually	No specific barriers mentioned	
Create world-leading companies	Slovak workers are often motivated to work abroad as the pay and working conditions are often better.	S
	Lack of experts on energy efficiency	C&S
	Jobs connected to renovation projects are often seasonal, which makes it harder to have experts.	S
Raise global ambition to tackle climate change	No specific barriers mentioned	
Improve health and well-being	No specific barriers mentioned	
Address inequality and energy poverty	The current situation in Ukraine, energy security concerns.	S
Ensure a Just Transition that is fair, competitive and green	No specific barriers mentioned	
Mobilising industry for a clean and circular economy	No specific barriers mentioned	

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Main instruments of implementation: communication and education

Actions that can be carried out now with minimal support suggested by the national stakeholders and the citizens are outlined in the following table. Most of these are the low-hanging fruit including awareness campaigns and education programmes in schools and improved processes to access support for funding. Others such as the state ordering public media to focus on energy, climate and security as part of prime prime-time, seem unrealistic and draconian. Other actions including targeting specific buildings and eliminating certain groups do not elaborate on why one particular building type should be chosen and another ignored.

Theme	Action name	Description	Idea Source [666]
Increasing renewable energy in buildings	Awareness campaigns regarding local projects	More campaigns should be launched that show the results of ongoing projects, e.g. retrofitting of the municipal office.	S
	Improved short-term process for renovation	The deep renovation requests should impose short-time timelines since they currently foresee a long-term process.	S
Improving energy efficiency in buildings	Education programmes in schools to understand basic energy efficiency measures	Environmental education should be compulsory to ensure that all people understand basic energy efficiency measures.	S
	Social media campaigns regarding energy efficiency in buildings	The Slovak government should make education about these issues more interesting, maybe using social media campaigns.	S
	Mandate that energy, climate, and security are topics of prime time public media debates	The State should order public media to change the broadcasting structure so that energy, climate and security are the main topics in prime time.	S
	Energy app to identify how to save energy and the benefits of renovation	Government should educate on how to renovate; create an app to show how much you can save by simple measures.	C
Provide funding for renovation of buildings	Improved process for access to funding for small companies	Facilitate the rules for small companies to access state funding for renovation projects .	S
	Greater and easier access to funding for renovation projects	More extensive and more accessible financial reports.	C
Renovate at least 3% of the total floor area of public buildings annually	Target specific cohorts of buildings	Targeted and consistent criteria for the selection of buildings to be chosen for renovation are needed. Such measures should specify the categories of buildings to be supported. Public funds should not support sports buildings, community centres, and hotels but hospitals, nursing homes, school buildings, and residential buildings.	S

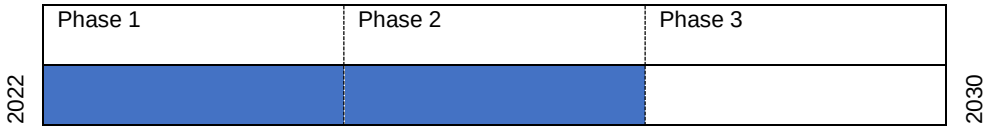
[666] C – Citizens; S – expert stakeholders

Improve health and well-being	Education regarding additional benefits to renovation such as improved indoor environment	At the local, regional, and national level, create education campaigns that show the additional benefits to renovation including the improved indoor environment of homes which leads to improved health benefits.	C&S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: policy, financial instruments, education and training

Actions that can be carried out in the medium term but need government support to implement further were also suggested by the national stakeholders and citizens. These focused mainly around new policies such as ensuring every renovation project included renewables or green areas, or introducing building passports for a building's energy efficiency. Other actions focused on tax reductions for buildings supporting renewables or increased financial support for renovation. Increasing the skillset of the construction and energy professionals was also highlighted.

Theme	Action name	Description	Idea Source [667]
Increasing renewable energy in buildings	Policy for every renovation project to include a renewable energy component	Make integrating renewable energy for renovation and new building projects compulsory. While realising such an idea can take longer, a request to include it from a specific year can be done with the legislative changes in the medium timeframe.	S
Improving energy efficiency in buildings	Policy to ensure more green areas of both new projects and renovations	Participants elaborated on the citizens' idea of adding more green areas for all new projects and renovations. They agreed with the statement and would like to see legislative changes on both state and EU levels.	S
	Funding to exchange heat sources from carbon-intensive to other options	National stakeholders representing the regional level would also like to see a specific funding scheme from the State for exchanging heat sources from carbon-intensive to other options. Many	S

[667] C – Citizens; S – expert stakeholders

		people in particular areas, such as villages and rural areas, still use wood, and there is a lack of targeted funding for these people.	
	Building passports for energy efficiency	Employ passports for buildings with key static and dynamic energy data that would rate their energy efficiency.	S
Tax system for energy products aligned to the green transition	Tax reduction for buildings that support renewable energy	Participants suggested lowering some taxes for the owners of buildings that utilise renewable energy.	S
Provide funding for renovation of buildings	Financial supports for renovation	A repeated theme during the discussion was the need to improve the financial schemes for energy efficiency projects. A participant suggested that in addition to the existing plans, non-repayable financial contributions and low-interest loans for renovation would motivate more citizens to start renovating projects. As this is a matter of changing legislation, participants believed it feasible to improve it quickly.	S
	Coordinated approach for funding for energy efficiency related projects	Participants agreed that more coordination on different levels is needed for energy efficiency-related projects and funding, but they see it as a highly complex thing to achieve. Nevertheless, some small changes can be achieved in a shorter period.	S
Create world-leading companies	Certification and standardisation for construction and energy experts carrying out renovation projects	In Slovakia, people who want to become construction entrepreneurs in the building and renovation industry do not need any qualifications. This situation can lead to unprofessionally executed projects and lower citizens' trust to employ such services – changing this to compulsory qualification can be done with changes in legislation.	S
	Increased educational programmes for energy efficiency academic courses	Supporting education for students in energy efficiency could solve the lack of experts. The State can add requests to universities to open more programmes focused on energy efficiency.	C&S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Main instruments of implementation:

Actions that will take longer to implement were few, with only one suggestion from the national stakeholders to prioritise and accelerate the mandatory renovation of public buildings.

Theme	Action name	Description	Idea Source [668]
Renovate at least 3% of the total floor area of public buildings annually	Prioritise and accelerate legislation to make the renovation of public buildings compulsory	While legislation that will make renovations of public buildings compulsory exists on the EU level, executing such legislation will take a long time. Participants, however, believe that it can be done by 2030 if it is made one of the priorities of the EU and with enough motivation for the Member States.	S

Just Transition

National stakeholders raised an interesting point that an increased level of renewable energy supporting the national grid will be more expensive than fossil fuels and as such could increase energy prices, which would impact those on lower incomes the most. There was nothing, however, to back up this view and globally, renewables would be seen to be a cheaper source of energy than fossil fuels and are getting cheaper all the time. It is not clear if this was a misinterpretation of the discussion or a real viewpoint.

Another point raised by the national stakeholders was that renovation carried out poorly could lead to poor indoor health conditions such as mould on walls. As such, the need for good quality professionals to carry out renovation work is required to ensure a Just Transition.

There is no income threshold for thermo-modernisation projects, which should be introduced to enable those on lower incomes to participate in energy efficiency projects.

Introducing one-stop shops would enable all citizens, regardless of demographic or socio-ethnic background, to avail of energy efficiency projects.

6.25 Slovenia

6.25.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Slovenia[669] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this

[668] C – Citizens; S – expert stakeholders
[669] A stakeholder meeting took place on 27 September 2022 and involved one Civil society member, two Research and education community members.

document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[670]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Slovenia's policies on the EGD and Citizen and National Stakeholder Reports

The following policies were pointed out by the participants of the stakeholder meeting in Slovenia. These are incomplete but serve as an indication of the more visible policies to the stakeholders.

- A new initiative/incentive aims to promote carbon sequestration through farming by encouraging farmers to adopt carbon farming methods. Based on the volume of carbon removals and the possibility to valorise these removals on the markets, farmers and foresters will be financially rewarded for storing carbon in the soil through the scheme (Sloveniatimes.com, 2022)[671].

- The Climate Fund and Water Fund. The programme addresses selected areas that could help Slovenia mitigate climate change and where investment gaps have been identified. Among its goals, it aims to contribute to a more 'circular' economy to increase material productivity, thus strengthening the move towards a low-carbon society and green economic growth, as well as strengthening the protection and restoration of ecosystems in the face of climate change.

- The National Research and Development programme oversees funding for research projects (including those related to sustainability).

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Slovenia.

- The National Programme on Strategic Orientations for the Development of Slovenian Agriculture and Food Industry 'Our Food, Rural and Natural Resources 2021' (Government of Slovenia, 2021)[672]. The programme aims to promote targeted strategic planning of public support for food production, processing, and rural development. Particular emphasis is placed on protecting the environment and nature and conserving agricultural areas, which should become an asset rather than an obstacle to management.

[670] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[671] Sloveniatimes.com (2022). Podgoršek announces incentives for carbon farming. Available at: https://sloveniatimes.com/podgorsek-announces-incentives-for-carbon-farming/ (Accessed on 18 November 2022).
[672] Government of Slovenia (2021). Our Food, Rural and Natural Resources 2021. Available at: https://www.gov.si/en/policies/agriculture-forestry-and-food/agriculture-and-rural-development/ (Accessed on 10 November 2022).

- Other relevant policies and resolutions related to food systems include the Resolution on the National Nutrition and Physical Activity Programme 2015-2025 (Government of Slovenia, 2015)[673].

General overview of actions per theme

The actions proposed by the Slovenian citizens and stakeholders on transforming the current food system in Slovenia consist of seven categories, aiming at addressing specific components of the food system. The proposed actions target all the components of the food system, focusing on sustainable food production. Finally, the proposed measures mainly focus on implementation tools such as communication, education and regulation.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**
Sustainable food production (15)	Promotional campaigns supporting local, sustainable food production
	School education on the importance of local food production
	Educational programmes for small-scale food producers
	Mediators providing advice to farmers who want to switch to organic farming
	Promoting new types of associations and cooperatives in food production
	Municipal support to local food production (e.g. community gardens)
	Incentives for new urban farmers
	Investments in the use of advanced technology in agriculture (e.g. satellite mapping and automation)
	Shortening supply chains
	Incentives for organic farming
	Increasing the ratio of organic agricultural land to 25%
	Research on food production and processing
	Introducing new legislative measures to increase biodiversity
	Reducing the limit on the use of synthetic pesticides and herbicides
	Simplifying the bureaucratic procedures on organic farming
Sustainable food processing, distribution & retail (8)	Development of more sustainable food packaging

[673] Government of Slovenia (2015). Resolution on the National Nutrition and Physical Activity Programme 2015-2025. Available at: https://www.fao.org/faolex/results/details/en/c/LEX-FAOC189116/ (Accessed on 10 November 2022).

	Incentives for farmers to sell their produce directly to consumers
	Introduction of a separate label of origin and processing on food products
	Reduced VAT on sustainable and locally produced food products
	Reducing the end price of organic products
	Government limits on out-of-season food imports
	Penalties for misleading food advertising
	Certifying products produced by small-scale farmers
	Prohibition of plastic water bottles
Sustainable food consumption (5)	Awareness campaigns promoting the consumption of locally produced sustainable food
	Priority of locally produced food in public procurement
	Educational programmes on a new food health model
	Awareness campaigns on the adverse health and environmental impacts of consuming red meat
	Funding for schools to provide meals based on locally produced food to students
Food loss and waste reduction (1)	School education on reducing food waste
Ensuring food security (1)	Investments in installing more irrigation systems
	The government should develop a plan with priorities to increase the food self-sufficiency of Slovenia.
Combating food fraud (1)	More transparency on food labelling
Across the entire food cycle (4)	Promoting more networking and connection between the farmers and their customers
	Slovenia should be more involved in the EU-level food debates
	Education for citizens on how the agricultural system functions in Slovenia
	More cross-sectoral integration between public agencies working on agriculture, environment, infrastructure and health elements of food

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Action**	**Idea Source**[674]
Sustainable food production	Slovenian farmers are often not associated in cooperatives, making their bargaining position on the market more tenuous.	S
	Slovenia is not competitive with other EU countries in the food market. This is partly due to farmers not having the	S

[674] C – Citizens; S – expert stakeholders

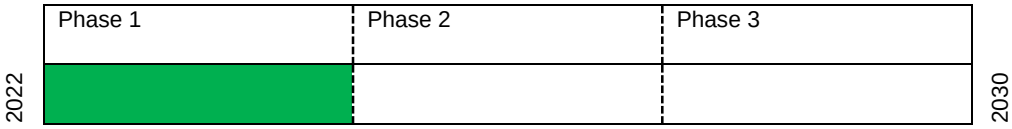
	tools to collaborate in producing and distributing their products.	
Sustainable food processing, distribution & retail	There are too many food labels; citizens find it difficult to track and understand them.	S
	Food advertising promotes low-priced products.	C
Sustainable food consumption	Public procurement often focuses on cheap rather than sustainable/local food.	C
	Citizens find it challenging to afford organic and healthy food. It usually comprises a small section of the stores' offers and makes the most expensive product category.	C
Across the entire food cycle	Lack of coherent national sustainability strategy on food.	C
	Objectives being set out in the area of sustainable food systems are not based on scientific research and impact assessment.	S
	The citizens pointed out that Slovenians find it challenging to trust others and resist change, meaning they need more time to embrace change.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can primarily be implemented and have an effect in the short term.



Main policy instruments of implementation: communication, education and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses and are proposed by citizens and stakeholders in Slovenia. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. All of these actions can be implemented straight away. Some, such as awareness campaigns on adverse health and environmental effects of red meat consumption, are easy to implement (quick wins). However, they also have a limited potential to contribute to the food system transformation. Others, such as sending advisors on change to organic farming to the farmers, may be more difficult to implement successfully but can produce knock-on effects in getting large groups of farmers on board with the transition to organic farming.

Theme	Action name	Description	Idea Source[675]
Sustainable food production	Promotional campaigns supporting local (own) sustainable food production	Promotional campaigns encouraging citizens to grow their food in communal and urban gardens.	C&S
	School education on the importance of local food production	Local food production should become a part of school education.	C
	Educational programmes for small-scale food producers	Professional education for small-scale food producers to develop more innovative food production techniques.	S
	Mediators providing advice to farmers who want to switch to organic farming	Advisors and consultants should be organised to engage conventional farmers and provide advice on how to transition to organic farming.	C
	Promoting new types of associations and cooperatives in food production	Creation of new cooperatives and associations for farmers to be more competitive in food production.	C
Sustainable food consumption	Awareness campaigns on locally produced sustainable food	Awareness campaigns for the general public promoting the consumption of locally grown, sustainable food.	C&S
	Priority of locally produced food in public procurement	Public procurement should focus on local and sustainability criteria rather than affordability ones.	C
	Educational programmes on a new food health model	The traditional food pyramid model should be updated to reflect local and sustainability criteria and promoted through educational programmes.	C
	Awareness campaigns on the adverse health and environmental impacts of consuming red meat	Awareness campaigns targeting the general population on the negative impacts of eating red meat should be implemented.	C
Food loss and waste reduction	School education on reducing food waste	Managing food waste should become a part of the official school curricula.	C
Across the entire food cycle	Promoting more networking and connection between the farmers and their customers	Farmers and consumers should have more networking and connection opportunities to build trust and understanding.	C
	Slovenia should be more involved in the EU-level food debates	Slovenia's public agencies, associations and citizens should have a more proactive role in EU-level food debates.	C
	Education for citizens on how the agricultural system functions in Slovenia	The Slovenian agricultural system should be more transparent to citizens through educational workshops.	C&S
	More cross-sectoral integration between public agencies working on agriculture, environment, infrastructure and health elements of food	Cooperation between government agencies working on various aspects of the food system (agriculture, environment, health, infrastructure) should be promoted and institutionalised.	S

[675] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.

Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions primarily affect increasing the sustainability of food production through means such as grants for organic and urban farming, as well as investments in technology supporting sustainable agriculture. Many of these actions take place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source[676]
Sustainable food production	Municipal support to local food production (e.g. community gardens)	For example, municipalities should support local food production by making more community gardens available.	C
	Incentives for new urban farmers	Urban farming should be promoted through incentives for citizens who take it up.	C
	Investments in the use of advanced technology in agriculture (e.g. satellite mapping and automation)	Investments should be made in technology supporting agriculture, such as satellite mapping for irrigation and general automation.	C
	Shortening supply chains	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	C
	Incentives for organic farming	More incentives should be made available to promote organic farming	S
	Increasing the ratio of organic agricultural land to 25%	Subsidies should be provided to significantly expand the amount of land dedicated to organic farming.	C
	Research on food production and processing	Research should be funded on new methods of food production and processing.	C
Sustainable food processing, distribution & retail	Development of more sustainable food packaging	All food packaging should use more sustainable materials.	C
	Incentives for	Farmers should be incentivised to sell	

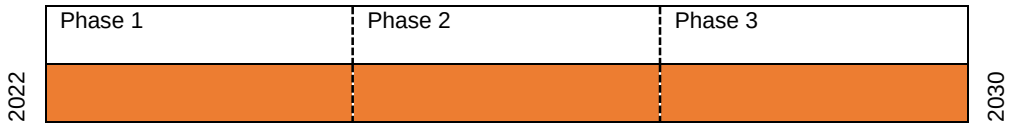
[676] C – Citizens; S – expert stakeholders

	farmers to sell their produce directly to consumers	their produce directly through free slots at food markets and logistical support.	
Sustainable food consumption	Funding for schools to provide meals based on locally produced food to students	Financing schools to provide locally produced food for students.	C
Ensuring food security	Investments in installing more irrigation systems	More investments should be made in agricultural irrigation systems to deal more successfully with droughts.	C

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus and thus have the most extended implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: new regulatory frameworks

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions address all stages of the food system. They include changes in product labelling, taxation and pricing, and anti-fraud measures. Some measures, such as those on labelling transparency, are likely to take place as a part of a joint effort with other EU Member States.

Theme	Action name	Description	Idea Source[677]
Sustainable food production	Simplifying the bureaucratic procedures on organic farming	Streamline the processes around adopting organic agriculture for small-scale farmers.	S
	Reducing the limit on the use of synthetic pesticides and herbicides	The total limit on synthetic pesticides and herbicides should be reduced. Special limits should be reassessed in nature conservation areas.	C
	Introducing new measures to increase biodiversity	Legislation introduction on increasing biodiversity in Slovenia.	C
Sustainable food processing, distribution & retail	Introduction of a separate label of origin and processing on food products	Food products should have a dual label of origin, including the ingredients' origin (e.g. specific farm) and place of processing.	C

[677] C – Citizens; S – expert stakeholders

	Reduced VAT on sustainable and locally produced food products	Reducing VAT on sustainable and locally produced food products to make them more competitive with other food products.	C
	Reducing the end price of organic products	Regulating the price of organic food products to make them more affordable.	C
	Government limits on out-of-season food imports	Limiting the imports of out-of-season food products to Slovenia.	C
	Penalties for misleading food advertising	Financial penalties for misleading advertising on health and sustainability characteristics of food products.	C
	Certifying products produced by small-scale farmers	Certifying food products produced by small-scale local farmers gives them more visibility.	
	Prohibition of plastic water bottles	Banning the sale of plastic water bottles.	C
Ensuring food security	The government should develop a plan with priorities to increase the food self-sufficiency of Slovenia.	Development of long-term plans for developing food self-sufficiency in Slovenia that will not be prone to changes with electoral cycles.	C
Combating food fraud	More transparency on food labelling	Standardisation of labels on food products and a clear explanation of their meaning.	C

Just Transition

The switch to more sustainable and healthy food is impacted mainly by its affordability. Many citizens fear that the high prices will limit their access to food products that are promoted as healthy and sustainable. This leads to resistance to the food system transformation, as many citizens feel they will be left behind.

6.25.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[678] in Slovenia that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[679]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

[678] A meeting took place on 28 October 2022 and involved one representative from academia, two from municipalities and one from civil society.
[679] Prof Tom Rye, Molde University College, Norway.

Summary of Slovenia's policies on the EGD and Citizen and National Stakeholder Reports

The transport sector in Slovenia represents by far the largest source of GHG emissions, as much as 47% in 2020. Most of these emissions are from road traffic. Besides agriculture, transport is the only sector in which emissions increased in the period 2005−2019, namely by 4%. Measures to reduce emissions are defined in the National Energy and Climate Plan[680]. In the field of transport, they are divided into five major groups:

- General promotion of sustainable mobility, which includes sustainable urban mobility planning at the local and regional level, promotion of sustainable mobility measures, informing and raising awareness of the main target groups about sustainable mobility, and development of sustainable mobility within the framework of spatial planning.

- Promotion of public passenger transport, which includes subsidising public passenger transport, the development of an integrated public passenger transport system and incentives for improvements of infrastructure for public passenger transport.

- Development of sustainable freight transport, which includes measures such as improving railway infrastructure and other measures to promote co-modality.

- Encouraging the improvement of vehicle efficiency, driving and vehicle occupancy, and the use of low-emission CO2 fuels. This includes measures such as the promotion of vehicle efficiency and the use of low-emission fuels, the promotion of economical driving and financial incentives for infrastructure for alternative fuels and e-mobility.

- Promotion of non-motorised forms of transport: construction of bicycle infrastructure at the national and local level and improved infrastructure for pedestrians.

Slovenia is also spending EUR 312m of Recovery Funds on refurbishing and electrifying railway lines and stations and installing a network of over 500 EV charging stations by 2025. The investment in rail is complemented by a change in public transport governance to create a single national public transport operator and coordinating organisation, to deliver integrated public transport across the country (thus, to some extent anticipating the points brought up in discussions with citizens and stakeholders about public transport in Slovenia)[681].

Citizens and stakeholders were in favour of existing national policies and spending that have been put in place to support the EGD. However, they wanted to see more: citizens were very concerned about the need to cut waste and to live more locally, which would lead to fewer and shorter journeys, and consequently less use of private vehicles. Stakeholders were in support of stronger pricing and taxation signals to make car use less attractive and were doubtful that national transport policy is closely aligned with EGD objectives, being still very orientated towards inter-city road building. In more detail:

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[680] Podnebnapot2050.si (2021). Climate Action Mirror. Results from Slovenia. Available at: https://podnebnapot2050.si/results-for-slovenia/annual-climate-action-mirror/?lang=en (Accessed on 16 November 2022).
[681] European Commission (2022). Slovenia's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/slovenias-recovery-and-resilience-plan_en (Accessed: 16 November 2022).

- ***Citizens*** strongly believed that public transport should be improved and reorganised and made accessible and affordable in both urban and rural areas, with all citizens receiving a quota of free rides and improved park-and-ride and bus priority infrastructure provided in cities. Cycling infrastructure should be improved to make it a safe and easy alternative. The use of (electric) micro-mobility and reduced personal car ownership should be encouraged through infrastructure and sharing operations. The panel was also in favour of purchase subsidies for EVs and improved charging infrastructure, although there was some scepticism about the environment-friendliness of battery production. Slovenian citizens were highly concerned about resource extraction and waste disposal, suggesting that much more work is needed to promote the use of recycled materials in vehicle production and understand the life cycle costs of different transport modes. They were also keen on local production and consumption, and home working, as means of reducing distances travelled.

- ***Stakeholders*** generally agreed with the suggestions from citizens but also had several more strategic recommendations to do with energy planning and integration (for EVs especially), regulation of EV charging and electricity prices, the lack of a national transport strategy aligned with the goals of the EGD, and the focusing of national resources on the Ljubljana Region, and roadbuilding. They also spoke in favour of the 15-minute city and a shift in transport pricing to make alternatives to the car more attractive. Stakeholders expressed some scepticism that transport policy at the national level is aligned with the goals of the EGD, nor that there is the capacity at the national or local level to deliver the required measures. They would like the EU to use more conditionality of funding to increase the likelihood that structural and other EU funds are truly spent on measures to reduce emissions from transport.

General overview of actions per theme

The national stakeholders did not provide detailed information on activities that could be carried out in a roadmap. As such, the following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	**Action**	**Idea source[682]**
Clean vehicles	EV purchase incentives	C&S
	Energy needs planning	S
	Energy supply and (recycling) of raw materials for EVs and vehicles in general	C&S
	Charging stations for micro-mobility (e.g. scooters)	S
Better public transport (PT)	Better PT vehicles	C&S
	Free or reduced-cost PT	C
	PT integration	C
Spatial planning and	More bike paths	C&S
	15-minute city	C

[682] C – Citizens; S – expert stakeholders

city development		
Pricing and charges for transport	Taxation of polluting freight vehicles	S
	Changes to taxation regime for fuels	S
	Changes in cost and taxation structures to reflect external costs – price of road transport up and price of public transport down	S
	Clear, integrated and good-value electricity pricing for EVs	S
Planning and operation of transport networks	PT network improvement – extent, frequency, priority lanes and speed	C&S
	Smart mobility coordination centres to manage all traffic better	S
	Rail freight transport network should be improved but not at the expense of passenger rail	S
Governance	Shift in national funding priorities towards public transport and active travel, away from the road, supported by more conditionality in EU funding	S
	Strategic transport plan is needed at the national level	S
	EU - stronger role in cross-border rail travel – national rail agencies are not always capable or have other priorities.	S
	EU expert and financial support to member states to develop and implement national and local measures to support EGD implementation	S
Greening transport in general	Education on buying and sourcing locally to cut travel distances	S
	Exchange of experience through research and exchange projects (with EU funding)	S
	Research and awareness raising on life cycle costs of vehicles and recycling of transport products	S
	Promotion of EVs to raise awareness of benefits	S
	General awareness raising for the need for travel behaviour change	S
	Capacity building in local and national administrations	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders, however, made several points. These in the main do not relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 finalCOM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 finalCOM(2021) 811 final)), or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the EGD – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

Theme	Barrier	Idea Source[683]
Planning and operation of transport networks	A long-term focus in the national ministry towards major road construction at the expense of investment in sustainable transport for shorter-distance trips in urban regions and rural areas.	S
Governance	Lack of clear guidance on implementing	S

[683] C – Citizens; S – expert stakeholders

	European goals locally and a lack of conditionality in funding to achieve this.	
Governance	Many very small municipalities cannot implement measures to support the EGD.	S
Governance	The lengthy administrative procedures for approving freight EV charging infrastructure are slowing its implementation significantly.	S
Spatial planning and city development	A centralisation of resources in the Ljubljana region.	S
Pricing and charging	Lack of political will to implement changes in taxation to increase the cost of using polluting modes of transport – fossil fuels are priced amongst the lowest in Europe, whilst electricity prices are high.	S
Pricing and charging	A poorly regulated electricity market, with high prices and confusing pricing structures for (potential) EV users – there is a role for the EU here in regulating this situation.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Slovenia. These mainly comprise communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description	Idea source [684]
Greening transport in general	Education on buying and sourcing locally to cut travel distances	Citizens were particularly interested in the idea that transport impacts, particularly of freight could be reduced if people were more aware of the real sustainability cost of their purchasing decisions.	C

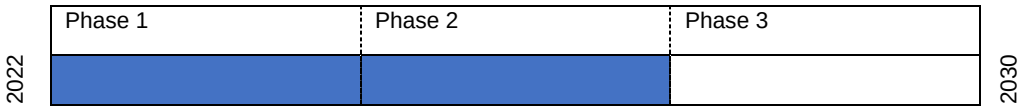
[684] C – Citizens; S – expert stakeholders

	Exchange of experience through research and exchange projects (with EU funding)	Exchange projects between different Member States providing expertise, advice, and consultations in reaching the mobility goals are very important in helping Slovenia overcome the lack of knowledge and capacity that stakeholders identified as a barrier to EGD goal achievement.	S
	Research and awareness raising on life cycle costs of vehicles and recycling of transport products	Few details were provided, but citizens were very concerned about waste reduction and recycling and felt this issue should be extended to vehicles and transport.	C
	Promotion of EVs to raise awareness of benefits	This action was not spelt out. Still, stakeholders believed financial incentives to purchase or lease EVs, and extensions of charging infrastructure, need to be matched with information and awareness raising about EVs to address people's doubts (for example, about range) to ensure that the incentives and infrastructure are used.	S
	General awareness raising for the need for travel behaviour change	Changing people's habits through education: encourage more thinking about changing habits and reducing pollution, especially in schools from an early age. Promote behaviour change such as substituting shorter trips for longer ones, combining trips, sharing vehicles and using e-commerce and e-working more.	S
	Capacity building in local and national administrations	Through education, training and experience exchange, the shortfall in the capacity that stakeholders identified could, they felt, be addressed.	S

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the ‘action name’ column.

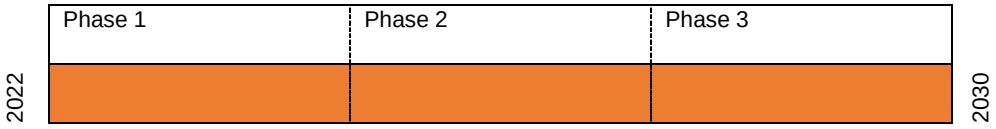
Theme	Action name	Description	Idea source[685]
Clean vehicles	EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy e-vehicles.	S
	Charging stations for micro-mobility (e.g. scooters)	Little detail was provided, but it was felt by both groups that these modes of transport also required charging stations, and that they should not be forgotten.	C&S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public vehicles, including low-emission vehicles.	C&S
	Free or reduced-cost PT	Certain groups in Ljubljana currently qualify for free public transport. To make public transport more attractive and smooth the path to a Just Transition, a strong view was expressed that public transport fares should be reduced or even free for certain groups, or possibly all users, across the country.	S
Spatial planning and city development	More bike paths	Cycle use is already relatively high in Slovenian cities. To further boost usage, there was support for increased investment in cycling infrastructure, including in rural areas.	S
Pricing and charges for transport	Taxation of polluting freight vehicles	Higher taxation of more polluting vehicles and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	S
	Changes to taxation regime for fuels	The low price of petrol and diesel (a policy decision) and the high price of electricity were problems raised several times by stakeholders concerned that, since the price is a key driver of behaviour, this situation would work against the achievement of EGD goals.	S
	Changes in cost and taxation structures to reflect external costs.	Related to the point above, concern was expressed about the relatively low cost of road use (including the low cost of an annual vignette) compared to public transport fares. To better reflect actual external costs, this situation needs to be reversed.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at local, regional, national and international levels. Suggestions included priority lanes for public transport, park and ride, and investment in rail.	C&S
	Smart mobility coordination centres to manage all traffic better	It could be better employed to ensure that all modes of transport are better managed (particularly congested roads) and better information is delivered to users.	S
	Rail freight transport network	Slovenia has a large amount of transit freight transport, especially by truck. Pricing and improvements in the rail freight network were key to shifting more freight from road to rail.	S
Governance	No measures suggested	/	/

[685] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Instruments of implementation: regulation

Many proposals from Slovenian citizens and experts require implementing policy changes and regulations. Depending on how they would be developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were about better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea Source[686]
Clean vehicles	Energy needs planning	At the national level, energy needs planning, mainly due to the increased use of e-vehicles. Stakeholders commented that the current grid is not capable of delivering electricity at peak times for large numbers of EVs.	S
	Recycling and sourcing of raw materials for EVs and vehicles in general	This action reflects concerns about the environmental and geopolitical challenges of sourcing, particularly batteries, and disposing of them. It was felt that a clearer and more strategic approach is needed at the national level, possibly at the EU level.	S
Better public transport	PT integration	All participants identified better planning and coordination of public transport routes as a priority.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport. Planning processes and possibly also land ownership should reflect this.	S
Planning and operation of transport networks	No measures suggested	/	/
Pricing and	Clear, integrated and	The Slovenian electricity supply industry, and	S

[686] C – Citizens; S – expert stakeholders

charging	good-value electricity pricing for EVs	the politics of its control, were criticised by the participants. Changes are required to ensure that EVs' electricity price is transparent and that all charging stations are accessible to all vehicles.	
Governance	Shift in national funding priorities for transport	Participants observed that the national transport policy in Slovenia is dominated by road building. Stakeholders suggested that policy and funding should shift away from their road focus to support public transport and active travel instead. This could be supported by more conditionality in EU funding.	S
	Strategic transport plan needed at national level	A national transport strategy in which EGD goals, and measures to achieve them could be made much clearer is absent.	S
	EU should take a stronger role in cross-border rail travel	Whilst not explicitly identified as such by stakeholders, this suggestion corresponds directly to actions in the EGD. The motivation for the suggestion is that national rail agencies often lack capacity and/or have other priorities that stop them from working on cross-border passenger traffic.	S
	EU expert and financial support to Member States to develop and implement national and local measures to support EGD implementation	Again, reflecting the perceived lack of capacity at the national and local level in Slovenia, it was suggested (based on the country's successful experience in national initiatives on developing SUMPs) that the EU could provide valuable support in this way, for example by providing expertise to help the national level to develop a more sustainable national transport strategy.	S

Just Transition

There were some concerns expressed by citizens and stakeholders about the following aspects of a Just Transition in mobility – although this was not a large part of either discussion:

- One stakeholder felt that there is a risk that the implementation of the EGD could backfire if it causes hardship for poorer people in society.

- Stakeholders were concerned that, without better bus services (particularly in rural areas) and free fares when using those bus services, poorer and older people are at high risk of social exclusion as a result of the transition to a low-carbon transport system. There were concerns that EVs are unaffordable for most of the population, compromising the ambitions at the EU and national level for the numbers of EVs on the road, but also concerning the distribution of EV subsidies (including non-purchase subsidies, for example, free parking) towards wealthier people.

6.25.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Slovenia[687] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[688]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Slovenia's policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[689], Slovenia's National Recovery and Resilience Plan (NRRP) endorsed by the European Commission in July 2021 comprises measures worth €1.8bn in grants and €666m in loans. This can be broken down as follows with respect to the European Green Deal (EGD) priorities:

Increasing renewable energy in buildings	Deployment of heating and cooling measures for the residential sector are not a focus point. Still, potentially enabling investments are proposed such as supporting renewable energy uptake and district heating.
Improving energy efficiency in buildings	In addition to the NRRP, Slovenia's Long-term Renovation Strategy (LTRS) 2050[690] aims to reduce final energy use by 45% and CO2 emissions by almost 75% compared to 2005. Both the LTRS and the NRRP emphasise public sector building renovation. The goal in the NRRP is to renovate a floor area of 0.16 million m2 across all renovation programmes. This is equivalent to about 17% of the total area of narrower public sector and 1.6% of wider public sector building area. Renovation impact will be measured by issuing energy performance certificates for renovated buildings or via energy audits to confirm whether renovations secure 30% energy savings, although this is not always required.
Tax system for energy products aligned to the green transition	Not mentioned

[687] A stakeholder meeting took place on 27 September 2022 and involved two representatives from academia; two representatives from civil society; one passive house building representative; and a regional energy agency representative.
[688] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[689] Ivanova, V. et al. (2021), see note 30, page 61.
[690] Government of Slovenia (2021). Dolgoročna strategija energetske prenove stavb do leta 2050. Available at: https://www.energetika-portal.si/fileadmin/dokumenti/publikacije/dseps/dseps_2050_final.pdf (Accessed: 3 November 2022).

Provide funding for renovation of buildings	€86m is allocated for the renovation of public buildings. €66m is allocated to administrative buildings of social importance such as health and judicial buildings. €10m is allocated to buildings that need technical building systems upgrade. €5m is allocated to renovations of publicly owned multi-apartment buildings and another €5m to the establishment of a systemic financing source for energy renovations of public sector buildings.
Renovate at least 3% of the total floor area of public buildings annually	Based on an EU study, the current renovation rate for the residential sector is 1.3% medium retrofit and 0.1% deep retrofit; in the non-residential sector the rate is 1.5% for medium retrofit and 0.3% for deep retrofit[691]. The NRRP only focuses on the renovation of public buildings as the government think it will be more feasible to achieve the 3% renovation rate via public buildings.
Create world-leading companies	Technical assistance will be managed by a special governmental office to support the renovation of public buildings. There is no clear plan to support construction and energy professionals targeting the renovation sector.
Raise global ambition to tackle climate change	Not mentioned
Improve health and well-being	Not mentioned
Address inequality and energy poverty	Energy poverty is not directly addressed by the NRRP as the focus is on public buildings.
Ensure a Just Transition that is fair, competitive, and green	Not mentioned
Mobilising industry for a clean and circular economy	Not mentioned

Concerning improving energy efficiency in buildings, the national stakeholders were positive about Slovenia's role in implementing the EGD and that EU legislation related to the EGD was being well adopted at a national level. They mentioned that Slovenia had implemented several initiatives supporting the green energy transition and numerous renovation funding programmes. Some of the mechanisms mentioned by the stakeholders included:

- A 100% subsidy for replacing combustion plants is available for low-income families.
- A 100% subsidy for renovating apartments in multi-residential buildings is available for low-income families.
- Specific measures have been implemented to support the renovation of single-apartment buildings.
- The renovation of the common elements of multi-apartment buildings is covered by their reserve funds, paid monthly by the owners.

The national stakeholders also mentioned that more efforts should be made to ensure the full accessibility of the various schemes to all citizens through public technical support and

[691] European Commission (2019), see note 31, page 61.

raising awareness and education initiatives. The application process should be straightforward and easy to understand, with knowledge of the benefits of carrying out renovation clear to the building owner from the start. They felt that understandable information would reach a wider group of people.

Citizens identified that renovation is not affordable, and there is too much pressure on individual homeowners to carry out the renovation themselves. Furthermore, there are limitations on what systems one can switch depending on available subsidies. National stakeholders also felt that renovation should be affordable to all and that renovation schemes should be 100% subsidised for everyone and that the grants should go directly to the contractors to reduce the administrative burden on the induvial looking to renovate their buildings. They also mentioned that people downsizing should be offered greater incentives. However, if everyone is 100% subsidised, it is unclear what these additional incentives would be. National stakeholders also felt that the costs to renovate should not be passed on to tenants and that tenants should also profit from the renovation of the building.

Even though the national stakeholders mentioned some subsidy programmes above, the view of the citizens that there is too much pressure on individuals to carry out renovations themselves would be consolidated by the NRRP, which focuses on grants for public buildings and not private individuals. Both citizens and national stakeholders, however, did feel that public buildings should lead the way. Perhaps, therefore, this strategy is supported by all as a result.

Concerning the public sector being subsidised and heavily encouraged to lead the way, national stakeholders felt that public bodies were still lacking in this regard, as the focus is typically on roads and urban planning, and less on buildings and energy efficiency.

When it comes to creating world-leading companies, national stakeholders mentioned that salaries in the construction space are low and hence the motivation to upskill, invest in further education or educate themselves on new techniques is not there. There are qualifications and trainings available for people with higher education but not for those who started working straight after secondary school. One way to address this could be formal education programmes for new technologies and technical education courses in secondary schools on energy efficiency in buildings. Furthermore, currently, the owners of the companies participate in the training events, but the workers in the field receive only summary information. More on-the-ground training should be available. Quality labels for energy renovation experts are also required to ensure the trust and reliability of the solutions for the end users. This lack of focus on creating a skilled workforce is also consolidated by the Renovate2Recover report, which states that there is no mention of this in the NRRP.

To raise global ambition to tackle climate change, all agreed that this is required. There are many challenges which need to be addressed - from citizens' understanding of what needs to be done to an educated workforce and clear guidelines for building operators concerning how to manage their buildings.

Concerning health and well-being, citizens did have some awareness that energy efficiency leads to more comfortable homes; this was not mentioned by the national stakeholders to any degree.

Concerning the circular economy, the national stakeholders felt that Slovenia does not have enough experts in the entire life cycle of the renovation process, and there is also a lack of understanding of the materials used in renovations.

Between the citizen workshops, the national stakeholder workshops, and the review of the NRRP, the emphasis on building integrated renewables was not high, suggesting that one of the core goals of the EGD, to increase the renewable energy in buildings, is not being addressed from either the top down or the bottom up.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. As can be seen from the number of suggestions, along with the barriers previously presented and the citizens report, the Slovenian citizens and national stakeholders are very knowledgeable with respect to the EGD and what is needed to be taken at local and national level to increase awareness and adoption.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Commitment to renewable energy schemes Solar panels on all roofs
Improving energy efficiency in buildings	Awareness and education campaigns Public buildings leading the way Changes to policy regarding land-use Zero-energy new build Promote private investor good examples One-stop-shop platform Better building databases Platform to compare renovation materials and services Tools to understand building energy demand Platforms to understand the benefits of renovation Co-habitation of different generations
Tax system for energy products aligned to the green transition	Reduced taxes to encourage energy efficiency technology adoption
Provide funding for renovation of buildings	100% financing for renovation schemes Reduce administrative effort for subsidies Better accessibility of financial support Incentives for those downsizing Subsidised energy audits
Renovate at least 3% of the total floor area of public buildings annually	Public buildings lead the way

Create world-leading companies	Training programmes for contractors EU quality labels for energy experts Education programmes for consultants advising on renovation Training programmes offered via professional associations Training courses on new materials Knowledge sharing between professionals Licensed building energy managers Ranking of contractors Quality label for energy experts
Raise global ambition to tackle climate change	Green technology education in schools
Improve health and well-being	None mentioned
Address inequality and energy poverty	None mentioned
Ensure a Just Transition that is fair, competitive and green	Encourage intergenerational living and outline the benefits
Mobilising industry for a clean and circular economy	Training on circular economy Adaptability of appliances Identification of lifecycle impacts to renovation Emphasise the circular economy in renovation projects Tools to analyse level of renovation to undertake with respect to lifecycle elements Encouragement of green roof adoption in buildings Policies around less demolition and more renovation

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	**Barrier**	**Idea Source**[692]
Increasing renewable energy in buildings	None mentioned	
Improving energy efficiency in buildings	Renovation is not affordable and there is too much pressure on individuals.	C
	Slovenia does not have the tools to enable well-informed decisions. There are only private programmes for checking the energy balance of the building.	S
	Slovenia falls behind in green procurement. Fast action needs to be taken.	S
	The main criterion in a building is the lowest costs of investment, not the most economical investment in the lifespan. The new measures need to be implemented immediately.	S
	Some households cannot afford to participate in the renovation. They need support from the centres for social work that should also have information about the energy-poverty measures.	S

[692] C – Citizens; S – expert stakeholders

	It is challenging for the average person to apply for support in renovation due to the lack of technical knowledge.	S
	The buildings do not have clear operating and maintenance instructions.	S
	People without professional knowledge cannot choose among several contractors or materials. It is hard to make an informed decision. The information on the environmental impact is often missing, as are the maintenance needs.	S
	People in Slovenia lack access to transparent, independent information. The information on the web is often connected to companies' interests.	S
	Most buildings in Slovenia are one-person apartments. It is hard to rent them since they hardly generate enough revenue for regular maintenance	S
	Larger municipalities fall behind in the renovation of public buildings. The roads and squares are always a priority, while buildings are not.	S
	Maintenance of the buildings is often challenging for the owners. Making decisions on the investment in a multi-owner building is a big task because of the differences in financial capabilities and the owners' interests. It is challenging to get consensus in a building with multiple building managers.	S
Tax system for energy products aligned to the green transition	None mentioned	
Provide funding for renovation of buildings	Limitations on what systems you can switch too dependent on the subsidies available.	C
	The public housing fund tries to create demonstration buildings, but it is tough to get funds since no specific measure would support this endeavour.	S
	In Slovenia, obtaining the funds for renovation is complex and demanding for the owner of the building. The dynamics of the processing of applications and payments are too slow	S
	There are a small number of financial models for renovation. The models of cooperation with energy providers are missing.	S
Renovate at least 3% of the total floor area of public buildings annually	If the criteria for supporting renovation projects are too high, undertaking renovation might become difficult. The requirements must be checked regularly and aligned with the new research and industry standards.	S
	Renovation of heritage and listed building is challenging since it is more complicated to follow the prescribed standards with them.	S
Create world-leading companies	Slovenia needs quality labels for experts.	S
	Slovenia needs to create a consultancy hub that would provide additional training for energy advisors and develop the capacity to address the buildings individually.	S
	Currently, the owners of the companies participate in the training events, but the workers in the field receive only a summary information. More on-the-ground training should be available.	S
Raise global ambition to tackle climate change	None mentioned	/
Improve health and well-being	None mentioned	/

Address inequality and energy poverty	None mentioned	/
Ensure a Just Transition that is fair, competitive and green	None mentioned	/
Mobilising industry for a clean and circular economy	None mentioned	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

	Phase 1	Phase 2	Phase 3	
2022				2030

Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. These focused on education and awareness campaigns and upskilling and education of energy and construction professionals. There was a suggestion from the citizens concerning lower taxes for devices that enable energy efficiency, national stakeholders, however, did not agree with this view and felt reducing VAT would influence all materials and better solutions are available. National stakeholders felt that 100% subsidies should be offered in the short term along with easing the administrative burden of applying for such subsidies.

Theme	Action name	Description	Idea Source[693]
Increasing renewable energy in buildings	Commitment to renewable energy schemes	Governments should commit to renewable schemes in the long run.	S
Improving energy efficiency in buildings	Awareness and education campaigns	More awareness-raising campaigns and education should be promoted. A well-educated person can achieve high energy-efficient behaviours and reduce consumption.	S
	Public buildings leading the way	Public buildings should lead by example.	S
	Changes to policy regarding land-use	Land use control for building purposes should be in the hands of professionals, not politicians.	S
	Zero-energy new	All new public buildings must be zero-	S

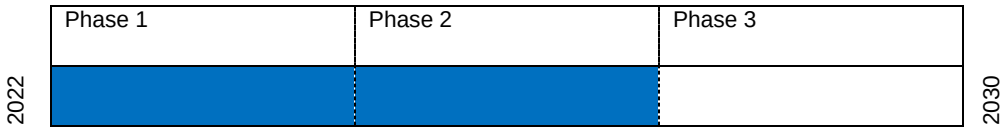
[693] C – Citizens; S – expert stakeholders

	build	energy buildings.	
	Promote private investor good examples	Some private investors should be proposed as good examples.	S
Tax system for energy products aligned to the green transition	Reduced taxes to encourage energy efficiency technology adoption	Lower taxes (VAT) for devices that enable energy efficiency.	C
Provide funding for renovation of buildings	100% financing for renovation schemes	Renovation schemes should be 100% financed.	S
	Reduce administrative effort for subsidies	Streamline the process and the pay-out of subsidies for buildings.	S
Renovate at least 3% of the total floor area of public buildings annually	Public buildings lead the way	Public buildings lead the way.	C
Create world-leading companies	Training programmes for contractors	Training for contractors.	C
	EU quality labels for energy experts	Quality labels should be introduced for experts.	S
	Education programmes for consultants advising on renovation	Consultants on subsidy programmes should be well-informed, available to the public, and trained to cater to the elderly.	S
	Training programmes offered via professional associations	The training of micro-enterprises and SMEs contractors needs to be established through their professional associations.	S
	Training courses on new materials	Training courses on modern insulation materials and methods should be provided.	S
	Knowledge sharing between professionals	A consultancy hub should be created to provide additional training for energy counsellors to develop the capacity to address the buildings individually; a stronger connection among experts with diverse levels of education should be encouraged.	S
Mobilising industry for a clean and circular economy	Training on circular economy	More focus and education on repair of materials.	C&S
	Adaptability of appliances	Software for energy-efficient appliances needs to be open source to be adapted to the new elements replaced in the system or upgraded.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. These focus on platforms and tools to enable end users to understand the benefits of renovation and enable them to break through the administrative burden and find EU-certified experts to undertake the renovations for them. Other suggestions focus on increased subsidies for downsizing and energy audits. Further work on upskilling and creating shared networks between professionals was also suggested. There was also a high focus on ensuring renovation links with the circular economy.

Theme	Action name	Description	Idea Source[694]
Improving energy efficiency in buildings	One-stop-shop platform	Development of platforms that will connect contractors with owners of real-estate and more accessible access to subsidies for investment.	C
	Better building databases	Development of tools to evaluate buildings and databases. Tools need to be verified, and the database needs to be run by an independent institution.	S
	Platform to compare renovation materials and services	Creation of a free platform for comparing renovation materials and services.	C&S
	Tools to understand building energy demand	The connection between the data on building and energy demand.	S
	Platforms to understand the benefits of renovation	Clear information about the sequence of steps in renovating a building. The information on a change's (side) effects should be readily available.	S
Provide funding for renovation of buildings	Better accessibility of financial support	Measures for financial support should be more accessible.	C
	Incentives for those downsizing	People downsizing/living in the smaller house should receive better incentives.	S
	Subsidized energy audits	Energy audits should be subsidised to get precise information about the need to renovate.	S

[694] C – Citizens; S – expert stakeholders

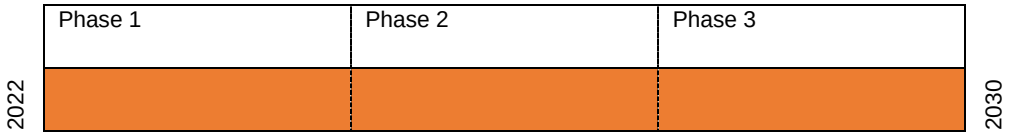
Create world-leading companies	Licensed building energy managers	Licensing and training for building managers to monitor energy efficiency at the EU level.	C
	Ranking of contractors	Participants in the non-formal education for contractors should get credit points. These should enable ranking the contractors based on their ability to keep up with trends in the field.	S
	Quality label for energy experts	Establishment of a quality label for energy renovation experts on the EU level.	S
Raise global ambition to tackle climate change	Green technology education in schools	Education on new technologies should be part of formal education programmes.	S
Ensure a Just Transition that is fair, competitive and green	Encourage intergenerational living and outline the benefits	Intergenerational shared living could improve energy efficiency and provide support for the elderly.	C
Mobilising industry for a clean and circular economy	Identification of lifecycle impacts to renovation	Implementation of the lifespan sustainability system should become the cornerstone of green procurement. The indicators of green construction for Slovenia are in tune with the EU system and need to be fully developed and implemented in practice.	S
	Emphasise the circular economy in renovation projects	The circular economy should become a priority in the renovation.	S
	Tools to analyse level of renovation to undertake with respect to lifecycle elements	Consultation systems should be established to decide whether the renovation is more sustainable than replacing a building.	S
	Encouragement of green roof adoption in buildings	Green roofs, especially for public buildings, should be increased since they contribute to better insulation and more biodiversity in the city.	S

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Theme	Action name	Description	Idea Source[695]
Increasing renewable energy in buildings	Solar panels on all roofs	Find the ways to put solar panels on every roof and develop mechanisms that allow them to operate for more extended periods.	C
Improving energy efficiency in buildings	Co-habitation of inter generations	The co-habitation of several generations under the same roof should be promoted to reduce the number of one-person units.	S
Mobilising industry for a clean and circular economy	Policies around less demolition and more renovation	Less demolition and more renovation; improve policy around this.	C

Just Transition

National stakeholders felt that more targeted awareness campaigns to reach a wider diversity of people were needed, along with a network of energy efficiency counsellors to support individuals in preparing documentation and calculations to obtain subsidies. Alternatively, if the contractors delivering the renovation could claim the grant on behalf of the individual, this would avoid the need for them to carry out any administration.

National stakeholders also mentioned that there are 100% subsidies to the very poor; however, many citizens who are not below the poverty line but cannot afford to renovate their buildings, and this cohort of people is significant. Slovenia has a loan scheme to support these people.

National stakeholders also felt that renovation schemes should be diverse, supporting those who live in blocks of flats, in the countryside, or in semi-urban areas.

[695] C – Citizens; S – expert stakeholders

6.26 Spain

6.26.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Spain[696] that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[697]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Spain's policies on the EGD and Citizen and National Stakeholder Reports

The following policy was pointed out by the participants of the stakeholder meeting in Spain. While it does not represent an exhaustive list, it can rather serve as an indication of the more visible policies to the stakeholders present.

- Law for the Prevention of Food Losses and Waste (Ministry of Agriculture, Fisheries and Food, 2022)[698] – The law is currently in parliamentary procedure and aims to target food loss across the food chain, from harvest to household.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following policies within food policy in Spain:

- National Strategy for Nutrition, Physical Activity and Prevention of Obesity (*ASEAN, 2005)*[699] – The Strategy developed by The Spanish Agency for Food Safety and Nutrition (ASEAN) sets out to improve health and prevent obesity through promotional and educational actions to help people make healthy choices regarding their nutrition as well as engage in more physical activity.

- Collaboration plan for the improvement of the composition of food and drink and other measures 2020 (ASEAN)[700] – The plan calls for various sectors to work together to

[696] A stakeholder meeting took place on 18 October 2022 and involved two national government members, two Research and education community members, and one Civil Society member.
[697] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.
[698] Ministry of Agriculture, Fisheries and Food (2022) Law for the Prevention of Food Losses and Waste. Available at: https://www.agroberichtenbuitenland.nl/actueel/nieuws/2022/07/06/spain-approves-the-draft-law-against-food-waste. Accessed on 22. November 2022.
[699] Agencia Española de Seguridad Alimentaria y Nutrición (AESAN (2005). National Strategy for Nutrition, Physical Activity and Prevention of Obesity. Available at: https://www.aesan.gob.es/AECOSAN/web/nutricion/seccion/estrategia_naos.htm (Accessed on 22 November 2022).
[700] Agencia Española de Seguridad Alimentaria y Nutrición (AESAN) (2020). PLAN de colaboración para la mejora de la composición de los alimentos y bebidas y otras medidas. Available at: https://www.aesan.gob.es/AECOSAN/docs/documentos/nutricion/DOSSIER_PLAN_2020.pdf (Accessed on 22 November 2022).

ensure that citizens achieve a more balanced and nutritional consumption of food and drink, calling for a reduction in added sugars, salt and saturated fats. To this end, amongst others, the plan includes a specific objective to support and encourage research and development of products that form such a diet.

- Digitisation Strategy for the Agri-Food and Forestry Sector and Rural Areas (Ministry Of Agriculture, Fisheries and Food, 2022)[701] – The strategy sets out to foster an economically, socially and environmentally sustainable agri-food sector by promoting its digital transformation. Several specific measures listed in the strategy centre around fostering research and innovation and promoting knowledge exchange.

- Spanish Bioeconomy Strategy (Ministry of Economy and Competitiveness, 2015)[702] – The strategy develops the role of agriculture and food production in productive bioeconomy, as well as placing the research to act as a driving force in its implementation. The strategy focuses on fostering interaction between public, private and international science and technology systems, and promotion of social and environmental sustainability.

General overview of actions per theme

The actions proposed by the Spanish citizens and stakeholders on transforming the current food system in Spain consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with a focus on sustainable food production. Finally, the proposed actions are mainly focused on immediate implementation tools such as communication, education and interaction.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

Theme	**Action**
Sustainable food production (10)	Education on urban food production methods
	Promotion of organic and regenerative agriculture at the local, regional and national level
	Promotional campaign on urban farming
	Subsidies for organic farming
	Financial support for local sustainable food producers to place their products on the market
	Incentives for individual food production
	Investments in research on food production methods that reduce carbon emissions

[701] Ministry of Agriculture, Fisheries and Food, Government of Spain (2022). Digitisation Strategy for the Agri-Food and Forestry Sector and Rural Areas. Available at: https://www.mapa.gob.es/images/en/digitisationstrategy_tcm38-513192.pdf (Accessed on 22 November 2022).
[702] Ministry of Economy and Competitiveness, Government of Spain (2015). Spanish Bioeconomy Strategy. Available at: https://bioeconomia.chil.me/download-doc/102159 (Accessed on 22 November 2022).

	Regulations improving animal welfare measures in productivist animal husbandry
	Development of a national strategy improving quality of life in rural areas
	Regulation limiting the excess use of fertilisers and antimicrobial products
Sustainable food processing, distribution & retail (7)	Expansion of the Nutriscore system to a wider range of food products
	Expansion of the number of organic and healthy products in supermarket
	Subsidies to support shortening the supply chain
	Regulation reducing unnecessary food packaging
	Regulation of the food distribution system
	Regulation on food advertising
	Standardisation of food labels
Sustainable food consumption (3)	Awareness campaigns on the connections between social wellbeing and food
	Awareness campaigns on maintaining healthy diets
	Promotional campaigns encouraging citizens to buy directly from farmers
Food loss and waste reduction (3)	Awareness campaigns on weekly food planning and reducing food waste on a household level
	Promotion of apps reducing food waste
	Regulation on reduction of food waste in food-based businesses
Ensuring food security (0)	
Combating food fraud (1)	More stringent enforcement of European regulations on sustainable food production
Across the entire food cycle (0)	

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	**Action**	**Idea Source** [703]
Sustainable food production	There is a lack of financing and investment in a sustainable food system transformation.	S
	New food production technologies are often prohibitively expensive, especially for small-scale food producers.	S
	The worsening effects of climate change are reducing the productivity of agriculture.	S
	The geopolitical factors (such as the war in Ukraine and increasing fuel prices) affect the production costs.	S
	There is a lack of consensus on managing the balance between productivity and sustainability.	C&S
Sustainable food consumption	Costs of healthy and sustainable food are often prohibitively expensive for some citizens.	C&S
	Changes to dietary habits are difficult to achieve, since they carry traditional importance.	S
Across the entire food cycle	The participants perceived a lack of strategic direction in Spain when it comes to sustainable food system transformation.	S

[703] C – Citizens; S – expert stakeholders

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Spain. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some, such as promotional campaigns on urban farming, are easy to implement (low hanging fruit), however, they also have a limited potential to contribute to the food system transformation. Others, such as more stringent EU regulation monitoring on food products, may be more difficult to implement successfully, but can produce knock-on effects, in raising the overall food quality.

Theme	Action name	Description	Idea Source [704]
Sustainable food production	Education on urban food production methods	Educational workshops should be organised on methods of urban food production (e.g. urban farming, community orchards).	C
	Promotion of organic and regenerative agriculture	Promotional events and campaigns should be organised on the benefits of organic and regenerative agriculture at a local, regional, and national level.	S
	Promotional campaign on urban farming	Promotional campaigns should be organised to promote urban farming.	S
Sustainable food processing, distribution & retail	Expansion of the Nutriscore system to a wider range of food products	The Nutriscore system should be expanded to include more products through consultations of public agencies with food producers.	C
	Expansion of the number of organic and healthy products in supermarkets	Supermarkets should be encouraged to expand their offer of organic and healthy food products.	C
Sustainable food consumption	Awareness campaigns on the connections between social wellbeing and food	Awareness campaigns should be organised on the connections of healthy, varied and fresh food, as well as dedicating more time to food enjoyment, and increased wellbeing.	C
	Awareness	Awareness campaigns should be	C

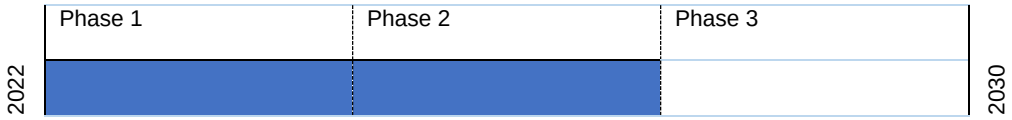
[704] C – Citizens; S – expert stakeholders

	campaigns on maintaining healthy diets	organised on maintaining healthy diets (e.g. through reduction of intake of meat and highly processed foods).	
	Promotional campaigns encouraging citizens to buy directly from farmers	Promotional campaigns should be organised to encourage citizens to purchase produce directly from local farmers.	C
Food loss and waste reduction	Awareness campaigns on weekly food planning and reducing food waste on a household level	Awareness campaigns should be organised on the importance and methods of planning food consumption for households, in order to reduce their food waste generation.	C
	Promotion of apps reducing food waste	The use of apps that help to reduce food waste should be promoted.	C
Combating food fraud	More stringent enforcement of European regulations on sustainable food production	The enforcement of compliance with EU regulations on sustainable food production should be more stringent.	C&S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed as unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production, through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

Theme	Action name	Description	Idea Source [705]
Sustainable food production	Subsidies for organic farming	Subsidies should be provided for organic farming methods.	C

[705] C – Citizens; S – expert stakeholders

	Financial support for local sustainable food producers to place their products on the market	Local and sustainable food producers should receive financial support to place their products on the market (e.g. payment of food market fees, reimbursement of food certification).	C
	Incentives for individual food production	Municipalities should provide incentives for individual food production (e.g. providing tools for urban farming).	C
	Investments in research on food production methods that reduce carbon emissions	Investments should be made in research on low-carbon and carbon-reducing food production methods.	S
Sustainable food processing, distribution & retail	Subsidies to support shortening the supply chain	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g. reducing shipping routes, food processors and others).	S

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus coming with the longest development period before they can be implemented. Accordingly, these actions depend on the policy-making process beginning immediately.

Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include the development of national strategies, as well as regulation of different components of food systems, such as food labels and animal welfare regulations.

Theme	Action name	Description	Idea Source [706]
Sustainable food production	Regulation improving animal welfare measures in production-driven animal husbandry	Regulation should be introduced to improve animal welfare of livestock on farms (e.g. prohibiting fattening medication, compound feed etc.).	C
	Development of a national strategy for improving quality of life in rural areas	A national strategy should be developed to improve life in rural areas, focusing on the position of young farmers.	C

[706] C – Citizens; S – expert stakeholders

	Regulation limiting excess use of fertilisers and antimicrobial products	Regulation should be introduced limiting the use of fertilisers and antimicrobial products, to preserve the health and productive capacity of soil.	S
Sustainable food processing, distribution & retail	Regulation reducing unnecessary food packaging	Regulation should be introduced to limit the use of packaging to specific food products, as well as define the packaging materials.	C
	Regulation of the food distribution system	Regulation should be introduced defining the allowed profit margins of food producers, distributors and retailers, in order to ensure fair compensation for all stakeholders.	C
	Regulation on food advertising	Food advertising should be regulated to prevent the promotion of highly processed and CO2-intensive food products.	C
	Standardisation of food labels	Regulation should be introduced to standardise and improve the accessibility of food labels.	S
Food loss and waste prevention	Regulation on the reduction of food waste in food-based businesses	Regulation should be introduced to reduce food waste generation in food-based businesses (e.g. through supermarkets having to offer discounts on soon-to-expire food, restaurants donating food).	C&S

Just Transition

The increasing costs of a transition to sustainable food production systems should be distributed across the food chain, to avoid them disproportionately affecting only producers or consumers.

Small producers encounter more difficulties and have less financial capacity to adapt to the required changes towards sustainable production, and the regulations should take this into account. New digitisation tools can be an interesting source of support for improving sustainable production, but these may not be achievable for everyone, and their associated costs (materials and energy) must also be considered in a world of increasingly scarce resources.

Income should not be a defining factor in access to healthy and sustainable food, with the most socio-economically vulnerable groups at risk of losing access to high-quality food. Healthy diets should be an effective right for the entire population.

6.26.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[707] in Spain that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any

[707] A stakeholder meeting took place on 18 October 2022 and involved three research and academia members and two local authorities.

barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[708]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Spain's policies on the EGD and Citizen and National Stakeholder Reports

In 2021, Spain adopted its Secure, Sustainable and Connected Mobility Strategy 2030 , which incorporates objectives on reducing greenhouse gas emissions from transport through measures such as planning to reduce the need to travel, and changes to non-fossil fuel vehicles[709]. Spain has also announced plans to introduce a nationwide kilometre-based road charging system since it removed tolls on most motorways in 2021[710]. Spain is spending almost EUR 9.5 billion of Recovery Funds on various measures to make transport more sustainable: it will stimulate the uptake of EVs by the public sector and businesses; replace polluting public transport vehicles; expand charging facilities for EVs; improve cycling and walking in cities with additional funding to the local level; and improve its railway network, including investing EUR 400 million in suburban (regional) railways around cities, which carry the vast majority of the country's rail passengers[711].

The workshops with citizens and stakeholders revealed an agreement with EU and national policies, except for some opposition to investment in EVs. All also wanted to see more traffic restraint in cities, and the pricing and taxation structure of transport shifted strongly to support the use of sustainable modes (and to achieve more equality and social inclusion). They were also in favour of more home working. In more detail:

- ***Citizens*** were strongly of the opinion that public transport should be improved, reorganised, and made more accessible and affordable, particularly in rural areas. They felt that, at present, it is not a viable alternative for many trips due to long journey times. They were interested in the 15-minute city concept, better cycling infrastructure, expanded pedestrian areas and low-emission zones, particularly in larger cities. They also felt that home working should be expanded and formalised after positive experiences of using it during the pandemic. They were concerned about the cost of the shift to EVs, both financial (and therefore whether it is inclusive) and environmental. They were not clear why hydrogen is not pursued more as a technology (especially given the scepticism they expressed about the range of EVs). Nonetheless, they wanted to see more EV charging points, some subsidies, and higher taxes on fossil fuels to fund sustainable transport.

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[708] Prof Tom Rye, Molde University College, Norway.
[709] The Secure, Sustainable and Connected Mobility Strategy 2030, developed by the Ministry of Transport, Mobility and Urban Agenda (MITMA) and approved by the Council of Ministers in 2021, updates the Spanish Strategy for Sustainable Mobility from 2009. Documents available at: https://esmovilidad.mitma.es/ejes-estrategicos (Accessed on 25 November 2022).
[710] Cf. Spanishnewstoday.com (2021). Spain confirms intention to install tolls on highways. Available at: https://spanishnewstoday.com/spain-confirms-intention-to-install-tolls-on-highways_1668263-a.html (Accessed on 25 November 2022).
[711] European Commission (2021). Plan de Recuperación, Transformación y Resiliencia. Available at: https://ec.europa.eu/info/files/spains-recovery-and-resilience-plan_en (Accessed on 25 November 2022).

- ***Stakeholders*** generally agreed with the suggestions from citizens. They also spoke in favour of traffic restriction measures in cities and additional taxation to disincentivise the use of polluting vehicles – but they were specifically against subsidies for the purchase of EVs, arguing that the pricing and quality of alternatives to car use should be changed to stimulate their use (with price subsidies particularly focused on the poorest members of society), and road tolls, low emission zones and higher fuel taxes introduced to cut emissions from road vehicles. They were concerned about current subsidies to fossil fuel use (those introduced to cut the fuel price) as they are perceived as regressive and do nothing to reduce reliance on fossil fuels. They were finally concerned about the difficulties of quickly improving public transport, given the long lead times on rail investments. They felt that encouragement to home working might have uneven distributional impacts, particularly between genders.

General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens, the national stakeholders, and the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source[712]
Clean vehicles	Limited EV purchase incentives	C
	Low emission zones	C&S
	More EV charging infrastructure	C&S
Better public transport	Better PT vehicles	C&S
	Cheaper PT (targeted to the poorest)	C
Spatial planning and city development	More bike infrastructure and parking	C&S
	More pedestrian zones	C&S
	15-minute city	C
	Limited parking supply, including in new development	C&S
Pricing and charges for transport	Higher fuel prices for fossil fuels	S
	Road users charging on existing roads	S
	Parking pricing	S
Planning and operation of transport networks	PT network improvement	C&S
Governance	Contracts that permit home working	C
	Tax incentives to encourage home working	C
Greening transport, in general	Awareness raising for behaviour change in transport	C

[712] C – Citizens; S – Expert Stakeholders

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation, aside from their scepticism about the environmental benefits of electric vehicles. Stakeholders, however, made a limited number of points. These, in the main, do not, though, relate directly to the implementation of mobility-related aspects of the EGD (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); nobody spoke about specific proposals in the Urban Mobility Framework (COM(2021) 811 final); or specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, these barriers relate to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport. The barriers identified were primarily at the national and local levels and included:

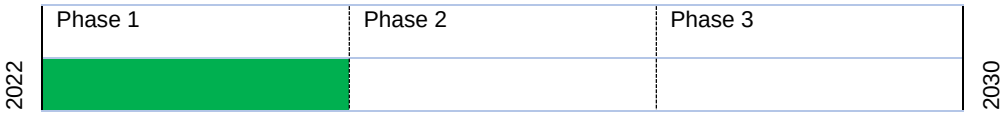
Theme	Barrier	Idea Source[713]
Better public transport	The length of time that it takes to invest in public transport alternatives.	S
Better public transport	The association of public transport use with people in lower social classes and, therefore, the difficulty of achieving behaviour change.	

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.



Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Spain. These mainly comprise communication and education activities. All these actions can be implemented straight away.

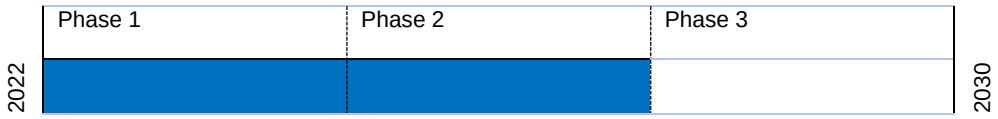
[713] C – Citizens; S – Expert Stakeholders

Theme	Action name	Description	Idea source [714]
Greening transport in general	Awareness raising for behaviour change in transport	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution, especially in schools from an early age.	C

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

Theme	Action name	Description	Ideas Source [715]
Clean vehicles	Limited EV purchase incentives	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, and providing financial incentives to buy e-vehicles. However, this was qualified: stakeholders were keen to avoid subsidising wealthy car users, did not feel that the EV fleet could be expanded quickly enough to meet emissions targets, and therefore argued for restraint of car use and improvement of alternatives.	C
	Low emission zones	Both groups were keen to see the LEZ programme in Spanish cities expanded, even though it is aimed primarily at controlling local pollutants rather than GHG emissions.	C&S
	More EV charging infrastructure	Despite scepticism about the environmental benefits of EVs and the speed with which they can be rolled out, range anxiety was flagged as an issue that might make them less popular. So both groups suggested additional charging infrastructure.	C&S
Better public transport	Better PT vehicles	Investing in new, electric and more comfortable public transportation vehicles was seen as part of the solution to making alternative forms of transport more attractive.	C&S
	Cheaper PT	The stakeholders felt that public transport prices	S

[714] C – Citizens; S – Expert Stakeholders
[715] C – Citizens; S – Expert Stakeholders

	(targeted to the poorest)	should be reduced, particularly for the poorest in society, as part of the Just Transition; blanket subsidies should be avoided.	
Spatial planning and city developme nt	More bike infrastructure and parking	Cycling was seen to have potential, but many cities' infrastructure is currently lacking.	C&S
	More pedestrian zones	Spanish cities already have large pedestrian zones, but further improvements to the pedestrian environment, including full pedestrianisation, were suggested.	C&S
Pricing and charges for transport	Higher fuel prices for fossil fuels	Higher taxation of more polluting vehicles; tax raised should be hypothecated to sustainable transport.	S
	Road users charging on existing roads	Few details were provided, but in general, the stakeholder group wanted to see more restraint of car use and thus suggested road user charging. However, the legislation for this does not currently exist in Spain.	S
	Parking pricing	In the absence of road user charging, stakeholders suggested parking pricing to disincentivise car use.	S
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds at the local, regional and national levels. However, the issue of how to coordinate public transport services provided by different levels of government was not raised.	C&S
Governance	*No measures suggested*	/	

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus, have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from Spain citizens and experts require policy changes and regulations in order to be implemented. Depending on how they are developed in detail, some proposals could fall under shared EU and Member State competency and thus result from multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [716]
Clean vehicles	*No suggestions in this category*	/	
Better public transport	*No suggestions in this category*	/	
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport. Citizens were more in favour of this than stakeholders; the latter argued that the 15mC is more feasible in new than existing development, despite the high densities in many parts of Spanish cities.	C&S
	Limited parking supply, including in new development	Citizens and stakeholders recognised the link between parking provision and car use. Stakeholders wanted to see the amount of parking provided in new developments (currently at least 1,5 spaces per housing unit in Spain) reduced.	S
Pricing and charges for transport	*No suggestions in this category*	/	/
Planning and operation of transport networks	*No suggestions in this category*	/	/
Governance	Contracts that permit home working	These two issues were raised together – citizens, in particular, were very keen on home working and felt that the push by employers to get people to return to the office after the pandemic has been a retrograde step. Thus, citizens wanted to see measures that would formalise and encourage home working. Stakeholders were, however, a little more sceptical, particularly about impacts on gender equality.	C
	Tax incentives to encourage home working		

Just Transition

Participants were concerned about the distributional impacts of the shift to a less carbon-intensive transport system; several proposals in the tables above reflect this. The main concern revolved around the price of public transport for people on low incomes, the progressiveness or otherwise of existing subsidies on fossil fuels, and further subsidies and incentives for an EV purchase. Stakeholders also wanted to see improvements to working conditions in the transport sector.

[716] C – Citizens; S – Expert Stakeholders

6.26.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Spain[717] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[718]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of country policies on the EGD and Citizen and National Stakeholder Reports

According to *Renovate2Recover, How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[719], Spain's National Recovery and Resilience Plan (NRRP), endorsed by the European Commission in July 2021, comprises measures worth €69.5bn. This can be broken down as follows concerning the EGD priorities:

Increasing renewable energy in buildings	The Plan includes promoting renewable energy, including, but not limited to, cooling and heating and through energy efficiency standards intended to eliminate fossil fuel use in newly constructed social housing.
Improving energy efficiency in buildings	Nearly 85% of existing buildings are rated E, F or G based on their energy consumption. The target is to renovate 1.2 million out of 18.7 million primary residences by 2030. The Plan estimates that, in the residential sector, the measures would save a lifetime saving of 26TWh of final energy consumption, with an additional 17TWh in the non-residential sector. It is estimated that the impact of the measures to promote renovation will lead to an average reduction in non-renewable primary energy consumption of more than 40% both in the residential and non-residential sectors.
Tax system for energy products aligned to the green transition	Not specifically mentioned by the review of the NRRP.

[717] A stakeholder meeting took place on 18 October 2022 and involved one national authority, one civil society member and three research and academia member.
[718] Dr Ruth Kerrigan, COO at Integrated Environmental Solutions.
[719] Ivanova, V. et al. (2021), see note 30, page 61.

Provide funding for the renovation of buildings	€3.6bn is allocated for a multi-measure renovation programme in residential environments for economic and social recovery. €758m is assigned to the renovation of public buildings. €1bn is earmarked for the modernisation of public services. €135m is allocated for the energy efficiency of sports facilities. Almost all programmes require at least 30% primary energy savings to be achieved (therefore at least 'medium' depth) or obtaining energy performance class A or B certification (potentially deep renovation) to be eligible for funding. Some of the plan's programmes will link the level of grant support offered to the depth of renovation and household income, covering 30-50% of investment costs for projects with shorter payback periods, 50-70% for those with longer paybacks, and 70-100% for energy poor and low-income households.
Renovate at least 3% of the total floor area of public buildings annually	An EC study estimates that only 1.7% of residential sector renovations were medium depth and 0.3% deep renovations. In the non-residential sector, the estimate is for 2.9% medium, and 0.5% deep renovations.
Create world-leading companies	Spain's NRRP includes measures related to improving digital skills and training, but the overall plan needs further development. There are proposals for one-stop shops and updates to the Housing Act.
Raise global ambition to tackle climate change	Not specifically mentioned by the review of the NRRP.
Improve health and well-being	Not specifically mentioned by the review of the NRRP.
Address inequality and energy poverty	€1bn is allocated for a 'Regeneration and Demographic Challenge' programme focused on smaller municipalities and low-income areas. 70-100% funding grants are available for those on low incomes.
Ensure a Just Transition that is fair, competitive, and green	Not specifically mentioned by the review of the NRRP.
Mobilising industry for a clean and circular economy	Not specifically mentioned by the review of the NRRP.

The following compares the views of the citizens and the national stakeholders along with Spain's National Recovery and Resilience Plan (NRRP) in the context of the EGD. The aim is to understand where the strengths and weaknesses lie in the current national plans and from the views of the citizens and national stakeholders to inform the actions to be taken to ensure the adoption of the EGD.

Increasing renewable energy in buildings: Citizens felt that large companies and the public are increasing the use of solar panel technologies which is a positive transition. The review of the NRRP mentions plans to encourage renewable energy, particularly for heat replacement, but it does not mention the allocated funding or any detail for this plan.

Improving energy efficiency in buildings: According to the NRRP, many buildings (85%) have worse than an E energy performance rating. An ambitious target is also to renovate

1.2 million out of 18.7 million primary residences by 2030. However, the national stakeholders distinguished between measures orientated to produce clean energy, such as solar photovoltaic (PV) panels and those that will reduce energy consumption, such as medium or deep renovation of a building. The perception is that measures to produce clean energy are more affordable and have a lower payback period than those looking to reduce energy consumption. They also suggested that citizens do not fully understand the difference and think energy efficiency measures are largely related to clean energy solutions. As such, there is more education required for citizens concerning overall awareness of both clean energy integrations and refurbishment projects. Citizens also mentioned the need for increased education on energy renovation to consolidate this view.

National stakeholders also felt there should be support for citizens looking to avail of funding mechanisms, including information offices distributed in different territories in Spain. Other ideas included a minimum energy rating when renting a property or setting maximum prices for properties with high energy consumption. It was also mentioned, however, that this could have an unintended consequence of evicting tenants during the renovation period and charging them higher rents later, which should be avoided.

Other suggestions from the national stakeholders included linking Real Estate Tax to your energy certification, so those with a lower energy consumption would pay less. However, this would raise a query regarding the Just Transition in that those who cannot afford to renovate their properties would end up paying higher property taxes.

Concerning energy-efficiency building projects, there was a perception by the citizens that there is a monopoly for energy-efficient construction, which will lead to companies benefitting at the expense of the individual. However, they also felt that energy efficiency could lower energy bills, which is a positive outcome, even if the initial cost to carry out the measures is expensive.

Tax system for energy products aligned to the green transition: Citizens suggested tax breaks for those carrying out renovations.

Provide funding for the renovation of buildings: There are €3.6bn allocated from the NRRP for the refurbishment of residential buildings. However, this is not 100% funded for most residential homeowners. Citizens mentioned that renovation is expensive, regardless of available subsidies, especially for middle- and lower-income families and that it is difficult to renovate older buildings. Further financial contributions would be needed to increase the adoption of energy efficiency measures for buildings. National stakeholders did not agree and mentioned that 100% funding could not be given to all citizens as there is not enough budget to fund everyone, and as such private homeowners need to contribute. However, they did mention the need for 100% subsidies for those on low incomes but not middle incomes.

Renovate at least 3% of the total floor area of public buildings annually: The renovation rate is still far behind the target of 3% of public buildings' floor area per year. This was confirmed by the national stakeholders, who mentioned, however, that there is a plan to renovate public buildings. The process at the national level is slow, with more being achieved at the local and regional levels. Citizens agreed that public buildings and public citizens should lead by example.

Create world-leading companies: The Renovate2Recover review mentioned that key challenges to be addressed are creating an enabling environment for the sector's growth, including adequate fiscal support, training and specialised workforce development. This

was consolidated by the national stakeholders who felt there is good education for professional levels (e.g. architects and engineers); however, further education for installers and professionals executing energy efficiency projects is required. The NRRP includes measures related to improving digital skills and training, one-stop shops, and updates to the Housing Act, which could be coupled with education for installers and professionals.

Citizens also felt that more training should be required for renovation and mentioned that access to experts is expensive. The national stakeholders suggested that community processes could facilitate access to these experts at scale, making it more affordable to citizens. A further suggestion was that refocusing the construction business on refurbishment rather than new housing construction would have a huge impact.

Citizens felt there should be increased funding for R&D to develop new technologies for energy-efficient buildings. They also suggested that there should be incentives for companies offering green solutions to encourage more companies to move into the energy efficiency market.

Raise global ambition to tackle climate change: National stakeholders mentioned there are not enough national campaigns to educate citizens and raise awareness regarding energy efficiency in buildings, and the existing communication initiatives do not reach all citizens. This was confirmed by citizens who mentioned that more education is required to raise awareness regarding energy efficiency and climate change.

Improve health and well-being: Citizens recognised that energy efficiency measures would positively impact the citizens' health and enable improved personal comfort conditions. It was not mentioned by the national stakeholders nor noted as part of the NRRP.

Address inequality and energy poverty: National stakeholders mentioned that there is 100% financing of renovation projects for those on lower incomes. However, the 100% financing does not include hidden costs such as taxes and building permits. Therefore it is still impossible for this demographic to improve the energy efficiency of their buildings. There is €1bn set aside by the NRRP for those in low-income areas. As such, this funding could be reviewed in line with citizen and stakeholder views.

Ensure a Just Transition that is fair, competitive, and green: This was not mentioned by the NRRP, citizens or the national stakeholder.

Mobilising industry for a clean and circular economy: This was not mentioned by the NRRP, citizens or the national stakeholder.

General overview of actions per theme

The following is a summary of the actions proposed by the national stakeholders and citizens during the workshops.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Promotion of energy networks such as district heating or cooling Long-term commitment from the government to renewable energy Incentive schemes for companies investing in solar technology
Improving energy efficiency in buildings	Local visits for citizens to renovated buildings to understand the benefits. Community processes to access professional expertise at scale to reduce costs Awareness campaigns communicating energy efficiency legislation Development of new business models for the delivery of energy efficiency projects
Tax system for energy products aligned to the green transition	Reduced property tax for those in energy-efficient buildings Tax breaks for renovation projects
Provide funding for the renovation of buildings	Optimisation of the national mechanisms for distributing funding for energy efficiency projects Increased grants and subsidies for renovation Solutions to allow easier access to grants
Renovate at least 3% of the total floor area of public buildings annually	Dissemination of successful public building projects
Create world-leading companies	Awareness campaigns for the construction sector to understand the opportunities in the renovation sector Training programmes to enable upskilling of energy and construction professionals Increased R&D funding for energy-efficient technologies
Raise global ambition to tackle climate change	Awareness and education campaigns for citizens Educational programmes in schools
Improve health and well-being	No action mentioned.
Address inequality and energy poverty	Rent caps for property owners on renovated properties 100% renovation schemes for the most vulnerable
Ensure a Just Transition that is fair, competitive and green	100% funding for an energy assessment of buildings to enable access for all
Mobilising industry for a clean and circular economy	No action mentioned.

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[720]
Increasing renewable energy in buildings	No barriers were mentioned.	/
Improving energy efficiency in buildings	The strategies proposed by the EU to achieve the objectives sometimes do not make sense for Mediterranean countries. For example, Europe tends to focus more on heating than cooling, which makes less sense for southern countries.	S

[720] C – citizens; S – expert Stakeholders

	When discussing more energy-efficient buildings, people tend to think of clean energy production rather than consumption-reducing actions, so people do not focus on improving insulation and taking advantage of sunlight.	S
	The Communities of Property Owners have difficulties reaching agreements among their members, and their requests to the energy service companies are often unrealistic.	S
	It is harder to retrofit older buildings.	C
Tax system for energy products aligned to the green transition	No barriers were mentioned.	/
Provide funding for the renovation of buildings	The application for receiving subsidies is usually very complex. It is a rather lengthy bureaucratic process that, in many cases, discourages citizens from applying, especially the most vulnerable, who are the ones who need it the most.	S
	To qualify for subsidies, it is necessary to reach a minimum level of improvement for which sometimes there are additional actions that need to be taken where there is no budget. As a result, citizens only undertake renovation as much as they can afford.	S
	Some citizens have little confidence in the incentive plans. They complained that some schemes had been put in place and then abolished, leaving people without long-term support. The stakeholders consider that this perception is based on misinformation.	C
	There is a lack of human support to people in the application process.	S
	Renovation is expensive, especially for middle and low-income houses.	
Renovate at least 3% of the total floor area of public buildings annually	Administration buildings have not implemented renovation.	S
Create world-leading companies	There is a significant lack of knowledge and qualifications among the professionals undertaking these works/remodels/adaptations.	S
Raise global ambition to tackle climate change	There is a lack of general information. For example, photovoltaic systems are often confused with thermal systems.	S
	There is a lot of ignorance among the public about the benefits of a renovation. There are too few campaigns, and they are usually digital, not reaching the grassroots citizens on the ground.	S
Improve health and well-being	No barriers were mentioned.	/
Address inequality and energy poverty	No barriers were mentioned.	/
Ensure a Just Transition that is fair, competitive and green	No barriers were mentioned.	/
Mobilising industry for a clean and circular economy	No barriers were mentioned.	/

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have an effect in the short term.

2022	Phase 1	Phase 2	Phase 3	2030

Main policy instruments of implementation: awareness raising, creation of energy networks, change in taxation and funding

Theme	Action name	Description	Idea Source[721]
Increasing renewable energy in buildings	Promotion of energy networks such as district heating or cooling	At the local level, energy networks should be promoted to enable cooperation, encourage more rational use of resources and promote self-management.	S
	Long-term commitment from the government to renewable energy	At all levels, governments must commit to long-term renewable energy plans.	S
Improving energy efficiency in buildings	Local visits for citizens to renovated buildings to understand the benefits.	At the local level, visits to energy-efficient buildings should be promoted to motivate retrofitting, although the impact would be low.	S
Tax system for energy products aligned to the green transition	Reduced property tax for those in energy-efficient buildings	At the local level, IBI (Spanish Property Tax) or other taxes should be linked to the energy rating so that fewer taxes are paid by people living in a house with a better energy rating.	S
Provide funding for the renovation of buildings	Optimisation of the national mechanisms for distributing funding for energy efficiency projects	At the national level, the ongoing optimisation of mechanisms for the National Energy Efficiency Fund should be completed to make it more efficient, reducing the costs associated with the current bureaucracy and therefore being able to increase the number of actions with the same amount of money.	S
Create world-leading companies	Awareness campaigns for the construction sector to understand the opportunities in the renovation sector	At the national level, the construction business should be focused on renovation rather than new housing construction. This would have a high impact, but it does not seem easy or quick to turn the sector around.	S

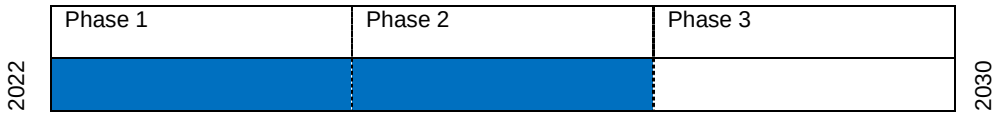
[721] C – Citizens; S – expert stakeholders

	Training programmes to enable upskilling of energy and construction professionals	Training programmes for construction and energy professionals carrying out renovation.	C
Raise global ambition to tackle climate change	Awareness and education campaigns for citizens	At all levels, more resources (technical and human) should be deployed to implement different information and dissemination strategies. For example, more offices that provide information and advice on rehabilitation options to citizens campaigns 'on the street' using the appropriate channels for each profile and campaigns that disseminate the experiences of people who have renovated their homes, highlighting the benefits obtained after the renovation.	C&S
Address inequality and energy poverty	Rent caps for property owners on renovated properties	At the national level, incentives should be introduced for property owners to limit rent increases, thus providing social safeguards to vulnerable families.	S
	100% renovation schemes for the most vulnerable	At every level, 100% renovation schemes should be available for the vulnerable population, and support should be provided during the application process.	S
Ensure a Just Transition that is fair, competitive and green	100% funding for the energy assessment of buildings to enable access for all	At the local level, funding should be available to pay consultancies with qualified professionals to learn about the most appropriate improvements for each building/house.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: inventive schemes, new business models, tax breaks, incentives

Theme	Action name	Description	Idea Source[722]
Increasing renewable energy in buildings	Incentive schemes for companies investing in solar technology	Incentivise large companies to invest in solar technology.	C
Improving energy efficiency in buildings	Community processes to access professional expertise at scale to reduce costs	At the local level, collective processes to access consultancy with good professionals, which could not be afforded individually, should be promoted.	S
	Awareness campaigns communicating energy efficiency legislation	At all levels, energy efficiency legislation should be communicated clearly.	S
	Development of new business models for the delivery of energy efficiency projects	New business models based on energy efficiency should be promoted at the national level, following the energy service companies' model.	S
Tax system for energy products aligned to the green transition	Tax breaks for renovation projects	Provide tax breaks for those carrying out renovation projects.	C
Provide funding for the renovation of buildings	Increased grants and subsidies for renovation	At all levels, grants and subsidies should be extended so that citizens can address these improvements in retrofitting.	S
	Solutions to enable easier access to grants	At all levels, the renovation should not only be affordable for all, but information and support managing the bureaucracy should also be provided.	S
	Solutions to enable easier access to grants	Offer incentives for companies looking to	C

[722] C – Citizens; S – expert stakeholders

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		provide green solutions to encourage more participants in this market.	
Renovate at least 3% of the total floor area of public buildings annually	Dissemination of successful public building projects	At all levels, administrations should lead by example concerning public policies on energy efficiency.	C&S
Create world-leading companies	Increased R&D funding for energy-efficient technologies	At the national and European levels, the investment in technology and research for energy efficiency should be increased and steady in the long term.	C&S
Raise global ambition to tackle climate change	Educational programmes in schools	At the regional level, school campaigns and outreach work should be continued. They are very effective when students share their learning with their families.	S

6.27 Sweden

6.27.1 Sustainable food systems

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders in Sweden[723] that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[724]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Sweden's policies on the EGD and Citizen and National Stakeholder Reports

The participants of the stakeholder meeting in Sweden did not point to any key food policies on a national level. This does not necessarily reflect the state of food policies but can rather serve as an indication of the lack of visible policies to the stakeholders present.

Additionally, an overview of the national R&I food investment landscape carried out by the European Commission points to the following documents as key pieces of food policy in Sweden:

[723] A stakeholder meeting took place on 28 October 2022 and involved one civil society member, one national authority representative, two local authorities' representatives and two academia.
[724] Prof. Jacqueline Broerse, professor of innovation and communication in the health and life sciences (with focus on diversity and social inclusion) and Director of the Athena Institute, Fac. of Science, Vrije Universiteit Amsterdam.

- A National Food Strategy for Sweden (Ministry of Enterprise and Innovation, 2016)[725] – The goal of the strategy is to foster competitive food production, increase growth, employment, and sustainable development by promoting resource-efficient production; foster research into new production methods, plant, and crop varieties; as well as sustainable and healthy foods.

- Strategy for Sustainable Consumption (Ministry of Finance, 2016)[726] – The goal of the Strategy is developing economically, socially, and environmentally sustainable consumption. The strategy focuses on what the state, municipalities, the business sector, and civil society can do together to motivate consumers to be sustainable. Regarding the first focus area, knowledge, the Swedish government wants to establish a new forum under the responsibility of the Swedish Consumer Agency to bring together stakeholders who can contribute to eco-smart consumption and lifestyles (e.g., schools, researchers, business sector, county administrative boards, municipalities, and civil society).

- National Research Programme on Food (Formas, 2017)[727] - The ten-year Strategic Research Agenda 'Towards a sustainable and competitive food system' is based on five perspectives (system perspective; knowledge and skills development; governance and leadership; digitalisation and technology development; and gender equality and diversity), and four themes (sustainable production systems; tasty food for a healthy population and planet; the meal and the consumer; and innovative and safe food). Overall, the National Research Programme on Food focuses on interdisciplinary and collaborative research that uses a system perspective.

General overview of actions per theme

The actions proposed by the Swedish citizens and stakeholders on transforming the current food system in Sweden consist of seven categories, aiming at addressing specific components of the food system. The actions they proposed target all the components of the food system, with no particular emphasis on a specific component. The proposed actions are mainly focused on medium-term implementation tools such as subsidies and other (financial) incentives.

Legend
Green: Actions that can be carried out now with minimal support
Blue: Actions requiring grants and incentives that need government support to implement further
Orange: Actions requiring changes in regulations that will take longer to implement

[725] Ministry of Enterprise and Innovation, Government of Sweden (2016). A National Food Strategy for Sweden. Available at: http://extwprlegs1.fao.org/docs/pdf/swe178046.pdf (Accessed on 28 November 2022).
[726] Ministry of Finance, Government of Sweden (2016). Strategy for Sustainable Consumption. Available at: https://www.government.se/4a9932/globalassets/government/dokument/finansdepartementet/pdf/publikationer-infomtrl-rapporter/en-strategy-for-sustainable-consumption--tillganglighetsanpassadx.pdf (Accessed on 28 November 2022).
[727] Formas (2017). National Research Programme on Food. Available at: https://formas.se/en/start-page/about-formas/what-we-do/national-research-programmes.html (Accessed on 28 November 2022).

Theme	Action
Sustainable food production (8)	Encouraging farmers to implement more frequent crop rotation
	Promotional campaigns on decentralised food production methods
	Subsidies for local and sustainable food production
	Investments in research on new types of proteins
	Investments in modernisation of agricultural methods
	Subsidies for farmers transitioning towards organic food production
	Subsidies to make the agricultural sector more attractive for young people
	Regulation supporting small-scale food production
Sustainable food processing, distribution & retail (7)	Investments in the extension of the food packaging deposit systems
	Shortening the food supply chain
	Subsidies for local food markets
	Regulation on special food label certificates for local and sustainable food producers
	Regulation introducing mandatory reductions in plastic food packaging
	Development of sustainable public food procurement guidelines
	Establishing a tax on food products with a high environmental impact
Sustainable food consumption (6)	School education on sustainable diets and meal preparation
	Educational workshops on maintaining environmentally acceptable and healthy nutrition
	Awareness campaigns on the importance of reducing meat consumption
	Awareness campaigns on the importance of purchasing organic and sustainable food products
	Introduction of eco-vouchers for seasonable food consumption
	Subsidies to make school meals more sustainable and organic
Food loss and waste reduction (1)	Development of a toolkit on household waste reduction actions
Ensuring food security (1)	Investments in research on making Sweden more self-sufficient in food production
Combating food fraud (0)	
Across the entire food cycle (2)	Education for holistic food system transition experts
	Investments in new technologies aiming to make the different components of the food system more sustainable

Barriers to EGD implementation

The citizens and stakeholders identified the following barriers to the implementation of the proposed actions on the transformation of sustainable food systems:

Theme	Action	Idea Source [728]
Sustainable food production	Farmers and food producers struggle to earn enough to uphold high food standards.	C
	Crop rotation is often difficult due to high costs.	C

[728] C – Citizens; S – expert stakeholder

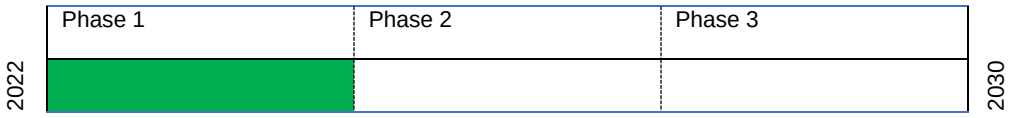
	Lack of investments in infrastructure for production of sustainable meat alternatives.	C
	Aging labour force in the agricultural sector.	S
Food processing, distribution & retail	Small-scale businesses have difficulties accessing the market due to high lease prices and highly competitive market actors.	S
	Greenwashing in food product labelling and marketing makes it difficult for consumers to understand which products are genuinely sustainable.	S
Sustainable food consumption	Healthy and sustainable food is unaffordable for many people.	c
Across the entire food cycle	Citizens perceive an unclear division of responsibility on food system regulation between public authorities, as many policy issues are cross-sectoral.	C

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, and interaction

This category concerns actions that can be taken straight away by individual citizens, (public) organisations and businesses, and are proposed by citizens and stakeholders in Sweden. These mainly comprise communication and education activities. However, they also include actions that entail negotiations, cross-sectoral cooperation, and advisory activities. Some actions, such as awareness campaigns on reducing meat consumption, are easy to implement (low hanging fruit); however, they also have a limited potential to contribute to the food system transformation. Others, such as more frequent crop rotation, may be more difficult to implement successfully, but can produce knock-on effects, in raising the overall soil health.

Theme	Action name	Description	Idea Source [729]
Sustainable food production	Encouraging farmers to implement more frequent crop rotation	Farmers should rotate their crops more frequently to ensure soil health.	S
	Promotional campaigns on decentralised food production methods	Promotional campaigns should be organised on decentralised food production methods (e.g. urban gardening and vertical farming).	S

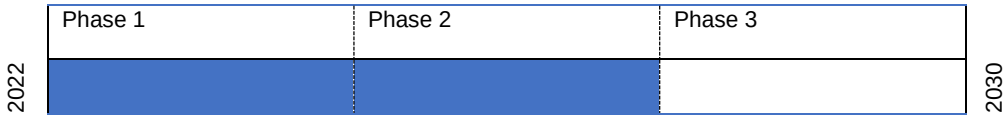
[729] C – Citizens; S – expert stakeholders

Sustainable food consumption	School education on sustainable diets and meal preparation	School education should include classes on maintaining sustainable diets and on healthy meal preparation.	C
	Educational workshops on maintaining environmentally acceptable and healthy nutrition	Educational workshops should be organised for the diverse groups in society on environmentally sustainable and healthy nutrition.	S
	Awareness campaigns on the importance of reducing meat consumption	Awareness campaigns should be organised on the environmental impact of meat consumption and importance of reduction in meat consumption.	S
	Awareness campaigns on the importance of purchasing organic and sustainable food products	Awareness campaigns should be organised on the importance of purchasing organic and sustainable food products.	C
Food loss and waste reduction	Development of a toolkit on household waste reduction actions	A toolkit should be developed and distributed to households on methods of reducing household waste.	S
Across the entire food cycle	Education for holistic food system transition experts	Educational programmes should be developed for food system transition professionals.	C

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have an impact in the medium term.



Main instruments of implementation: subsidies and other (financial) incentives

This category concerns actions that are deemed unaffordable and unlikely to take place without support through subsidies and other incentives. These actions mostly concern increasing the sustainability of food production through measures such as subsidies for farmers and local food producers, as well as technical support for sustainable food production. Many of these actions are taking place on a smaller scale but can be significantly ramped up with incentives.

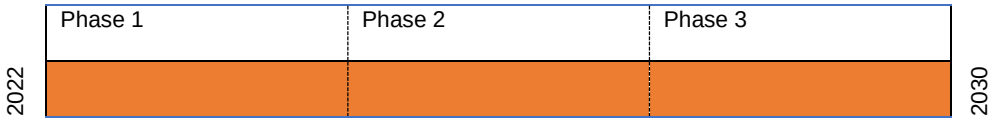
Theme	Action name	Description	Idea Source [730]
Sustainable food production	Subsidies for local and sustainable food production	Subsidies should be ensured for local and sustainable food production.	C
	Investments in research on new types of proteins	Investments should be made in research of new types of proteins (e.g. proteins from insects).	C
	Investments in modernisation of agricultural methods	Investments should be made in modernisation of agriculture (e.g. grants for more efficient machinery and application of new technologies).	C
	Subsidies for farmers transitioning towards organic food production	Subsidies should be provided for farmers attempting to transition from conventional food production methods to organic production.	C
	Subsidies to make the agricultural sector more attractive for young people	Subsidies should be provided to make the agricultural sector more attractive to young people (e.g. educational grants, easily accessible grants for small-scale sustainable production).	S
Sustainable food processing, distribution & retail	Investments in the extension of the food packaging deposit systems	Investments should be made in expanding the deposit systems of food packaging.	C
	Shortening the food supply chain	Subsidies to support the reduction of the number of actors involved in food supply chains (e.g., reducing shipping routes, food processors and others).	S
	Subsidies for local food markets	Subsidies should be provided for municipalities to expand the local food markets in size and opening hours.	S
Sustainable food consumption	Introduction of eco-vouchers for seasonable food consumption	An eco-voucher system should be introduced for the citizens to encourage them to consume more seasonal food products.	C
	Subsidies to make school meals more sustainable and organic	Subsidies should be made available for schools to base the students' meals on sustainable, local and organic food.	S
Ensuring food security	Investments in research on making Sweden more self-sufficient in food production	Investments should be made in research on methods to make Sweden more self-sufficient in food production.	S
Across the entire food cycle	Investments in new technologies aiming to make the different components of the food system more sustainable	Investments should be made in developing new technologies aiming to make the different components of the food cycle more sustainable.	S

[730] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus coming with the longest development period before they can be implemented. Accordingly, these actions depend on the policy-making process beginning immediately.



Main instrument of implementation: regulation

This category concerns actions that are unlikely to take place without regulatory frameworks. These actions include taxation tools as well as the development of various regulatory tools.

Theme	Action name	Description	Idea Source [731]
Sustainable food production	Regulation supporting small-scale food production	Regulation should be developed supporting small-scale food production businesses (e.g., easier certification procedures).	C
Sustainable food processing, distribution & retail	Regulation on special food label certificates for local and sustainable food producers	Regulation should be introduced outlining special food label certificates for local and sustainable food producers.	C
	Regulation introducing mandatory reductions in plastic food packaging	Regulation should be introduced outlining mandatory reductions in use of plastic food packaging.	S
	Development of sustainable public food procurement guidelines	Development of sustainable public food procurement guidelines (e.g., prioritising local and organic food instead of affordability).	S
	Establishing a tax on food products with a high environmental impact	A special tax should be introduced for food products with a high environmental impact (e.g., products containing palm oil, red meat etc.).	S

Just Transition

Small-scale food producers are disproportionately affected by the sustainable production requirements when compared to large corporations. This means there should be more subsidies and measures supporting them in the transformation to sustainable production. These measures can include easier access to land, training, and grants for local producers.

[731] C – Citizens; S – expert stakeholders

6.27.2 Sustainable and smart mobility

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[732] in Sweden that, in their view, can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[733]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Sweden's policies on the EGD and Citizen and National Stakeholder Reports

Sweden has in the recent past introduced several policies to reduce emissions from the transport sector. As the EU country with the lowest per capita emissions overall (5.1 tonnes per person), it managed to reduce its transport emissions by 23.3% from 2005 to 2019 (in contrast to the EU, where over the same period transport emissions remained stable in absolute terms[734]), although they still account for over 30% of the total[735]. This was achieved by introducing a range of measures to tackle not only vehicle technology and fuels but also total travel demand (km travelled by people and goods), recognising that both must be reduced to meet emissions reduction targets. Electrification of the vehicle fleet is recognised as a long-term aim but has not been the main pillar of Swedish emissions reduction policy from transport to date. Instead, measures have included[736]:

- A carbon tax on vehicle fuel and minimum proportions of biofuel used in fuels sold.
- A tax on aviation tickets for passengers departing Sweden and subsidising a long-distance night train from Stockholm to Hamburg to link Sweden to the rest of Europe's rail network.
- Higher purchase and annual taxes for high-emitting vehicles in their first three years of life, lower on low-emitting vehicles; and similar tax incentives and disincentives for company cars.
- City-environment agreements where the national government teams up with local and regional governments to improve public transport, walking and cycling areas and introduce lower vehicle speeds and more parking management in cities and regions. In

[732] A stakeholder meeting took place on 28 October 2022 and involved a representative from a national research institute and one from an international research and policy organisation.
[733] Prof Tom Rye, Molde University College, Norway.
[734] Eurostat, cited by World Economic Forum (2022). The European Union has cut greenhouse gas emissions in every sector - except this one. Available at: https://www.weforum.org/agenda/2022/09/eu-greenhouse-gas-emissions-transport/ (Accessed on 4 January 2023).
[735] European Parliament (2021). Climate action in Sweden: Latest state of play. Available at https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698764/EPRS_BRI(2021)698764_EN.pdf (Accessed on 30 November 2022).
[736] Ministry of the Environment. Government of Sweden (2020). Sweden's long-term strategy for reducing greenhouse gas emissions. Available at: https://unfccc.int/sites/default/files/resource/LTS1_Sweden.pdf (Accessed on 1 December 2022).

addition, Gothenburg and Stockholm have road user charging schemes, introduced in the last years as part of a city agreement.

- Particularly in Stockholm, many years of developing the city along public transport routes, with the highest housing densities around metro stations, leading to high public transport use.

- Financial support for buying low-emission buses (changed, from 2020, to support for purchasing low-emission commercial vehicles, including trucks).

Sweden is now spending EUR 168 million of Recovery Funds[737] on improving its rail infrastructure. In addition, vehicle taxes (including those on company cars) will be further adjusted to disincentivise the purchase of polluting vehicles and the converse for low-emission vehicles.

The workshops with citizens and stakeholders showed much congruence between their views and current government policy on reducing emissions from transport. However, it appeared that citizens did not feel that the government was doing enough to develop public transport (especially long-distance public transport, as an alternative to air) nor to keep public transport fares low enough. In more detail, the discussions with citizens and stakeholders revealed the following:

- ***Citizens*** suggested rewarding people who choose to move away from fossil fuel-based transport and towards environmentally friendly means of transportation, as well as a carbon tax for airline companies (as opposed to passengers). They want the government to develop public transport to become a more attractive choice and to make it cheaper, so that the poor are not excluded. They wanted to see communication campaigns on how green alternatives can 'contribute to a brighter future'. They said that they wanted to see the government 'develop an overall control on mobility' similar to the way governments have handled COVID-19 – this implies, although it was not stated, that they would support limits (in terms of km per year) for the amount people could travel, and/or personal travel carbon budgets. At a more micro level, they wanted to see coordinated parcel deliveries in districts, per street, per recipient, with requirements for delivery companies to use climate-smart transport.

- ***Stakeholders*** generally agreed with most of the suggestions from citizens, but they specifically disagreed with the suggestion 'Develop an overall control on mobility like the way governments have handled COVID-19. Establish a governance system for local communities and people and develop national and local plans', saying that it was excessively vague and therefore difficult to operationalise. In addition, they had several innovative suggestions regarding freight and deliveries, procurement, and the 15-minute city – they supported the latter but were also wary of excessive densification of cities. They wanted transition plans (presumably plans to transition to a low-carbon transport system) to be obligatory for municipalities. They noted several times that they believed even local and regional public transport to be too expensive for the poorest in society. They wanted a more flexible, broader view of public transport to be taken, including carsharing and smaller, driverless vehicles.

[737] European Commission (2022), see note 255, page 249.

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General overview of actions per theme

The following suggested actions have been devised from the reports relating to the events carried out with the citizens and the national stakeholders, as well as the experts' opinions.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action	Idea source[738]
Clean vehicles	Set standards for smart charging, emissions, hydrogen etc	S
	Develop charging infrastructure for EVs	S
Better public transport	More extensive PT network, and more reliable	C&S
	Cheaper PT	C
	PT system to include car sharing	S
Spatial planning and city development	Better cycling infrastructure	C&S
	15-minute city	C
Pricing and charges for transport	Taxation of polluting vehicles	C&S
	Carbon tax on airlines	C
	Traffic restraint in cities – limiting access to certain vehicles	C&S
	Geofencing freight vehicles to limit congestion and pollution	S
Planning and operation of transport networks	Self-driving small public transport vehicles in rural areas	S
	Consolidation centres for freight	S
Governance	Obligatory transport transition plans for municipalities	S
	Coordination and regulation of last mile freight deliveries	
Greening transport in general	Education and awareness raising	C&S
	Knowledge sharing in sustainable freight transport	S
	More research funding	S

Barriers to EGD implementation

Citizens did not mention barriers to EGD implementation. Stakeholders made only one key point, see the table below. This did not relate directly to the implementation of mobility-related aspects of the Green Deal (for example, nobody spoke about proposed changes to legislation found in Fit for 55 (COM(2021) 550 final); there was no mention of specific proposals in the Urban Mobility Framework (COM(2021) 811 final); nor about specific proposals in the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)). Rather, this barrier relates to the difficulty of implementing what the stakeholders believe to be necessary to achieve the objectives of the Green Deal – these being, primarily, a significant reduction in GHG emissions from transport.

[738] C – Citizens; S – expert stakeholders

Theme	Barrier	Idea Source[739]
Governance	The stakeholders pointed out that infrastructure policies are very focused on large, high-profile projects with the risk of locking in unsustainable mobility patterns. Participants mentioned highways and high-speed rail that take decades to implement. There is a need instead to focus more on small and decentralised solutions to decrease the need for transportation. This is at the national level and, to an extent, at the EU level.	S

Categorised actions with descriptions

Actions citizens can take on their own with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.

Actions that can be taken straight away by individual citizens, organisations, and businesses, proposed by citizens and stakeholders in Sweden. These mainly comprise communication and education activities. All these actions can be implemented straight away.

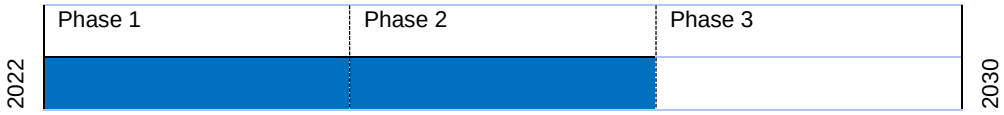
Theme	Action name	Description	Idea source [740]
Greening transport in general	Education	Changing people's habits through education and awareness raising with campaigns, training and advertisements.	C&S
	Knowledge sharing in sustainable freight	Exchange projects between different Member States providing expertise, advice and consultations in reaching the mobility goals for freight transport.	S
	More research funding	Both national and EU funding should be available for creative research trials and good upscale examples, especially when it comes to localised, less car-dependent service solutions and sustainable mobility in the countryside and in cities.	S

[739] C – Citizens; S – expert stakeholders
[740] C – Citizens; S – expert stakeholders

Actions requiring grants and incentives or changes in current public spending

Timeline

These actions will have an impact in the medium term.



Many of the measures suggested by stakeholders fell into this overall category. They are mainly implementable in the medium term; those identified as longer term are in italics in the 'action name' column.

Theme	Action name	Description	Idea source [741]
Clean vehicles	Develop charging infrastructure for EVs	In the view of stakeholders, this infrastructure is currently underdeveloped.	S
Better public transport	More extensive PT network, and more reliable	In general, participants wanted to see a better public transport that is more competitive with cars, but they did not give detailed examples.	C&S
	Cheaper PT	Participants were concerned that public transport could be unaffordable for vulnerable groups. It was not clear whether this referred to long-distance as well as local and regional public transport.	C&S
Spatial planning and city development	More bike paths	In general, participants wanted to see improved conditions for cycling, but they gave no further details.	C&S
Pricing and charges for transport	Taxation of polluting vehicles	Higher taxation of more polluting vehicles, and lower taxation of cleaner vehicles; tax raised should be hypothecated to sustainable transport.	C
	Carbon tax on airlines	Citizens spoke briefly of this without giving further details.	C
Planning and operation of transport networks	Self-driving small public transport vehicles in rural areas	Stakeholders supported a more innovative approach to public transport to guarantee accessibility in rural areas. This was one of their longer-term solutions.	S
Governance	No measures suggested		

[741] C – Citizens; S – expert stakeholders

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus and thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.

Many of the proposals from Swedish citizens and experts require policy changes and regulations to be implemented. Depending on how they are developed in detail, some of the proposals could fall under shared EU and Member State competency and thus be the result of multi-level policy reform. Some suggestions were for better coordination at the EU level, which may, in some circumstances, not require regulation, but they are included here for completeness.

Theme	Action name	Description	Idea source [742]
Clean vehicles	Set standards for smart charging, emissions, hydrogen etc	At the EU level and national levels, the stakeholders did not feel that standards are sufficiently harmonised. It is clearly the case that at present, in EV charging, there are many competing offers that can confuse the consumer.	S
Better public transport	Include car sharing in public transport	This was a suggestion aligned with stakeholders' view that public transport must be more innovative, particularly in rural areas where demand is low but the need to provide accessibility remains.	C&S
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.	S
Pricing and charges for transport	Traffic restrictions in cities – limiting access to certain vehicles	There should be measures to restrict personal car use, such as low emission zones in cities (which often include an element of pricing).	S
	Geofencing freight vehicles to limit congestion and pollution	Stakeholders made many suggestions related to freight. In this one, they suggested that access restrictions on freight vehicles could be linked to a geofencing system, making it impossible for prohibited vehicles to access certain areas at certain times.	S

[742] C – Citizens; S – expert stakeholders

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Planning and operation of transport networks	Consolidation centres for freight	Consolidation centres are a site at which various freight loads from various operators can be consolidated onto one vehicle to minimise the impacts of deliveries in central areas of cities.	S
Governance	Obligatory transport transition plans for municipalities	Little detail was provided, but it appeared that stakeholders were implying that stronger central government control of the transport policies of municipalities is required to drive the transition to low-carbon transport.	S
	Coordination and regulation of last mile freight deliveries	Recognising the increasing environmental impact of freight deliveries, stakeholders wanted to see coordination and if necessary, regulation to reduce the number of trips made by delivery vehicles in cities especially.	S

Just Transition

The main concern related to the Just Transition was public transport. Citizens wanted the system to be 'just and redistributive': the economic surplus of the collective transport system in urban settings should contribute to providing good public transport in the countryside, and, generally, public transport should be cheaper for (socially) vulnerable groups. Both citizens and stakeholders were concerned that without these measures, poorer people, especially those living in the countryside, would be at risk of exclusion due to the transition to a lower-carbon transport system. Concern was also expressed about potential exclusion due to a lack of digital literacy.

6.27.3 Energy-efficient buildings

Introduction

The document presents a series of actions suggested by citizens and/or stakeholders[743] in Sweden that in their view can support the achievement of the European Green Deal (EGD). The document also discusses views on a Just Transition to a low-carbon economy, and any barriers to the delivery of the EGD that were identified. The themes used in this document to structure the actions are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD.

Summary of Sweden's policies on the EGD and Citizen and National Stakeholder Reports

The following compares the views of the citizens and the national stakeholders in Sweden in the context of the EGD. The aim is to understand and compare the views of the citizens and national stakeholders to inform the actions to be taken to ensure adoption of the EGD.

Information from the *Renovate2Recover; How transformational are the National Recovery Plans for Buildings Renovation?*, commissioned by the Renovate Europe campaign[744], was

[743] A stakeholder meeting took place on 28 October 2022 and involved one member of the academia, a regional government representative and a state-owned research institute representative.
[744] Ivanova, V. et al. (2021). See note 30, page 63.

not available for Sweden. As a result, the following table compares the priorities of the EGD with Sweden's national energy ad climate plan (NECP) with information taken from the Commission staff working document assessing the final NECP, Sweden's Integrated NECP[745] and Sweden's Long Term Renovation Strategy (LTRS)[746].

Increasing renewable energy in buildings	Sweden has undertaken to contribute to the EU's 2030 target for renewable energy (as a share of gross final energy consumption) by reaching 65% of renewable energy. Support is provided for photovoltaic (PV) systems on buildings with a maximum support of 20% of the eligible costs as well as 60% support for the cost of an associated storage system.
Improving energy efficiency in buildings	On energy efficiency, Sweden's target is to be 50% more efficient by 2030 in terms of primary energy intensity compared to 2005. This translates to a contribution of 40.16 Mtoe for primary energy consumption and 29.67 Mtoe for final energy consumption.
Tax system for energy products aligned to the green transition	The NECP references carbon taxes with tax reductions and exemptions for sustainable biofuels used for heating, along with tax reductions for microgeneration of renewable electricity as well as PV and solar cells for building renovation.
Provide funding for renovation of buildings	The plan does not specify an overall estimated amount of investment needs. It identifies the main areas for investment going forward, such as power production and distribution, for which it estimates an investment requirement of €14.5bn. There is dedicated support for renovation and energy efficiency measures in rented properties. The renovation support, which is 20% of the costs, is given directly to the tenants as a rent rebate over seven years. The energy efficiency support is calculated based on the energy saving achieved after the renovation. This part of the support is given to the property owner. To be eligible for this part of the support, the renovations must improve energy performance by at least 20%. There is also the 'Energisteg' programme that supports energy efficiency in industry targeting 50% improvement by 2030. The LTRS does not elaborate on the level of subsidies provided to different building typologies.
Renovate at least 3% of the total floor area of public buildings annually	Based on 2012-2016 estimates, only 0.7% of residential sector renovations were medium depth and 0.1% deep renovations. For non-residential there was 2.0% medium, and 0.3% deep energy savings[747].
Create world-leading companies	Sweden's plan does not include national objectives or funding targets related to research, innovation and competitiveness, but it describes

[745] European Commission (n.d.), see note 128, page 165.
[746] European Commission (n.d.), see note 129, page 165.
[747] European Commission, (2019), see note 31, page 61.

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	several funding schemes for energy and climate research between 2016 and 2027.
Raise global ambition to tackle climate change	To promote energy services, the Swedish Energy Agency is currently working as a contact point, providing relevant information to customers and suppliers via web-based media. The need to raise awareness is iterated throughout the NECP but there are no specific plans detailed as to how this will be achieved. The LTRS also outlines programmes such as 'Energilyftet' that is an ongoing web-based initiative concerning free training relating to low-energy buildings along with 'Nya glasögon' (New glasses) that is a training initiative within sustainable construction and energy efficiency improvements aimed at vocational teachers at upper secondary level within construction, electricity and HVAC, however this ended in 2018.
Improve health and well-being	The plan provides information on the interactions with air quality and air emissions policy by describing Sweden's policy on air quality and how it interacts with other policy areas. This is relevant in view of the projected increase in bioenergy, which can have major impacts on biodiversity and air quality.
Address inequality and energy poverty	Sweden does not report the number of households in energy poverty, as it is considered to be an integrated part of the broader social policy. The reports make no distinction between energy poverty and poverty in general.
Ensure a Just Transition that is fair, competitive, and green	The plan covers issues related to the just and fair transition, providing limited information on social and employment impacts of the transition to a climate-neutral economy, such as employment in carbon-intensive industries and in low-emission sectors.
Mobilising industry for a clean and circular economy	There are 2050 objectives including long-term targets for deployment of low-carbon technologies, the decarbonisation of energy and carbon-intensive industrial sectors and, carbon transport and storage infrastructure. According to the LTRS, there is also the Information Centre for Sustainable Construction (ICHB) whose remit is to 'promote increased energy efficiency in renovation and an energy-efficient construction with the use of sustainable materials and a low carbon footprint from a life-cycle perspective'.

According to the International Energy Agency (IES), Sweden is seen as a leader in the climate transition and sets aside €17bn per year towards the energy transition[748]. The national stakeholders identified the need for a cross-disciplinary approach where linear

[748] International Energy Agency (2019). Energy Policies for IEA Countries. Sweden 2019 Review. Available at: https://www.iea.org/reports/belgium-2022/executive-summary (Accessed on 2 November 2022).

models make way for circular ones. The approach must include targets for environmental impact, sustainability and innovation, on top of energy efficiency, if the EGD is to be achievable. The national stakeholders felt that the current EU strategy does not place a high focus on sustainable biomass and the forestry industry. As such, district heating and the use of biofuels have not been considered fully in the solutions. They believed that Sweden's district heating systems were disadvantaged in the EU discussions, which held a higher focus on solar and gas to solve the energy crisis. As a result, long-term strategies for how Member States will achieve climate commitments should be set at the national level and not by the EU.

Increasing renewable energy in buildings: The national stakeholders highlighted that 32% of emissions in Sweden is accounted for by industry[749]. Sweden has a national goal to become the first fossil-free welfare nation in the world[750]. They aim to achieve this by switching to renewable energy and through investment in innovation capacity and increased competency of the labour force. Citizens also mentioned that there is investment into fossil-free energy showing that there is good awareness between both national stakeholders and citizens on this topic.

Improving energy efficiency in buildings: The national stakeholders spoke highly of Gothenburg who have created a roadmap for climate friendly buildings[751], which other regions in Sweden are now starting to follow. They mentioned that in the past discussing lifestyle and consumption was not an open topic, whereas now citizens are willing to discuss these matters openly and are more open to making behavioural changes. However, citizens still need the information to identify how they should change and as such there is a need for interactive systems to monitor energy usage.

National stakeholders also mentioned there is a push for collaborative solutions at the city/community level such as modular systems working for multiple buildings as well as subsidies for communities. This would replace subsidies for individual upgrades to their ventilation, heating, water systems etc. and would create a longer-term systemic impact.

In general, national stakeholders believed there was a need for increased personal responsibility regarding energy consumption and the energy transition and that owning a property comes with a certain level of accountability and responsibility. On the other hand, citizens felt that environmentally sound living is only available for the middle- and higher-income earners.

Provide funding for renovation of buildings: National stakeholders were of the view that short-term energy subsidies for individual households should be abolished, apart from those who are on low incomes who are having difficulty paying their energy bills. Instead, funding should support larger scale investments in systems change that would have a greater overall impact.

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[749] Data crosschecked at European Commission (2022). EU Cohesion Policy: €155.7 million for a just climate transition in Sweden. Available at: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_5316 (Accessed on 4 January 2023).
[750] More information available at Fossil Free Sweden (n.d.). Becoming the First Fossil Free Welfare Nation in the World. Available at: https://fossilfrittsverige.se/wp-content/uploads/2021/04/Fossilfritt_folder_ENG_TGA.pdf (Accessed on 4 January 2023).
[751] Cheema S., Outlook Traveller (2022). What Makes Gothenburg The World's Most Sustainable Destination. Available at: https://www.outlookindia.com/outlooktraveller/explore/story/72389/what-makes-gothenburg-the-worlds-most-sustainable-destination (Accessed on 4 January 2023).

Renovate at least 3% of the total floor area of public buildings annually: National stakeholders felt that local governments should have a bottom-up approach and more control over setting their own ambitious energy efficiency policies and they should not be dictated by top-down national policies. This approach would also ensure that if there are changes in government, this would not impact the energy transition as plans would continue regardless of the political climate.

Both citizens and national stakeholders felt that municipalities should take a bigger role in promoting energy efficiency solutions and that information regarding the achievements of the public sector on energy efficiency in their buildings should be disseminated widely.

Create world-leading companies: Citizens mentioned that companies whose services lack accountability should not be used for energy efficiency projects. There should also be investment in innovative technologies to identify easily where buildings are not being energy efficient.

National stakeholders mentioned a conflict between industry and local government and that local government cannot keep pace with industry innovations and advancements. They also mentioned the need for increased training and capacity building across Sweden.

National stakeholders also recognised that more young people needed to enter the construction sector and that jobs in this area needed to be more attractive to encourage their entry.

Mobilising industry for a clean and circular economy: Citizens mentioned that second hand and re-use should be used as much as possible. They also mentioned that only natural and locally used products should be used for energy efficiency projects. National stakeholders mentioned the existing Eco Design Circle Initiative[752]. This supports inclusive design for a circular economy, supporting leading-edge technology and innovation. National stakeholders also suggested the creation of a marketplace for second hand materials for the renovation of buildings, which would also aid the shortage of raw materials across the construction industry.

General overview of actions per theme

The following is an overview of the actions provided by the national stakeholders and citizens with respect to what could be carried out to encourage and enable greater adoption of the EGD. As Sweden has, according to the participants, a roadmap towards sustainable energy efficiency which is more ambitious than the EGD itself and whose date of completion is 2025, the national stakeholders decided not to fill out the roadmap section of the mural board. Still there were many good actions suggested which were captured from earlier in the discussion and hence these have been used to create the roadmap. As the national stakeholders did not identify which phase of the roadmap these actions should be placed on, the expert has placed these in the following sections at her discretion. There was a good spread of actions suggested across most of the EGD themes, with the Swedish national stakeholder and citizens showing good knowledge of the green transition, the barriers for their country and what actions could increase uptake of the EGD.

[752] More information available at https://sustainabilityguide.eu/ecodesign-circle/.

Legend	
Green:	**Actions that can be carried out now with minimal support**
Blue:	**Actions requiring grants and incentives that need government support to implement further**
Orange:	**Actions requiring changes in regulations that will take longer to implement**

Theme	Action
Increasing renewable energy in buildings	Government involvement in renewable energy schemes at the community level
Improving energy efficiency in buildings	Low interest 'mortgage' loans for renovation Political anchoring of key energy initiatives Guides with simple advice to reduce energy consumption in buildings Energy monitoring systems for households Create an energy and climate advisor role
Tax system for energy products aligned to the green transition	No actions suggested
Provide funding for renovation of buildings	Increase energy subsidies for low-income households Provide funding for large systemic changes rather than short-term initiatives at an individual level
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested
Create world-leading companies	Further investment in innovation Training programmes to increase the number of experts in Sweden Update education curriculums to include the energy and climate transition Expansion of education and training programmes
Raise global ambition to tackle climate change	Education and awareness raising campaigns Knowledge sharing platforms Mobile apps and gamification Education and awareness on the process for energy efficiency renovation Co-creation hubs Framework for energy communities
Improve health and well-being	No actions suggested
Address inequality and energy poverty	No actions suggested
Ensure a Just Transition that is fair, competitive and green	Individual metering systems for buildings to ensure that those who use the most pay the most
Mobilising industry for a clean and circular economy	Second-hand construction material marketplace

Barriers to each theme

As a result of the discussions with both citizens and stakeholders, the following barriers to EGD implementation were identified. These were the barriers specifically mentioned by each of the citizen and stakeholder groupings:

Theme	Barrier	Idea Source[753]
Increasing renewable energy in buildings	The EU's focus is primarily on solar and gas solutions to solve the energy conundrum. Sweden, on the other hand, includes heat pumps and centralised district heating. These have a lower price per kWh than solar and gas. Additionally, Sweden uses bioenergy and reusable energy from centralised district heating systems. This method aligns with the circularity principle of reusing heat waste in a holistic energy system.	S
	The emission factor for electricity needs to be updated regularly, if possible, annually/every two years, as fossil electricity production is phased out and renewable electricity production increases.	S
Improving energy efficiency in buildings	Environmentally sound living is only affordable for the middle- and upper-income earners.	C
	Energy efficiency projects are being carried out by contractors who do not have any accountability.	C
	Lower energy standards and ambition levels set by the EU, Member States and the EGD pose restrictions on the innovative energy transformation of Sweden, Swedish municipalities, industry and the public/private housing stock	S
	The EU debate needs to balance the climate and circularity perspective with green energy and building design. Participants believe that energy efficiency should be included in a systemic approach which considers the development of energy-efficient buildings in view of their capacity to meet climate goals and according to the technology and innovation agenda.	S
	There are limitations on using forestry products for building houses and in the energy system itself coming from the EU; this has a knock-on impact on reduced bioenergy production, which hampers Sweden's energy transition as there is a large reliance on district heating across Sweden and as such policies should be set at national level to achieve overall climate reduction impact and not by the EU.	S
Tax system for energy products aligned to the green transition	No barriers mentioned	/
Provide funding for renovation of buildings	No barriers mentioned	/
Renovate at least 3% of the total floor area of public buildings annually	The total impact of energy usage on a national level is not visible, nor is it visible on an EU level. Statistics and reporting standards need to reflect initiatives taken by municipalities.	S
Create world-leading companies	No barriers mentioned	/
Raise global ambition to tackle climate change	Emissions from energy use need to enter the national emissions database (SMED). Today, only emissions from energy production are shown in the National Emissions Database. A coherent way of valuing the climate impact of electricity is needed because otherwise, the data is skewed, resulting in poor decisions being made based on it.	S

[753] C – Citizens; S – expert stakeholders

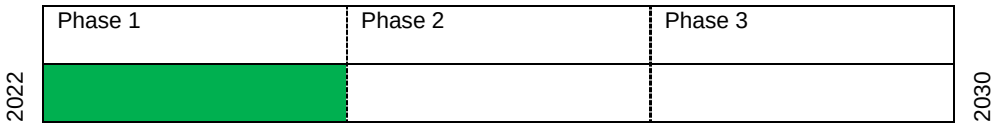
Improve health and well-being	No barriers mentioned	/
Address inequality and energy poverty	No barriers mentioned	/
Ensure a Just Transition that is fair, competitive and green	No barriers mentioned	/
Mobilising industry for a clean and circular economy	It is a challenge to get the public to take waste seriously and see the link between waste, energy savings and climate impact.	S

Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

The following are the actions that citizens and national stakeholders identified as those being able to be carried out in the short term with minimal support. The suggested actions were diverse, covering topics from political anchoring of key initiatives to technologies for monitoring energy consumption, to investing in innovation, education and training programmes, raising global awareness and knowledge sharing platforms. Both citizens and national stakeholders were very aware of the circular economy and actions to enable this as part of the EGD were also suggested.

Theme	Action name	Description	Idea Source[754]
Improving energy efficiency in buildings	Low interest 'mortgage' loans for renovation	Enable property owners to take responsibility for renovating, as owning a property comes with responsibility and accountability, through low interest loans for renovation (similar to a mortgage loan).	S
	Political anchoring of key energy initiatives	Enable a broad political anchoring of key energy initiatives required for people and industry to make long-term strategic and financial commitments.	S
	Guides with simple advice to reduce energy consumption in buildings	The creation of a guide with tips and tricks for tenants and property owners to reduce their energy consumption/usage to meet targets for	S

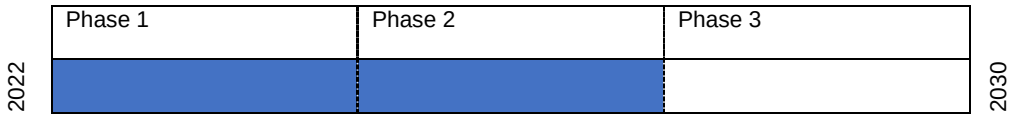
[754] C – Citizens; S – expert stakeholders

		increased energy efficiency.	
	Energy monitoring systems for households	Enable innovative systems that would enable households to get more information (data, statistics) about their energy consumption.	S
Provide funding for renovation of buildings	Increase energy subsidies for low-income households	Provide energy subsidies for those on low incomes who have difficulty paying their energy bills.	S
Create world-leading companies	Further investment in innovation	Invest in innovative technologies to identify where buildings are not being energy efficient.	C
	Training programmes to increase the number of experts in Sweden	Increase the number of experts in Sweden and increase the education and capacity of the workforce.	S
	Update education curriculums to include the energy and climate transition	Behavioural and cultural aspects of the energy and climate transition should be included in future education programmes.	S
Raise global ambition to tackle climate change	Education and awareness raising campaigns	Stimulate the learning about building and renovating in an environmentally friendly way, both to builders and consumers.	C
	Knowledge sharing platforms	Shared learning, experimentation and innovation to foster the accumulation of knowledge and science within the sector.	S
	Mobile apps and gamification	Creation of mobile apps and increased gamification of energy and environmental responsibilities on a more personal and individual level.	S
	Education and awareness on the process for energy efficiency renovation	More widespread knowledge and awareness of the whole value chain and procurement processes for houses, requirements for repairability, etc.	S
Ensure a Just Transition that is fair, competitive and green	Individual metering systems for buildings to ensure those who use the most, pay the most	There should be individual meters and charging for heating instead of building-level meters, as well as hot- and cold-water meters.	S
Mobilising industry for a clean and circular economy	Second-hand construction material marketplace	Create a second-hand construction material market to address the issue of lack of raw materials as well as a clean and circular economy.	S

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions will have impact in the medium term.



Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

The following are the actions identified by the citizens and national stakeholders that can be carried out in the medium term and that may require government supports. There were a small number of actions that fit within this category.

Theme	Action name	Description	Idea Source[755]
Increasing renewable energy in buildings	Government involvement in renewable energy schemes at the community level	Governments should be more involved in renewable energy solutions as only those who can afford the upkeep and maintenance of the renewable energy system can consider their installation.	S
Improving energy efficiency in buildings	Create an energy and climate adviser role	Create energy and climate adviser roles who can operate across disciplines and bring knowledge from one sphere to another.	S
Provide funding for renovation of buildings	Provide funding for large systemic changes rather than short-term initiatives at an individual level.	Finance should be provided for large systemic changes and strategic innovations rather than subsidising short-term actions and initiatives on a household and individual level. Larger system changes are perceived to be more impactful (less biased) and less costly for society than individual subsidies.	S
Create world-leading companies	Expansion of education and training programmes	Education and training programmes are already in place with associated certifications and environment/climate advisors supporting citizens in their energy transition. Moving forward, the participants feel this system should expand.	S
Raise global ambition to tackle climate change	Co-creation hubs	Create shared local, regional, national, and global hubs for co-creation.	S
	Framework for energy communities	Create energy communities where people and organisations think about how they make decisions, how to use energy more efficiently and effectively, and how best to collaborate.	S

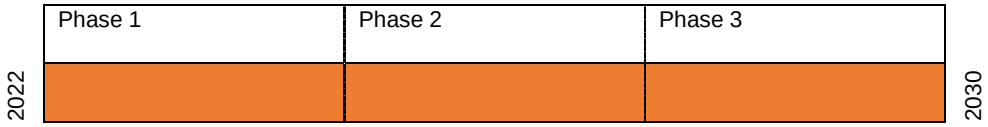
[755] C – Citizens; S – expert stakeholders

Actions requiring changes in regulations that will take longer to implement

There were no actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policy-making process beginning immediately.



Main instruments of implementation: policy change

Just Transition

National stakeholders mentioned that inequalities could arise when insufficient funding is provided to those on lower income thresholds, and due to financial barriers, they therefore cannot participate in the green transition. They believed that those in energy poverty would be reached quicker if resources were used to make systemic changes. The national stakeholders also felt that owning or renting a property came with certain responsibilities and there was a personal obligation on all citizens to contribute towards the green transition.

7. European Roadmap for the EGD

The following provides an overview of the recommended actions that could be taken across all EU Member States to encourage uptake of the EGD. These actions result from the analysis of the 27 Member States' reports on workshops held with citizens as well as national stakeholders. Some of the actions have come directly from these reports as actions recognised to be common needs across more than one third of Member States. Other actions have been suggested by the expert to meet barriers that have been identified, or actions that are required to address topics, which were not discussed at length during the citizen and stakeholder workshops.

The related barriers have also been outlined in the subsequent sections along with a detailed table of each of the actions and a description of why the action is being suggested. Actions have been split into three categories: (i) actions that can be carried out now with minimal support (typically within two years), (ii) actions requiring grants and incentives that need government support to implement further (typically within three to four years) and (iii) actions requiring changes in regulations that will take longer to implement (typically up until 2030). The actions suggested by the national stakeholders varied across categories, with some national stakeholders suggesting a similar action but in a different time frame. As such, each expert has assessed all actions and made recommendations for which category the action should belong to enable the green transition and achievement of the EGD objectives. As such, the indicator of whether the action was suggested by a citizen (C) or a national stakeholder (S), as per the individual Member State roadmaps, has not been included in the resulting tables.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need governmentsupport to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

7.1 Sustainable food systems

7.1.1 General overview of actions per theme

The following provides an overview of the recommended actions that could be taken across all EU Member States to encourage uptake of the Green Deal. These actions are a result of analysis of 27 Member State reports on workshops held with citizens as well as national stakeholders. The actions listed below were present in at least six countries.

The related barriers have also been outlined in the subsequent sections along with a detailed table of each of the actions and a description of why the action is being suggested. Actions have been split into three categories: (i) actions that can be carried out now with minimal support (typically within two years), (ii) actions requiring grants and incentives that need government support to implement further (typically within three to four years) and (iii) actions requiring changes in regulations that will take longer to implement (typically up until 2030).

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need governmentsupport to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Sustainable food production	- Promotional campaigns on urban farming - Skills-based education on sustainable food production for farmers - Technical support to small-scale sustainable farmers - Financial support to small-scale, sustainable, and seasonal food production - Subsidies for urban farming - Research on new methods of sustainable food production - Financial support for farmers transitioning from conventional to organic farming - Subsidies for implementation of new technologies in food production - Stricter legislation on use of antimicrobials, pesticides, and chemicals in food production
Sustainable food processing, distribution and retail	- Education on reading food labels - Promotion of organic, healthy, and local products in supermarkets) - Shortening food supply chains - Subsidies for development of sustainable distribution networks - Regulation standardizing food labels for organic and sustainable food products (e.g., use of Nutriscore) - Adjusting VAT on food products based on their environmental impact - Legislation on minimisation of single-use packaging - Legislation on mandatory CO2 emissions information on food labels
Sustainable food consumption	- Promotional campaigns on buying food directly from small-scale sustainable farmers - Education on maintaining healthy and environmentally sustainable diets - Awareness campaigns on origin of food, cooking, sustainable diets - Subsidies for school cafeterias to cook diverse meals with seasonal and organic produce
Food loss and waste reduction	- Awareness campaigns on reducing household waste - Regulation on food waste reduction across the food chain
Combatting food fraud	- Stringent monitoring on products fulfilling their sustainability and quality certificates
Across the food cycle	- Education on sustainable food systems - Implementation of experiential and participative activities on food system transformation

7.1.2 Barriers to each theme

In this section, we describe the common barriers that have been identified by the national stakeholders and citizens during the consultations. These barriers also provide justification as to why the actions above are being suggested.

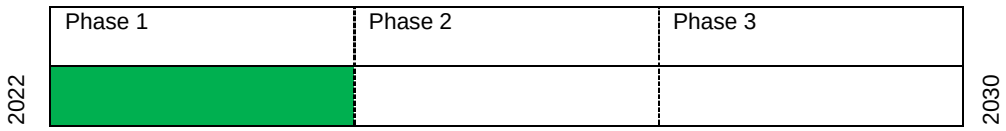
Theme	Barrier
Sustainable food production	Agricultural subsidies support large-scale industrial agriculture over small-scale and sustainable production.
	Geopolitical and unpredictable factors, e.g., current high energy prices and COVID-19, intensify foreign competition.
	Lack of regulation on the development of new types of proteins.
	The current economic model forces food producers to orient themselves towards profit over the environment.
	Small-scale farmers face more difficulties in absorbing subsidies (e.g. in the first year of subsidies, the farmers can only receive a reimbursement instead of an advance payment, requiring significant capital to start up a sustainable food production business).
Sustainable food processing, distribution & retail	Current use of diverse food labels on products is confusing and disorienting for many consumers.
	Stores often mislead consumers with unsubstantiated sustainability and health claims of products.
Sustainable food consumption	For many citizens, sustainable and healthy food is unaffordable.
	Significant work is needed to achieve a cultural shift towards sustainable nutrition (e.g. reducing meat production and consumption).
Across the entire food cycle	Lack of consensus between political parties makes a coherent long-term national food strategy difficult to develop.
	Lack of interdepartmental cooperation slows down food system transformation.
	Lack of investment in, and financing of, research on sustainable food transformation.
	Decision making on food system transformation does not involve diverse stakeholders sufficiently.

7.1.3 Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication, education, interaction

Theme	Action name	Description
Sustainable food production	Promotional campaigns on urban farming	Urban farming is a food production method relevant to the citizens across the EU. Awareness campaigns on the benefits of taking up urban farming and methods to implement it are one of the most popular actions.
	Skills-based education on sustainable food production for farmers	Skills-based education and training on sustainable food production methods (e.g., permaculture, no-till, frequent soil rotation) should be organised for farmers to enable them to implement more sustainable food production.
Sustainable food processing, distribution & retail	Education on reading food labels	Unclear food labels were repeatedly pointed to as an issue, which could be addressed by educational workshops, online webinars and school education incorporating sessions on reading food labels.
	Promotion of organic, healthy, and local products in supermarkets	Organic, healthy, and local food products should be clearly marked in supermarkets, to encourage customers to purchase them instead of highly processed and environmentally unsustainable food.
Sustainable food consumption	Promotional campaigns on buying food directly from small-scale sustainable farmers	Promotional campaigns should be organised to encourage citizens to purchase their food products directly from small-scale sustainable farmers, as a way for citizens to get access to healthier food at a lower cost.

	Education on maintaining healthy and environmentally sustainable diets	Education on maintaining healthy and sustainable diets should be introduced for the general population, through school education, as well as through workshops organised by municipalities.
	Awareness campaigns on origin of food, cooking, sustainable diets	Awareness campaigns should be organised on the origin of food products, as well as on the importance of cooking to maintain sustainable diets.
Food loss and waste reduction	Awareness campaigns on reducing household waste	Awareness campaigns to reduce household waste should be organised, pointing out methods on reducing food waste generation, as well as proper sorting methods, e.g. better planning and cooking with leftovers.
Combatting food fraud	Stringent monitoring on products fulfilling their sustainability and quality certificates	More stringent monitoring activities should be implemented to ensure that food products correspond to their sustainability and quality certificates.
Across the food cycle	Education on sustainable food systems	Education should be organised on the various components of sustainable food systems as well as the importance of citizen engagement in food system transformation.
	Implementation of experiential and participative activities on food system transformation	Experiential and participative activities should be implemented by the municipalities and national governments to facilitate citizens' understanding of food system transformation and get their insights on methods to achieve it.

Actions requiring grants and incentives that need government support to implement further

Timeline

These actions can mostly be implemented and have effect in the medium term.

Main instruments of implementation: subsidies and other incentives

Theme	Action name	Description
Sustainable food production	Technical support to small-scale sustainable farmers	Small-scale sustainable farmers should receive technical support from municipalities with distribution of their products, applying to public tenders, and accounting assistance.
	Financial support to small-scale, sustainable, and seasonal food production	Small-scale, sustainable, and seasonal production should be subsidised, over large-scale industrial food production.
	Subsidies for urban farming	Urban farming should be supported through subsidies for rent for plots of land, farming equipment and free classes on urban farming.
	Research on new methods of sustainable food production	Investments should be made in research on new methods of sustainable food production (e.g., vertical farming, cultured meat production).
	Financial support for farmers transitioning from conventional to organic farming	Food producers attempting to transition from conventional to organic farming should be supported with financial grants for equipment and certification.
	Subsidies for implementation of new technologies in food production	Subsidies should be provided for the implementation of new technologies to make food production more efficient (e.g., data solutions, irrigation).
Sustainable food processing, distribution & retail	Shortening food supply chains	Investments should be made to shorten food supply chains at various junctures, from supporting farmers to directly deliver produce,

		grants for cooperative shops for sustainable producers, etc).
	Subsidies for development of sustainable distribution networks	Subsidies should be provided for the development of sustainable distribution networks (e.g., investments in EVs, reducing distances etc).
Sustainable food consumption	Subsidies for school cafeterias to cook diverse meals with seasonal and organic produce	Subsidies should be provided for schools to introduce diverse meals developed with use of seasonal and organic produce. This will support students to develop more healthy and sustainable dietary habits.

Actions requiring changes in regulations that will take longer to implement

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policymaking process beginning immediately.

Main instruments of implementation: regulation

Theme	Action name	Description
Sustainable food production	Stricter legislation on use of antimicrobials, pesticides, and chemicals in food production	Stricter legislation should be introduced to restrict the use of antimicrobials, pesticides, and chemicals in food production.
Sustainable food processing, distribution & retail	Regulation standardising food labels for organic and sustainable food products (e.g., use of Nutriscore)	Regulation should be introduced to standardise food labels for organic and sustainable products. These types of products should be clearly visually distinguishable on store shelves (e.g., using Nutriscore).
	Adjusting VAT on food products based on their environmental impact	The VAT on food products should be based on their environmental impact (e.g., through high VAT on red meat and highly processed foods, and low VAT on local produce).
	Legislation on minimisation of single-use packaging	Legislation should be introduced on minimisation of food packaging made from unsustainable material

		(e.g., plastic) and packaging intended for single use.
	Legislation on mandatory CO2 emissions information on food labels	Legislation should be introduced to make the information on CO2 emissions on food labels mandatory.
Food loss and waste reduction	Regulation on food waste reduction across the food chain	Regulation outlining food waste reductions across all stages of the food system (e.g., food production processes, distribution and retail, household waste) should be introduced.

7.1.4 Just Transition

The following paragraphs contain considerations about the Just Transition, which consistently emanated from the national EU roadmaps. Since they do not represent an analysis of how the actions taken under the "Territorial Just Transition Mechanism" should come into play, the reader is invited to consult the appropriate sources on EU website to obtain more information abou the "Territorial Just Transition Mechanism".

The citizens and stakeholders across the EU Member States were consistent in pointing out that the costs of food system transformation disproportionally affect small-scale producers and socio-economically vulnerable citizens.

A transformation to sustainable food systems comes with costs of certification, adoption of new technologies and finding new markets. All these costs are likely to disproportionally affect small-scale food producers, compared to large-scale businesses. Unless compensatory measures are ensured (e.g. grants, consultative support), small-scale producers run the risk of being outcompeted by large corporations and going out of business.

Furthermore, the increased costs of sustainably produced, healthy food are likely to be unaffordable to the more vulnerable socio-economic groups in society. These groups run the risk of losing access to sustainable and high-quality food products, unless compensatory measures are introduced (e.g. eco-vouchers, food redistribution schemes etc.).

7.2 Sustainable and smart mobility

7.2.1 General overview of actions per theme

The categorisation and themes below are the same as the categorisation in the roadmaps for each Member State. The themes are those that emerged from discussions with citizens and stakeholders in all 27 Member States and are complemented by the analysis of the thematic expert appointed by the European Commission[756]. These themes and the analysis are thus original and do not come from any EU publication or website about the EGD. The following suggested actions have been devised from the reports relating to the events

[756] Prof. Tom Rye, Molde University College, Norway.

carried out with the citizens and the national stakeholders in each individual Member State, as well as the experts' opinions.

The short-term measures are those focused on education and training; the medium-term measures are those requiring investment; and the long term those requiring regulatory and legal change. Regarding these implementation timescales, some stakeholders pointed out that if implementation times for some infrastructure projects were able to be speeded up, then some measures that are classified as medium term could become short term. A few stakeholders also suggested implementing some medium-term measures as small-scale pilots in the short term.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need governmentsupport to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Clean vehicles	- Purchase incentives for EVs - Purchase incentives for clean vehicles (not just EVs), including second-hand - EV charging infrastructure - Hydrogen fuelling infrastructure - Management of the environmental impact of battery production and disposal - Biofuels should not be food-based or derived from land previously used for food production - Management and planning of electricity supply
Better public transport	- Newer, cleaner more comfortable public transport vehicles - Cheaper or free public transport - Demand responsive public transport in rural areas - Public transport integration, including integrated ticketing
Spatial planning and city development	- More bike paths and better walking infrastructure, - Make sure facilities are planned with easy access in mind by a variety of modes of transport - Reduction of cars/private motor vehicles in central cities - 15-minute city/short-distance cities/denser cities and neighbourhoods - Limited parking supply in new developments
Pricing and charges for transport	- Higher taxation of polluting vehicles - Lower taxation of less polluting vehicles - Road pricing of existing roads - Carbon taxation of airlines and maritime - Tax benefits for employers who provide sustainable transport options for staff (including more homeworking)
Planning and operation of transport networks	- Public transport network improvement – speed, reliability, coverage (especially suburb-to-suburb and rural areas) - Enhanced security on public transport and active travel networks - Use of IT to gather information and better manage congested road networks in real time

Governance	- Improved sustainable transport project delivery capacity in local and national government - Coordination in mobility planning across levels of government - EU wide standards on smart ticketing and Mobility as a Service (MAAS) - Promote, encourage and possibly give tax breaks for car-sharing - Promotion of homeworking via legislation - Reformed, simpler, procurement legislation
Greening transport in general	- Education and awareness raising of public about sustainable transport - Exchange of experience between administrations in same countries, and internationally - Training of professionals in different aspects of low-carbon transport – EV mechanics, for example, but also sustainable transport planners

7.2.2 Barriers to each theme

The following are the common barriers that have been identified by the national stakeholders and citizens during their interviews and workshops. Each of these barriers also relates to the suggested actions to provide justification as to why the actions are being suggested.

Theme	Barrier
Clean vehicles	Lack of electric vehicle charging infrastructure.
	Biofuels - very difficult to ensure that the use of crops for the production of biofuels has no impact on food production. Even if biofuel is made from waste, it is hard to ensure that the production of waste is not deliberately increased for this purpose.
	There is no infrastructure for hydrogen despite including hydrogen in the policy.
	Increased energy demand from EVs not planned for.
	High electricity prices barrier to using EVs.
Better public transport	Implementation times for new public transport infrastructure are excessively long. Lack of capacity may be part of the problem.
	Poor coordination of international rail services, ticketing and information. Difficult to make international rail trips.
	Currently poor public transport is a barrier to using it.
Spatial planning and city development	Planning and development: low-density housing and large shopping centres on the outskirts of urban areas are contributing to the problems. They are car centric.
	Currently poor conditions for cycling are a barrier to mode shift to cycling.
Pricing and charges for transport	Aviation and maritime energy use and/or emissions are not taxed enough at the national level.
	Taxes on polluting modes are not high enough.
Planning and operation of transport networks	There is still a lot of spending on building new roads – including the TEN-T network. New roads generate additional traffic.
Governance	Lack of capacity at the local authority level – for

	example, active travel funds do not get spent. Similar problems in public transport projects. Lack of capacity and complex operational procedures slow down the implementation process preventing the delivery of project results within one election cycle.
	Lack of political will to make changes necessary to bring about travel behaviour change.
	Poor coordination between different levels of government and different government ministries and agencies.
	EU funding is not easy to understand, many different funding streams, so not easy to access.
	The power of car industry and airline lobbies and their influence on policy.
	Lack of national transport strategy with objectives related to carbon reduction.

7.2.3 Categorised actions with descriptions

Actions that can be taken now with minimal support

Timeline

	Phase 1	Phase 2	Phase 3	
2022				2030

Instruments of implementation: communication and education

Actions that can be taken straight away by individual citizens, organisations and businesses, proposed by citizens and stakeholders. These mainly comprise communication and education activities. All these actions can be implemented straight away.

Theme	Action name	Description
Greening transport in general	Education	Changing people's habits through education: - Encourage more thinking about changing habits and reducing pollution especially in schools from an early age
	Exchange of experience and best practices	Exchange of experience and best practices between administrations in same countries, and internationally, to learn and build capacity
	Training of professionals in different aspects of low-carbon transport	Many countries' stakeholders identified that there is a lack of skills to deliver the EGD goals in mobility. Many administrations lack staff trained in delivering sustainable transport projects, whilst in industry there is a lack of staff with knowledge of new technologies.

Actions requiring grants and incentives, or changes in current public spending

Timeline

These actions will have an impact in the medium term.

Instruments of implementation: subsidies, investments and taxes

Many of the measures suggested by citizens and stakeholders fell into this overall category. They are mainly implementable in the medium term.

Theme	Action name	Description
Clean vehicles	Purchase incentives for EVs	At the national level, setting price caps, reducing VAT for e-vehicles to increase their accessibility and appeal, providing financial incentives to buy cleaner vehicles.
	Purchase incentives for clean vehicles	As above, but applying to all cleaner-fuelled vehicles, and covering second-hand vehicles also.
	Electric vehicle charging infrastructure	This is lacking currently in many countries, contributing to range anxiety (a standard electric vehicle term relating to users being concerned about how far they can travel on a charge and whether they will get to a charger before their battery goes flat).
	Development of hydrogen fuelling infrastructure	In some countries stakeholders identified the lack of infrastructure as a significant barrier to the use of more hydrogen fuel cell vehicles.
Better public transport	Newer, cleaner more comfortable PT vehicles	Investing in new, clean-fuelled and more comfortable public transportation vehicles.
	Cheaper or free PT	Cheaper or free public transport, particularly if it is targeted at less wealthy user groups like the elderly and students.
	Demand responsive public transport in rural areas	Public transport in rural areas is lacking and this was seen as a potential solution – services that do not operate to a fixed route or timetable but are scheduled in real time according to demand.
Spatial planning and city development	More bike paths and better walking infrastructure	Walking and cycling infrastructure is currently lacking, especially in more suburban areas. Its expansion and improvement are necessary.
Pricing and charges for transport	Taxation of polluting freight vehicles	Higher taxation of more polluting freight vehicles, given the significant contribution of freight transport to overall carbon emissions from transport.
	Higher taxation of polluting private vehicles	There were few specific suggestions, but many stakeholder and citizens meetings felt that a stronger price signal needs to be given to purchasers and users of larger cars, with revenues hypothecated to public transport and low-emission vehicle charging/fuelling

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		infrastructure.
	Lower taxation of less polluting vehicles	Less frequently suggested than the action immediately above, but raised frequently nonetheless.
	Road user charging of existing roads	A suggestion from a small number of countries.
	Carbon taxation of airlines and maritime	In a small majority of countries, the airline industry was identified as needing additional taxation, and in a few countries, maritime also.
	Tax benefits for employers who providing sustainable transport options	Employer-based green travel plans were suggested in some countries, such as Malta, and many citizens groups identified a potential role for employers in managing travel at peak times. In this case, this could be strengthened via the tax system.
	Carbon taxation of airlines and maritime sector	These modes are seen to be undertaxed, currently.
Planning and operation of transport networks	PT network improvement	Investment in improved public transport capacity and speeds, at local, regional, and national level (especially suburb to suburb and rural areas).
	Enhanced security on public transport and active travel networks	Personal security was seen to be a significant barrier to the use of more sustainable transport, hence this focus.
	Use of IT to manage networks	Use of information technology to better manage congested road networks in real time.
Governance	No measures suggested	/

Actions requiring changes in regulation and legislation

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policymaking process beginning immediately.

Instruments of implementation: regulation

Many of the proposals from citizens and stakeholders require policy changes and regulation to be implemented. Some of the proposals, depending on the way in which they would be developed in detail, could fall under shared EU and Member State competency and thus be the result of a multi-level policy reform. Some suggestions were for better coordination at the EU level which may in some circumstances not require regulation, but they are included here for completeness.

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Theme	Action name	Description
Clean vehicles	Battery production and disposal	This was seen as a major downside of EVs that is currently not properly addressed. There should be management of the environmental impact of battery production and disposal.
	Biofuels planning and sourcing	These should not be food-based or derived from land previously used for food production.
	Management and planning of electricity supply	Many stakeholder meetings identified this as a significant challenge to the move to EVs and wanted to see improved supply coordination and planning.
Better public transport	PT integration	Better planning and coordination of public transport routes, including integration of ticketing, with payment by debit card as well as cash and app.
Spatial planning and city development	15-minute city	All the most critical services and infrastructure should be accessible in 15 minutes by walking, cycling and/or public transport.
	Easy access to new facilities	Similar to the above, but with thought given by services such as health to how people access their facilities, and where these facilities should be located.
	Restraint of cars in central cities	Few details were given but many citizen and stakeholder groups were in favour of some form of access controls (pricing was rarely mentioned) to limit access by private car to central cities.
	Limited parking supply in new developments	A few stakeholder groups mentioned this as a means of encouraging the use of sustainable modes.
Pricing and charges for transport	No suggestions in this category	/
Planning and operation of transport networks	No suggestions in this category	/
Governance	Improved capacity to deliver sustainable transport projects	A lack of capacity in this area was perceived, slowing down the delivery of necessary projects, in both local and national government.
	Coordination in mobility planning across levels of government	Many stakeholder groups identified this as a significant barrier to delivery of projects and initiatives supporting the EGD.
	EU-wide standards on smart ticketing and Mobility as a Service (MAAS)	Only mentioned by a few stakeholder groups, there was however hope that the EU could intervene with further regulation on this issue so that for example joint information and ticketing systems can more easily be developed.
	Promote, encourage and possibly give tax breaks for car-sharing	Many groups of both citizens and stakeholders identified car-sharing and carpooling as complements to conventional public transport, especially in rural areas, and some suggested this could be given fiscal assistance.

	Promotion of homeworking via legislation	The benefits of homeworking have become apparent since the pandemic and, particularly in southern and eastern European countries, citizens in particular want to see this maintained.
	Reformed, simpler, procurement legislation	In certain countries this remains a barrier to many public sector activities, including carbon reduction from transport.

7.2.4 Just Transition

The Just Transition was not an issue discussed in depth in many of the citizen meetings, but it was much more a topic for discussions with stakeholders.

Citizens in many countries flagged up transport inequalities between rural versus urban areas in how to manage the environmental impact of transport. There was a widespread belief that people who live in rural areas already suffer from some level of transport exclusion, and that this is liable to get worse if, because of the EGD, it becomes much more expensive and/or difficult to use a vehicle powered by an internal combustion engine. Nevertheless, some groups expressed the idea that (smart) carpooling and demand responsive public transport could help address the accessibility problems of rural areas.

There were also equity concerns about the policy emphasis on (subsidies for) EVs – a concern borne out by the research on EVs in Norway. Norway is not an EU country, but it is similar in many respects and with the highest EV fleet penetration in the world thanks to the long-term pursuit of policies that many EU countries are now adopting. In this Scandinavian country, EV subsidies go to wealthier households, often to acquire a second car that then is used instead of public transport. The (perceived) focus on EVs worried many participants because such vehicles are expensive and thus available only to a small percentage of the population.

In addition, in four countries, citizens raised the issue of how smartphone ownership and internet literacy could exclude people from the transition toward smart mobility.

These concerns raised by citizens in a few countries were echoed by stakeholders in a wider range of countries, especially Spain, Ireland, Belgium, and Sweden. Stakeholders provided suggestions on how to address these potential inequities, mainly providing additional funding for public transport, particularly in suburban and rural areas (which some suggested could be funded partly from new taxes on polluting vehicles and/or road pricing schemes). In Slovenia and Ireland, stakeholders wanted to see income-related incentive schemes for low-emission vehicles and grants for moving away from old vehicles toward cleaner fuels.

7.3 Energy-efficient buildings

7.3.1 General overview of actions per theme

The classification of the themes and actions listed below reflects the classification in the national roadmaps. Both the themes and suggested actions emerged from discussions with citizens and stakeholders during the events carried out in all 27 Member States. It is indicated whether the proposals were assigned to the short-term, medium-term, or long-term by marking them respectively in green, blue, and orange.

Legend	
Green:	Actions that can be carried out now with minimal support
Blue:	Actions requiring grants and incentives that need governmentsupport to implement further
Orange:	Actions requiring changes in regulations that will take longer to implement

Theme	Action
Increasing renewable energy in buildings	- Increased use of renewable energy technologies in buildings - Long-term commitment from government for renewable energy schemes - Reduce the time to obtain permission for connection to renewable technologies - Create legal frameworks for community energy at the local energy system
Improving energy efficiency in buildings	- Create a standardised framework or an EU Directive for a one-stop-shop functionality to be implemented across all Member States - Campaigns to promote behavioural changes in buildings - Implement measures to measure energy consumption of the renovated building on a continuous or regular basis
Tax system for energy products aligned to the green transition	- EU review of how Member States are aligning energy products to the green transition
Provide funding for renovation of buildings	- Re-examine policies for incentive schemes and subsidies within each Member State - Pre-finance or voucher schemes for energy efficiency subsidies - Free-energy audit consultations for all - Enable 100% renovation for all
Renovate at least 3% of the total floor area of public buildings annually	- Create a framework for the renovation of public buildings that involves upskilling and training programmes for tradespeople and energy and construction professionals and awareness campaigns on the positive outcomes of energy efficiency measures.
Create world-leading companies	- Carry out a review to identify the gaps in training and upskilling across each Member State of the EU - Increase the capacity of professional engineers in construction and energy - Create a recognised EU label for energy efficiency renovation experts
Raise global ambition to tackle climate change	- Educational campaigns in schools across the EU - Awareness raising campaigns on the benefits of energy efficiency measures and renovation and renewables as well as available subsidy schemes
Improve health and well-being	- Awareness campaigns concerning other benefits to energy efficiency renovation such as improved thermal comfort and indoor air quality
Address inequality and energy poverty	- Create an EU task force to examine innovative ideas and legislation regarding the split incentive between property owner and tenant
Ensure a Just Transition that is fair, competitive and green	- Policies for renovation of apartment buildings where there is co-ownership
Mobilising industry for a clean and circular economy	- Policies to ensure there are no unintended consequences for the environment because of energy efficiency

	renovation

7.3.2 Barriers to each theme

The following barriers have been identified by the national stakeholders and citizens during their interviews and workshops and provide some background information on why the actions above are being suggested.

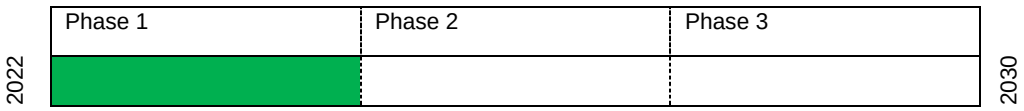
Theme	Barrier
Increasing renewable energy in buildings	Lack of long-term commitment for renewable energy schemes creates distrust in their adoption.
	Obtaining permits and permissions for renewable technologies is slow and off-putting.
	There are legal and financial barriers that block or delay the implementation of renewable energy communities.
Improving energy efficiency in buildings	Renovation is complex and hard to understand and it is difficult to find information.
	There is a lack of trust in the benefit of renovation.
Tax system for energy products aligned to the green transition	No barriers identified
Provide funding for renovation of buildings	Renovation is not affordable
	Only the wealthy can afford to carry out the renovation and claim back the subsidy after.
	Subsidies and incentive schemes are difficult to apply for.
	There are hidden costs to renovation.
	The threshold for low-income houses to avail of increased subsidy rates is too low.
Renovate at least 3% of the total floor area of public buildings annually	There is not enough funding for public buildings to carry out energy-efficiency renovation.
	The public sector is conservative and slow to respond.
	There is a lack of technical knowledge within public administration.
Create world-leading companies	There are labour and skills shortages.
	There is a lack of reliability and trust in energy and construction professionals.
Raise global ambition to tackle climate change	There is a lack of awareness amongst citizens with respect to why energy efficiency renovation is important.
Improve health and well-being	There is a lack of awareness amongst citizens relating to the added benefits of energy efficiency renovation on health and wellbeing, for example improved thermal comfort and indoor air quality.
Address inequality and energy poverty	There are not enough solutions for those on low incomes, who are not eligible for social welfare.
	There is an issue with the split incentive between the property owner and tenant that has not been solved.
Ensure a Just Transition that is fair, competitive and green	There is an issue with co-ownership of apartment buildings, where those wishing to participate in the green transition are blocked by those who cannot afford to participate in the green transition.
Mobilising industry for a clean and circular economy	Renovation may cause harm to the environment if the correct materials are not used.

7.3.3 Categorised actions with descriptions

Actions that can be carried out now with minimal support

Timeline

These actions can mostly be implemented and have effect in the short term.



Main policy instruments of implementation: communication and education

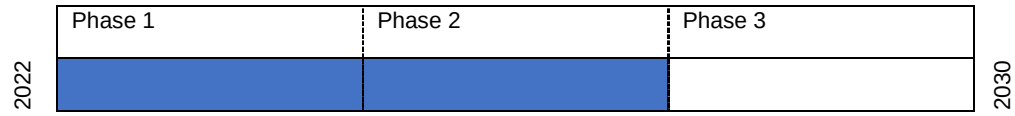
Theme	Action Name	Description
Increasing renewable energy in buildings	Increased use of renewable energy technologies in buildings	There are a significant number of renewable technologies available today on the market across the EU. Citizens should be educated and encouraged to install these renewables in their buildings to help improve the percentage of renewable energy supplied to buildings. More awareness on this topic is required across all Member States.
Improving energy efficiency in buildings	Create a standardised framework or an EU Directive for a one-stop-shop functionality to be implemented across all Member States	One-stop shops were a common theme across many of the citizen and national stakeholder discussions. Many of the NECPs also make reference to the creation of one-stop shops but in some Member States this has not happened yet. This action would look to create a Directive for the implementation of one-stop shops to enable energy efficiency measures to be implemented, like the Energy Performance Buildings Directive, which mandates minimum standards of performance in buildings. This would ensure that all stakeholders have access to information, financial mechanisms, and solution providers to enable the green transition.
	Campaigns to promote behavioural changes in buildings	Many citizens mentioned that they would be willing to change their behaviour if they had the information regarding how to do so. This action would create media campaigns at each national Member State level, specific to the national demographic to encourage and educate citizens on how their behaviour can enable the green transition.
Tax system for energy products aligned to the green transition	EU review of how Member States are aligning energy products to the green transition	This topic was not discussed widely amongst citizens or national stakeholders, nor was there significant reference to it across each of the NECP's and LTRS's for each Member State. As such, an EU review of how this is being implemented in each Member State is required and necessary actions following this to be disseminated.
Provide funding for renovation of buildings	Re-examine policies for incentive schemes and subsidies within each	There was a wide divergence regarding this topic between both citizens and national stakeholders. There were differing views on the level of subsidies

	Member State	that should be provided and which building typology or stakeholder sub-group should be targeted. A common theme was that renovation was only affordable for the very rich or the very poor. Each Member State should review their policies, based on the feedback from the citizen and national stakeholder reports, to determine what they could be doing further to enable adoption of EGD through incentive schemes. Further citizen engagement and stakeholder consultation would also be recommended.
	Pre-finance or voucher schemes for energy efficiency subsidies	A good suggestion that could be implemented in the short term across all Member States, could be the implementation of a voucher or pre-finance scheme so that citizens do not have to pay for renovation work in advance. This would enable more citizens to avail of subsidies as they would not have to have the money available upfront to pay for the renovation works. This would thus not only be available for those on high incomes, which is the current perception.
	Free-energy audit consultations for all	Another good suggestion that could be implemented now is free energy audits for all buildings, including residential and non-residential. This could follow a registered audit system, where citizens and property owners can apply for the voucher for the energy audit and contact an auditor via a single platform. The auditor is then paid to do the work via a voucher scheme. To do this, further education and an increase in those with the skills capable to carry out audits would be required.
Renovate at least 3% of the total floor area of public buildings annually	Create a framework for the renovation of public buildings that involves upskilling and training programmes for tradespeople and energy and construction professionals and awareness campaigns on the positive outcomes of energy efficiency measures.	Both citizens and national stakeholders were of the strong view that public buildings should lead the way. There is an opportunity to provide funding to public buildings, to carry out renovation works, while at the same time, using public projects to upskill and train energy and construction professionals in the process. The results from the renovation could then be disseminated to the public to encourage them to adopt energy efficiency measures. This could also be linked with a City-University approach to enable innovation in the area of energy efficiency in buildings.
Create world-leading companies	Carry out a review to identify the gaps in training and upskilling across each Member State of the EU	Another common theme amongst citizens and national stakeholders was the labour shortage and lack of skills for energy efficiency renovation. While the national NECPs and LTRS documents all refer to the need to increase the skills shortage, as this was mentioned significantly in the reports, this suggests that more work is needed. A review of what is being implemented across all Member States would be helpful to identify the gaps and what more needs to be done.
Raise global ambition to tackle climate change	Educational campaigns in schools across the EU	While some Member States have programmes for education on energy efficiency in schools, not all do, and this was a recurring topic amongst the citizens and national stakeholders. Suggestions for frameworks for educating young people in schools would help raise awareness amongst all citizens. Examining successful programmes and

		disseminating this in other Member States would be a good starting point.
	Awareness-raising campaigns on the benefits of energy efficiency measures and renovation and renewables as well as available subsidy schemes	A general awareness regarding the topic of energy efficiency was also suggested by most Member State discussions. Some citizens were unaware of the high contribution that buildings have on GHG emissions (i.e. 40%). Most felt they were uneducated on how to go about improving their building and reducing their consumption and many felt they did not know where to find information regarding available subsidies. Funding from the state into media campaigns is needed across all Member States.
Improve health and well-being	Awareness campaigns concerning other benefits to energy efficiency renovation such as improved thermal comfort and indoor air quality	While most of the citizen workshops did not discuss the benefits of improved health and well-being as a result of energy efficiency renovation, many of the national stakeholder workshops did. It was well recognised amongst these national stakeholders that it is important to disseminate this knowledge to citizens, as often the incentive to invest in renovation measures would be linked with improved comfort and air quality as well as other benefits such as reduced energy bills. These benefits are also longer term and will not fluctuate based on other changing criteria such as energy prices.
Address inequality and energy poverty	No actions suggested in the short term	/
Ensure a Just Transition that is fair, competitive and green	No actions suggested in the short term	/
Mobilising industry for a clean and circular economy	No actions suggested in the short term	/

Actions requiring grants and incentives that need government support to implement further

Timeline



These actions will have impact in the medium term.

Main instruments of implementation: education and awareness, energy audits, and workforce upskilling

Theme	Action Name	Description
Increasing renewable energy in buildings	Long-term commitment from government for renewable energy schemes	A common action amongst national stakeholders was the need for a long-term commitment from the government for renewable energy schemes. As the payback for renewable energy technology can be upwards of five years, the need for commitment from government for the payback of subsidies or policies such as Feed-in-Tariffs is important to secure investment from building owners. This would create trust in the investment into renewable technologies.
	Reduce the time to obtain permission for connection to renewable technologies	Another suggestion from the national stakeholders and citizens was to reduce the time it takes to obtain permission to install renewable technologies in a building. In certain countries, for energy generation values above a certain threshold, additional permits and permissions are required. This can be a length process, which is off-putting for the end user. If there is no long-term commitment from the government on renewable energy schemes, this also creates uncertainty into the overall investment for such a technology.
Improving energy efficiency in buildings	Implement measures to measure energy consumption of the renovated building on a continuous or regular basis	There were several different suggestions put forward from citizens and national stakeholders with respect to measuring the energy consumption of a renovated building. The need for this was to ensure the building is performing as it should and that the building owner will receive the benefits of the renovated building, such as a reduced energy bill. Several different mechanisms were proposed such as Measurement and Verification (M&V) standards, building passports or renovation passports. This is an important action, as the user behaviour could have a negative impact on the buildings' energy use, negating any of the costly energy efficiency improvements that have been implemented. The rebound effect was also quoted in two of the Member States reports to

		this effect.
Tax system for energy products aligned to the green transition	No actions suggested in the medium term	/
Provide funding for renovation of buildings	No actions suggested in the medium term	/
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested in the medium term	/
Create world-leading companies	Increase the capacity of professional engineers in construction and energy	Another common theme amongst the reports was the need to increase the capacity of our professional Architecture, Engineering and Construction (AEC) sector. This included updating the curriculums in universities to provide education on energy efficiency renovation, and creating an aware and skilled workforce leaving university that can lead the green transition. This was also referenced in many of the NECPs and LTRSs, however further work is needed across the EU in this regard.
Raise global ambition to tackle climate change	No actions suggested in the medium term	/
Improve health and well-being	No actions suggested in the medium term	/
Address inequality and energy poverty	Create an EU task force to examine innovate ideas and legislation regarding the split incentive between property owner and tenant	A significant amount of the built environment is rented properties, both residential and commercial. The percentage of rented buildings varies from State to State. One of the most cited barriers to energy efficiency renovation is the split incentive; the property owner pays for the renovation but the tenant benefits. There are many suggested solutions to the split incentive, but each has its own potential unintended consequence. For example, if the owner is mandated to renovate a building, this may allow them to evict a tenant based on the renovation and then charge them a higher rent to move back in, which the tenant may not be able to afford. Another suggestion was a 'green lease' where there is an understanding that the increased rent results in a reduced bill, however if the tenant does not behave well, they may not see a reduction on their bill. Another issue is that only the wealthy can afford to live in renovated properties, forcing the poor to live in sub-standard accommodation that results in poor health and well-being. This is a complex problem that needs to be solved with both innovative solutions and legal frameworks to prevent unintended consequences. A suggestion would be an EU task force to investigate solutions.
Ensure a Just Transition that is fair, competitive and green	No actions suggested in the medium term	/

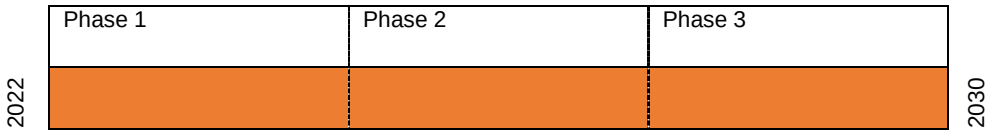
Mobilising industry for a clean and circular economy	No actions suggested in the medium term	/

Actions requiring changes in regulations that will take longer to implement

The following are the actions suggested by citizens and stakeholders that will take longer to implement and could need greater government support. These were also a small number of actions, including longer-term commitment form governments for renewables along with the increasing of priorities in the university curriculums for the EGD.

Timeline

These actions require significant political consensus, thus have the longest implementation period. However, they depend on the policymaking process beginning immediately.



Main instruments of implementation: policy change

Theme	Action Name	Description
Increasing renewable energy in buildings	Create legal frameworks for community energy at the local energy system	A common suggestion among national stakeholders and citizens was to enable the implementation of community energy systems, for example solar farms on rooftops shared between a community or community level micro-generation. Many EU countries currently have legal barriers preventing the implementation of such schemes and others have financial barriers that do not make the solutions cost-effective. Removing the legal and financial barriers that exist in many Member States needs to be driven from the top-down at the EU level.
Improving energy efficiency in buildings	No actions suggested in the longer term	/
Tax system for energy products aligned to the green transition	No actions suggested in the longer term	/

Provide funding for renovation of buildings	Enable 100% renovation for all	While it is recognised that 100% renovation has barriers and unintended consequences with respect to abuse/fraud or market distortion, there was also an acknowledgement by national stakeholders that it could be achieved in the longer term. The percentage of funding could be incrementally increased year on year to ensure there are no unintended consequences to not achieving the expected impact as there is no co-buy in from the end user, and to ensure there are no market distortions. The result would be that by 2030, renovations are affordable for all, meeting many of the other previously outlined barriers across other EGD thematic areas.
Renovate at least 3% of the total floor area of public buildings annually	No actions suggested in the longer term	/
Create world-leading companies	Create a recognised EU label for energy efficiency renovation experts	This action was suggested by several citizens and national stakeholders. The aim would be to create trust in the professional company delivering the solution as well as creating good quality renovation, ensuring the objectives of the EGD are met. This would also require investment into upskilling and training as per the actions previously mentioned in the short and medium terms.
Raise global ambition to tackle climate change	No actions suggested in the longer term	-
Improve health and well-being	No actions suggested in the longer term	/
Address inequality and energy poverty	No actions suggested in the longer term	/
Ensure a Just Transition that is fair, competitive and green	Policies for renovation of apartment buildings where there is co-ownership	The issue of co-ownership of apartment buildings was also mentioned amongst citizen and national stakeholder reports. In many cases, there was a required majority of apartment owners to agree to a renovation before it could be implemented. This was seen to be unfair to those who wanted to contribute to the green transition, however it would also be unfair to those who could not afford to invest in the renovation measures if they were forced to do so. As such, policies and regulations to ensure fairness amongst all for co-owned apartment buildings are needed.

Mobilising industry for a clean and circular economy	Policies to ensure there are no unintended consequences for the environment because of energy efficiency renovation	While there was no discrete common observation amongst all citizens and national stakeholders with respect to a clean and circular economy, there were several references to using materials in renovation that did not harm the environment. The requirement to carry out Life Cycle Analysis (LCA) for a new construction project or a renovation project is currently not mandated across the EU. This could ensure that there are no unintended consequences to the environment on the back of energy efficiency renovation. However, the information to enable the adoption of LCA for materials also needs to be available and as such, this is a complex issue that needs to be investigated before any policies are implemented.

7.3.4 Just Transition

The following paragraphs contain considerations about the Just Transition, which consistently emanated from the national EU roadmaps. They do not represent an analysis of how the actions taken under the “Territorial Just Transition Mechanism” should come into play.

The citizens and stakeholders across the EU Member States were consistent in pointing out that the costs of food system transformation disproportionally affect small-scale producers and socio-economically vulnerable citizens.

A transformation to sustainable food systems comes with costs of certification, adoption of new technologies and finding new markets. All these costs are likely to disproportionally affect small-scale food producers, compared to large-scale businesses. Unless compensatory measures are ensured (e.g. grants, consultative support), citizens believe small-scale producers run the risk of being outcompeted by large corporations and going out of business.

Furthermore, the increased costs of sustainably produced, healthy food are likely to be unaffordable to the more vulnerable socio-economic groups in society. These groups run the risk of losing access to sustainable and high-quality food products, unless compensatory measures are introduced (e.g. eco-vouchers, food redistribution schemes etc.).

Citizens did not directly mention the Just Transition being fair, competitive, and green. However, there were a few references to the lack of trust in both suppliers of green technology and governments;for example, a lack of trust in that the investment will lead to the savings proposed or a lack of trust in that a subsidy will continue to ensure a return on the investment. Other issues relating to trust touched on the fact that subsidies take a 'one-size-fits-all’ approach, which can cause unfairness concerning larger buildings having to pay more to renovate or buildings in rural areas getting the same subsidy as those in urban areas where the value of the home will increase significantly more because of the renovation. Furthermore, citizens felt that if the renovation were mandated, this would create significant inequality, which would not complement a Just Transition.

During the stakeholder meetings, citizens in nine countries (one-third) discussed the split incentive and the tenant/ property owner issue. Many national stakeholders felt that the property owners should be mandated to achieve a minimum standard of energy efficiency

to rent out their building/home. In some Member States, this already exists. Some national stakeholders mentioned the dangers of such a solution concerning 'renoviction', where the tenant is evicted for the property owner to carry out the renovations and later must pay increased rent when they return to the property. This would cause inequality and impact the Just Transition. Some national stakeholders felt that the property owner should be allowed to increase their rent on the back of renovation to recoup the costs, however this could result in those on lower incomes living in less energy efficient homes, which could potentially also have a negative impact on their health and well-being. There were no good solutions suggested to this issue, however the majority raised it as an issue to address if the EGD objectives are to be met.

Citizens in many Member States also discussed the issue of co-ownership and the difficulty of renovating apartment buildings with multiple owners. In some Member States, a majority, 70%, is needed before renovation can occur in an apartment building. Many felt more discussions and legislation were required around this issue as this is not fair to apartment owners who wish to contribute to the green transition but are blocked by others. On the other hand, homeowners should not be forced to pay for a renovation if they cannot afford it.

8. Other EU initiatives that will enable the roadmap

The EGD has been presented as a means to achieve several objectives, such as making the EU carbon neutral by 2050, economically competitive, and socially just. By involving several key strategic actions, ranging from climate to energy, industry to mobility, agriculture to biodiversity[757], the EGD serves as a comprehensive strategy for establishing new policies at both EU and national levels.

The EU initiatives listed below offer an important framework to measure and discuss progress with the EGD implementation within the present roadmap. They contribute to provide a background to understand and present the results of the stakeholders' and citizens' discussion on the measures being taken by the Member States.

On the other hand, they enable connecting, sharing knowledge, and scaling up solutions. Bringing together international policies and frameworks will facilitate building synergies between these initiatives as part of a holistic and integrated approach and allow the coordination of different Green Deal policies and legislations.

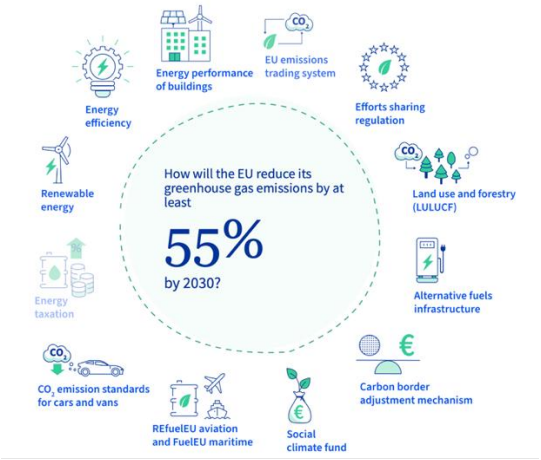
8.1 Legislative initiatives supporting the EGD

On 12 December 2019, the European Commission and the European Council established the EGD, the core EU strategy to fight climate change, boost the green revolution and achieve climate neutrality. As a first step, the Commission proposed an initial set of targets to be met by 2030. On 14 July 2021, the European Commission adopted 'Fit for 55'[758], a set of policy proposals preparing the implementation of the EGD. Fit for 55 refers to the **EU's target of reducing net greenhouse gas emissions by at least 55% by 2030**. The proposed package aims to bring EU legislation aligned with the 2030 goal.

The Fit for 55 package puts in place new initiatives to ensure that EU policies align with the climate goals agreed upon by the EU. The proposals aim to provide a coherent and balanced framework for reaching the EU's climate objectives to:

- Ensure a just and socially fair transition.
- Maintain and strengthen innovation and competitiveness of EU industry while ensuring a level playing field vis-à-vis third country economic operators.
- Underpin the EU's position as leading the way in the global fight against climate change.

[757] European Commission (2019). Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. The European Green Deal. Available at https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF (Accessed on 4 January 2023).
[758] European Council (n.d.). Fit for 55. Available at https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/ (Accessed on 14 December 2022)



Picture taken from the European Council's website (quoted in the footnote).

Other legislative initiatives supporting the EGD and worth noting are listed here below.

Food and Agriculture

- The EU's Biodiversity Strategy for 2030 (May 2020) contains critical commitments to adopt a new Nature Restoration Law and protect and effectively manage 30% of the EU's land and seas, including 1/3, under strict protection.[759]

- With its commitment, the EU's Soil Strategy (November 2021) sets out a framework and concrete measures to achieve healthy soils by 2050, with concrete actions by 2030. It also announces a new Soil Health Law by 2023.[760]

Mobility

- The proposed legislation for CO2 emissions for cars and vans (July 2021) commits to an end of sales of the internal combustion engine (ICE) by 2035 and stricter emissions standards.[761]

- ReFuelEU, a policy working towards decarbonising aviation to reduce the sector's environmental footprnt and enable it to help the EU achieve its climate targets.[762]

- The reform of the EU emissions trading system (EU ETS) is a key tool for reducing greenhouse gas emissions.[763]

Energy efficiency

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[759] European Commission (n.d.). Biodiversity strategy for 2030. Available at: https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en (Accessed on 14 December 2022).
[760] European Commission (n.d.). Soil strategy for 2030. Available at: https://environment.ec.europa.eu/topics/soil-and-land/soil-strategy_en (Accessed on 14 December 2022).
[761] Cf. European Council (n.d.), see note 739, page 804.
[762] Cf. European Council (n.d.), see note 739, page 804.
[763] European Council (n.d.). EU emissions trading system. Available at: https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/. (Accessed on 14 December 2022).

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- The Climate Neutral Europe commitment, enshrined in the Climate Law to ensure that all EU policies contribute to this goal and that all sectors of the economy and society play their part.[764]

- The proposal for the revision of the Energy Performance of Buildings Directive (EPBD) (December 2021) upgrades the existing regulatory framework to boost energy performance of buildings and help achieve the EU's energy and environmental goals.[765]

- The REPowerEU package proposal (May 2022) on renewables and energy efficiency responds to the energy market disruption caused by Russia's invasion of Ukraine.[766]

Energy efficiency and mobility

- The National Recovery and Resilience Plans are the reforms and investments packages proposed by Member States to facilitate and accelerate their green and digital transitions, while increasing resilience, cohesion and sustainable growth.[767]

- The Recovery and Resilience Facility (RFF) is the key instrument to help the EU emerge stronger and more resilient from the current crisis, making €672.5 billion in loans and grants available to support reforms and investments by Member States.[768]

Fair transition

- The Social Climate Fund (SCF) within the Fit for 55 package (July 2021) has a focus on the social dimension and helping poorer households in the energy transition.[769]

- The Just Transition Regulation (June 2021) aims to diversify the local economy of carbon-dependent societies towards sustainable activities and facilitate reskilling of the workforce.

In addition, here below are listed other noteworthy initiatives that will support the implementation of the EGD. The table does not include EGD-related legislative proposals or initiatives directly stemming from the EGD such as Farm to Fork.

8.2 Overview of other initiatives that will enable the transition

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[764] European Commission (n.d.). European Climate Law. Available at: https://climate.ec.europa.eu/eu-action/european-green-deal/european-climate-law_en. (Accessed on 14 December 2022).
[765] European Commission (n.d.). Energy performance of buildings directive. Available at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en. (Accessed on 14 December 2022).
[766] European Commission (n.d.). REPowerEU: affordable, secure and sustainable energy for Europe. Available at: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en. (Accessed on 14 December 2022).
[767] European Commission. Recovery Resilience Plan. Available at: https://reform-support.ec.europa.eu/what-we-do/recovery-and-resilience-plans_en. (Accessed on 14 December 2022).
[768] European Commission (n.d.). The largest stimulus package ever. Available at: https://commission.europa.eu/strategy-and-policy/recovery-plan-europe_en#the-largest-stimulus-package-ever. (Accessed on 14 December 2022).
[769] European Commission (n.d.). Social Climate Fund. Available at: https://climate.ec.europa.eu/eu-action/european-green-deal/delivering-european-green-deal/social-climate-fund_en. (Accessed on 14 December 2022).

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Name of tool	Short description	Initiator/implementer	Does it Involve citizens?	Topic (s) concerned
Peer Parliaments	From November 2021 to March 2022, European citizens conducted 461 Peer Parliaments across 26 EU Member States. Small groups of 5-10 individuals brainstormed ideas and solutions for some of Europe's most significant climate and environmental questions. Findings were shared with the European Commission, ensuring that EU policymakers heard citizens' voices.[770]	EU Commission / DG CLIMA (European Climate Pact)	YES	Food, Mobility, Energy (and buildings)
European Climate Pact	The Pact is an opportunity for people, communities and organisations to participate in climate action across Europe, to learn about climate change, to develop and implement solutions, to connect with others and to maximise the impact of these solutions.[771] Interested citizens can become a Climate Pact Ambassador; take a climate-friendly action and pledge (see above); or register a satellite event	EU Commission / DG CLIMA	YES	Food, Mobility, Energy (and buildings)
Just Transition Platform/ Mechanism	The Just Transition Platform is a single access point and help desk conceived to provide EU countries and regions with the support available through the Just Transition Mechanism, ensuring a fair and 'just' transition that leaves no person or region behind.[772]	EU Commission / DG REFORM	YES (indirectly)	Food, Mobility, Energy (and buildings)

[770] European Climate Pact (n.d.). Peer Parliaments across Europe. Available at: https://climate-pact.europa.eu/about/peer-parliaments_en (Accessed on 10 December 2022).
[771] European Climate Pact (n.d.). What is the European Climate Pact? Available at: https://climate-pact.europa.eu/about/about-pact_en (Accessed on 10 December 2022).
[772] European Union (n.d.)., see note 751, page 807.

Conference on the Future of Europe	Held between May 2021 and May 2022, it was a citizens-focused, bottom-up exercise for Europeans to have their say on what they expect from the European Union. The report on the outcome presented 49 proposals to the three EU Institutions.[773]	Executive Committee: European Parliament, The European Council and the European Commission	YES	Food, Mobility, Energy (and buildings)
New European Bauhaus	Announced in the 2020 State of the Union address, the initiative brings citizens, experts, businesses, and institutions together to reimagine European sustainable living. In addition to creating a platform for experimentation and connection, it supports positive change by providing access to EU funding for beautiful, sustainable, and inclusive projects.[774]	European Commission	YES	Mobility, Energy (buildings)
Next Generation EU	NextGenerationEU is a more than €800 billion temporary recovery instrument to help repair the immediate economic and social damage brought about by the coronavirus pandemic. It aims to build a greener, more digital, more resilient and better fit post-COVID-19 Europe for the current and forthcoming challenges.[775]	EU Commission	YES (indirectly in the Member States)	Food, Mobility, Energy (and buildings)

[773] European Union (2022). Conference on the Future of Europe. Report on the outcome. Available at: https://prod-cofe-platform.s3.eu-central-1.amazonaws.com/qtde64rjnkdaf5u2j54ocssxyn9w?response-content-disposition=inline%3B%20filename%3D%22Book_CoFE_Final_Report_EN_full.pdf%22%3B%20filename%2A%3DUTF-8%27%27Book_CoFE_Final_Report_EN_full.pdf&response-content-type=application%2Fpdf&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA3LJJXGZPDFYVOW5V%2F20221210%2Feu-central-1%2Fs3%2Faws4_request&X-Amz-Date=20221210T140653Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=bc366105cf1f1a29b0c06899a250cc9a5e262819cae10e20dc797800ecff1629 (Accessed on 10 December 2022).
[774] European Union (n.d.). New European Bauhaus. About the initiative. Available at: https://new-european-bauhaus.europa.eu/about/about-initiative_en. (Accessed on 10 December 2022).
[775] European Commission (n.d.). Main elements of the package. Available at: https://commission.europa.eu/strategy-and-policy/recovery-plan-europe_en. (Accessed on 10 December 2022).

EU Missions (Cities, Soil, Climate Adaptation)	EU Missions are a coordinated effort by the Commission to pool the necessary resources regarding funding programmes, policies and regulations, and other activities. They aim to engage with citizens to boost societal uptake of new solutions and approaches.[776]	DG RTD	YES	Food, Mobility, Energy (and buildings)
Covid Recovery and Resilience plans	The EU's long-term budget, coupled with NextGenerationEU (NGEU), the temporary instrument designed to boost the recovery, form the largest stimulus package ever financed in Europe. The Recovery and Resilience Facility is the key instrument to help the EU emerge more robust and more resilient from the current crisis, making €672.5 billion in loans and grants available to support reforms and investments by Member States.[777]	EU Commission		Food, Mobility, Energy (and buildings)
Rural Pact/EU Rural Action Plan	Launched in December 2021, the Pact is a framework for cooperation among authorities and stakeholders at the European, national, regional and local levels. It contributes to achieving the shared goals of the long-term vision for the EU's rural areas by facilitating interaction on rural matters between public authorities, civil society, businesses, academia and citizens.[778]	European Commission / DG AGRI	Yes	Food, Mobility, Energy (and buildings)
Renovation wave	Aims to double annual energy renovation rates until 2030. As well as reducing emissions, it will enhance the quality of life for people living in and using the buildings and create many additional green jobs in the construction sector. Focuses on three priorities: Tackling energy poverty and	European Commission / DG ENER	Yes (indirectly)	Energy-efficient buildings

[776] European Commission (n.d.). What are EU Missions? Available at: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe_en#how-to-get-involved. (Accessed on 10 December 2022).
[777] European Commission (n.d.). The largest stimulus package ever. Available at: https://commission.europa.eu/strategy-and-policy/recovery-plan-europe_en#the-largest-stimulus-package-ever. (Accessed on 10 December 2022).
[778] European Commission (n.d.). The Rural Pact – strengthened governance for EU rural areas. Available at: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en#rural-areas-in-numbers (Accessed on 10 December 2022).

	worst-performing buildings. Public buildings and social infrastructure. Decarbonising heating and cooling.[779]			
Communication on 'Safeguarding food security and reinforcing the resilience of food systems.'	The communication sets out actions in three areas: First, it presents the immediate actions to safeguard food security in Ukraine and worldwide. Second, it addresses the challenge of food stability in the EU's food system with various measures to support European farmers and maintain affordability for citizens. Finally, it confirms the European Union's agenda to make our food system sustainable and resilient in the years to come.[780]	EU Commission / DG AGRI / DG SANTE	Yes (indirectly)	Sustainable Food Systems
Sustainable and Smart Mobility Strategy	The European Commission presented the Strategy in December 2020 with an action plan of 82 initiatives that will guide the EU's work for the next four years to provide citizens with affordable, accessible, smarter and greener alternatives. This strategy lays the foundation for how the EU transport system can achieve its green and digital transformation and become more resilient to future crises. It is structured around three key objectives: making the European transport system sustainable, smart and resilient.[781]	EU Commission / DG MOVE	Yes (indirectly)	Mobility

[779] European Commission (n.d.). A renovation wave for Europe. Available at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en. (Accessed on 10 December 2022).
[780] European Commission (n.d.). Address by Mr Janusz Wojciechowski on the adoption of the European Commission Communication "Safeguarding food security and reinforcing the resilience of food systems". Available at: https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_1991. (Accessed on 10 December 2022).
[781] European Commission. A fundamental transport transformation: Commission presents its green, smart and affordable mobility plan. Available at: https://transport.ec.europa.eu/transport-themes/mobility-strategy_en. (Accessed on 10 December 2022).

9. Conclusions

The citizens' deliberations, the consultations with the stakeholders, the national roadmaps and the EU Roadmap all point to the same conclusions: there is both a desire to push forward with the green transformation and all countries, to varying extent, are making efforts to achieve it.

These results are further validated by recent Eurobarometer polling and specific polling carried out by the contractor during the project.

According to the Eurobarometer survey 513 on climate change[782], 32% of Europeans buy and eat more organic **food** and 31% of them buy and eat less meat to contribute to actions against climate change. The most common personal action Europeans take to tackle climate change is trying to reduce waste and regularly separate it for recycling (75%). The highest percentages of individuals who mentioned this action were found in Ireland (89%), Czechia (88%), and the Netherlands (87%). However, this approach was not as frequently mentioned in Bulgaria (31%), Romania (38%), and Latvia (59%), with fewer than six in ten participants identifying it as a useful action.

In regard to **mobility,** no specific results were mentioned. However, 75% of respondents believe that their national government is not doing enough to tackle climate change and 90% agree that greenhouse gas emissions should be reduced to a minimum by 2050 to make the EU economy climate neutral. 75% of surveyed Europeans think that funds from the economic recovery plan should mainly be invested in the new green economy rather than in the traditional fossil-fuelled economy.

In terms of **energy**, in the Special Eurobarometer 527 on fairness perceptions of the green transition[783] carried out between May and June 2022, 93% of EU citizens think that the current level of energy prices is a serious problem. That echoes the results of the Eurobarometer on climate changes according to which 81% of respondents believe that more public financial support should be given to the transition to clean energies. 78% of respondents think that promoting EU expertise in clean technologies can help create new jobs in the EU and that acting on climate change will lead to innovation that will make EU companies more competitive. 70% of respondents agree that reducing fossil fuel imports from outside the EU can increase energy security and benefit the EU economically. According to the Special Eurobarometer 527, 46% are confident that sustainable energy, products, and services will be affordable for all by 2050.

Finally, it is important to note that despite Russia's invasion of Ukraine, the green transition remains a priority for citizens. A survey carried out among the participants to the citizens' panels in the beginning of May 2022 (following the Russian invasion of Ukraine) showed that most citizens (62%) considered that this changing geopolitical context did not change their opinion on the EGD or on the priority actions to be carried out - if at all, several pointed to the fact that the Russian invasion should rather accelerate the green transition.

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[782] European Commission (2021), Special Eurobarometer 513 on Climate Change. Available at https://climate.ec.europa.eu/system/files/2021-07/report_2021_en.pdf (Accessed: 27 February 2023).

[783] European Commission (2022) Special Eurobarometer 527 on Fairness Perceptions of the Green Transition. Available at https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=10429&furtherNews=yes (Accessed: 27 February 2023).

To push the green transition forward, efforts must be made at all levels and actions need to be taken. The below sections will offer an overview of the discussions that took place, of the priorities that have been identified by citizens and stakeholders in each area, as well as the barriers to overcome and overall perception of the citizens and stakeholders as regards the EGD.

9.1 Overview of main EU interventions

The following paragraphs summaries the most salient points raised in the consultations and point to EU policy priorities and future research about the topic.

The analysis of the proposals allows the identification of three main aspects around which, to different extents, the main EU interventions should be built, namely:

- Legislation;
- Funding;
- Raising awareness and education.

Most of the actions proposed for sustainable food systems, sustainable and smart mobility, and energy-efficient buildings are, in fact, designed to address some of the major barriers pertaining to such areas, like the gaps in legislation, inefficient taxation or insufficient subsidies programmes, and lack of public awareness and technical knowledge.

While during the workshops, stakeholders have assigned priority actions to different competent bodies (local, national, and EU), it must be noted that for all three topics their implementation is usually expected to be carried out on multiple levels, for instance on the national and EU level in combination.

In the below tables, the assessment of the EU engagement in the action proposals is based on publicly available information on EU legislation, ongoing published legislative initiatives, and other initiatives and policy currently in development. However, this is not intended as a comprehensive analysis; it overlooks the most technical work done by the EU on certain actions and should thus be considered only indicative.

9.2 Sustainable food systems

The actions on sustainable food systems proposed by EU citizens and stakeholders that fall into the remit of the EU can be split into three groups. These include:

- the actions which currently are not addressed by the EU;
- actions which are only partially addressed by the EU, either by legislation, funding initiative, or direct action;
- actions more extensively addressed by the EU.

Approximately half (14) of the proposed actions on the EU level do not have any EU initiatives associated with them, be it legislation, legislative initiative, or a communication campaign. A total of eight actions proposed by the citizens are partially addressed by the EU. This means that the existing EU legislation, ongoing legislative initiatives, and actions

are addressing some of the components of the proposed actions, or that there are examples of the action being addressed by the EU, but without a systemic approach.

The remaining seven actions proposed by citizens and stakeholders have been already tackled by the EU and, although this does not necessarily mean they cannot be more fully or systematically addressed, the initiatives undertaken have allowed to implement effective measures to determine key solutions and encourage citizens to act sustainably.

This overview focuses on the proposals not currently addressed or non-sufficiently addressed by the EU presenting them as the main priorities for the work of the EU policy makers. The following table summarises for each priority action the current EU status, the area of intervention needed and also includes the barriers indicated by the citizens and stakeholders.

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Priority	Area of intervention needed	Current status	Relevant barriers	Actions to be taken by the EU
Sustainable food production				
Support to urban farming	Raising awareness & Education	Partially addressed by the EU through the EIP-AGRI Network and Horizon Europe and Horizon 2020 projects	/	Promotional campaigns on urban farming and subsidy programmes
Support to urban farmers	Funding	Partially addressed by the EU through the EIP-AGRI Network and Horizon Europe and Horizon 2020 projects	/	Subsidy programmes for urban farmers
Support to sustainable food production	Raising awareness & Education	Partially addressed by the EU by the legislative initiative on the Establishment of the Farm Sustainability Data Network (FSDN)	Support to farmers is focused on advice, rather than education	Skills-based education on sustainable food production for farmers
Support to small-scale sustainable farmers	Education	Partially addressed by the EU through the Legislative initiative: Establishment of the Farm Sustainability Data Network (FSDN)	The network's strength is in identifying the gaps through data, but it does not offer direct support	The EU should focus on direct provision of education and technical support
Support to small-scale, sustainable, and seasonal food production	Funding	Partially addressed by the EU through The EU small farmers scheme	The scheme doesn't address sustainable and seasonable production	Financial support should be provided
Support for farmers transitioning from conventional to organic farming	Funding	Partially addressed by the EU through the new common agricultural policy	Current agricultural subsidies system is oriented towards large-scale industrial production	Financial support should be provided
Implementation of new technologies in	Funding	Partially addressed by the EU through	Current agricultural	Financial support should

food production		the EIP-AGRI Network	subsidies system is oriented towards large-scale industrial production	be provided
Sustainable food processing, distribution, and retail				
Education on reading food labels	Raising awareness & Education	Partially addressed by the EU through the Farm to Fork Strategy	/	
Promotion of organic, healthy, and local products in supermarkets	Raising awareness & Education; Funding	Partially addressed by The EU organic label	Current use of food labels on products is perceived as confusing and not helpful in choosing sustainable and healthy choices	EU should raise awareness on healthy and local food products by putting efforts in related elements such as promotion of healthy and local food products in supermarkets; or provision of financial incentives to supermarkets for allocation of larger shelf space for these products
Shortening food supply chains	/	Partially addressed by the EU	/	/
Standardization of food labels for organic and sustainable food products	Raising awareness & Education; Legislation	Partially addressed by the EU through Regulation 2018/848 on organic production and labelling. Labels for sustainable food products, should be addressed by the sustainability labelling framework of the upcoming framework legislation proposal for a sustainable food system and the Proposal for a revision of Regulation on the provision of food information to consumers	This regulation does not address the educational and awareness campaigns for consumers on reading food labels.	Implementation of the revised legislation, including awareness campaigns
Development of sustainable distribution networks	Funding	Not addressed by the EU	/	/

Adjusting VAT on food products	Taxation	Not addressed by the EU	/	Revision of VAT on food products based on their environmental impact
Mandatory CO2 emissions information on food labels	Legislation	Should be Partially addressed by the EU through the Green Claims Directive proposal and the sustainability labelling framework of the upcoming framework legislation proposal for a sustainable food system	/	EU should legislate on mandatory CO2 emissions information on food labels
Sustainable food consumption				
Maintenance of healthy and environmentally sustainable diets	Raising awareness & Education	Partially addressed by the EU through the Farm to Fork Strategy	/	Education on healthy and environmentally sustainable diets
Promotion of food produced by small-scale sustainable farmers	Raising awareness & Education	Partially addressed by the EU through the Organic action plan	/	Promotional campaigns on buying food directly from small-scale sustainable farmers
Facilitating consumption of sustainable, healthy, and local food	Raising awareness & Education	Partially addressed by the EU through the Farm to Fork Strategy	/	awareness campaigns on origin of food, cooking, sustainable diets
School cafeterias cooking diverse meals with seasonal and organic produce	Raising awareness & Education; Funding	Partially addressed by the EU through Revision of the School Fruit, Vegetables and Milk Scheme	Inaccessible pricing of healthy and sustainable food for the wider population. The revision doesn't include education and awareness raising with students on the importance of sustainable and healthy food choices	The EU should implement raising awareness initiatives on sustainable and healthy food in schools, and provide subsidies to address the issue of high prices of sustainable food

Food loss and waste reduction				
Support for food donation and recovery programs	Funding	Partially addressed by the EU through the existing organisational EU Platform on Food Losses and Food Waste (FLW), ESF+ and the Fund for European Aid to the Most Deprived (FEAD)	No financial and logistical support for food donation and recovery programs	Financial support to food donation and recovery programs
Combatting food fraud				
Stringent monitoring on products fulfilling their sustainability and quality certificates	Legislation	Partially addressed by the EU through the Department for Health and Food Audits (DG SANTE) that carries out controls on food safety.	Sustainability fraud claims are currently not the focus.	EU should take measures aimed to ensure the product fulfilment of quality standards
Education and awareness campaigns for consumers and retailers	Raising awareness & Education	Partially addressed by the EU		Promotional campaigns targeted at consumers and retailers against food fraud
Across the food cycle				
Promotion of sustainable food systems	Raising awareness & Education	Partially addressed by the EU		Educational programmes on sustainable food systems

9.3 Smart and Sustainable Mobility

Of the 31 actions proposed by citizens and stakeholders to better deliver on the goals of the EGD with respect to Smart and Sustainable Mobility, 13 are within EU competence, eight can be influenced by the EU, and the remainder are outside the EU's current remit.

The first two categories have been assessed based on the current level of engagement of the EU. The proposed actions not addressed or only partially addressed by the EU have been considered as the main priorities.

- The table below contains some indicative suggestions as to how the EU may be able to act on these priority actions, along with corresponding barriers. Most of the barriers mentioned by the participants represent corollaries of the proposed actions (for example, participants identified a lack of cycling infrastructure as a barrier to more cycling and suggested that more such infrastructure should be provided) and have been disregarded in this summary. Instead,

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Priority	**Area of intervention needed**	**Current status**	**Relevant barriers**	**Actions to be taken by the EU**
Education and awareness raising of public about sustainable transport	Raising awareness & education	Largely addressed by the EU, for instance through www.eltis.org, or the European Mobility Week	/	The EU should continue supporting awareness-raising campaigns
Raising awareness & education	Raising awareness & education	Partially addressed by the EU	The complexity of EU funding applications, and the many different funding programmes each with their own rules, deters small and inexperienced municipalities and regions from applying for it	The EU should commission funded training and staff development and further user-focused research in this area with a view to significantly simplifying and coordinating application procedures and the number of funding programmes.
EU wide standards on smart ticketing and Mobility as a Service (MAAS)	Legislation	To be addressed by the MDMS initiative	/	The multimodal digital mobility services (MDMS) initiative intends to set reference API standards for booking of tickets (MaaS). This is supported by standardisation developments and

				coordination action to harmonise existing standards and make them interoperable.
Road pricing of existing roads	Taxation	Partially addressed by Directive 1999/62/EC[784] ('Eurovignette Directive'), and by Directive (EU) 2019/520[785] ('EETS Directive') on interoperability of electronic tolling systems.	/	EU may have competence to pass framework directive requiring all Member States to pass legislation enabling roads authorities in their member state to charge if they wish
Introduction of limited parking supply in new developments	Legislation	Not addressed by the EU	Typically, in most Member States, a minimum amount of car parking must be provided with new buildings, and there is no maximum	This could be enabled through the revisions to Energy Performance of Buildings Directive proposed by the Green Deal – at least, Member States could be required to permit reduced parking supply in new buildings in certain circumstances and permit maximum rather than minimum parking standards to be set
Management of the environmental impact of battery production and disposal	Legislation	Partially addressed by the EU by the new Regulation on batteries and waste batterie that addresses the environmental lifecycle impact of batteries		EU should finalise legislation in this area. Trilogue agreement reached in December 2022 – Regulation still to be formally approved by European Parliament and Counci.
Biofuels not to be food-based or derived from land previously used for	Legislation	Partially addressed by the EU by the current 2018 Renewable	There are significant shortcomings in the current	The Renewable Energy Directive, which is currently being revised,

[784] Directive 1999/62/EC of the European Parliament and of the Council of 17 June 1999 on the charging of vehicles for the use of road infrastructures

[785] Directive (EU) 2019/520 of the European Parliament and of the Council of 19 March 2019 on the interoperability of electronic road toll systems and facilitating cross-border exchange of information on the failure to pay road fees in the Union

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food production		Fuels Directive	2018 Renewable Fuels Directive in the way it allows considerable flexibility in the definition of plant-based and residue-based feedstocks for biofuels (plant-based can displace land for growing food and cause further deforestation, thus increasing carbon emissions)	contains strict sustainability criteria for biofuels, including limitations to the amount of food- and feed-based biofuels to be used in transport
Higher quality standards for new buses.	Legislation	Addressed by type-approval legislation (EURO VI, EURO 7) and CO2 emission performance standards for Heavy-duty vehicles (proposed)		EU type-approval legislation (currently EURO 6 and EURO VI) sets technical specifications and requirements for vehicles to be put on our roads, including buses. The Commission recently proposed a new Euro 7 standard, introducing even stricter requirements. Furthermore, the Commission proposal for a revision of the CO2 emission performance standards for heavy-duty vehicles includes GHG emission reduction targets for coaches and zero-emission vehicle mandates for urban buses
More bike paths and better walking infrastructure	Legislation; Funding	Partially addressed by the EU through EU funding (mainly via cohesion and structural funds,	The European Spatial Perspective Document is currently from 1999 and is	The revision of the European Spatial Perspective Document could encourage member states to

		RFF, pilot projects funded from Interreg programme) and policy (New EU Urban Mobility Framework; Updated concept for sustainable urban mobility planning (SUMP – annex to Commission Recommendation C(2023) 1524)	only advisory. A great deal of investment still goes in roads, including EU contributions to TEN investments	pursue this infrastructure in their spatial plans. The EU should consider whether road investments are consistent with its climate goals. TEN-funding could be conditional on providing bike and walking infrastructure in parallel with all new TEN road and rail infrastructure. Conditionality of Structural Funds – could seek to ensure that a proportion of budget for transport infrastructure is spent on these measures
Facilities planned with easy access in mind by a variety of modes of transport and promotion of 15-minute city/short-distance cities/denser cities and neighborhoods.	Legislation	Partially addressed by the EU through funding (pilot projects funded from Interreg programme, and Research on cities, towns and villages of short distances funded from Horizon programme) and policy (New EU Urban Mobility Framework; Updated concept for sustainable urban mobility planning (SUMP – annex to Commission Recommendation C(2023) 1524).	The European Spatial Perspective Document is currently from 1999 and is only advisory.	The revision of the European Spatial Perspective Document could encourage member states to pursue this infrastructure in their spatial plans
Use of IT to gather information and better manage congested road networks in real time.	Legislation	To be addressed by the MDMS initiative and by the revision of the Intelligent Transport Systems (ITS) Directive		MDMS initiative intends to add obligations MDMS services to share back data with public authorities. The Commission proposal to revise the ITS Directive

				includes i.a. the obligation to create crucial data, such as data on road safety-related events or data on the state of the network (e.g. roadworks), to better inform in real-time the drivers. It also includes the obligation to provide road safety-related minimum universal traffic information (SRTI) service.
Public transport integration, including integrated ticketing, especially for international rail services.	Legislation	To be addressed by the MDMS initiative	Poor coordination of international rail services, ticketing and information make it difficult to make international rail trips	MDMS initiative intends to add obligations for international rail services to enter into agreement with third party ticketing platforms.

9.4 Energy-efficient building

The majority of the actions proposed for the energy efficiency of buildings are addressed by various existing EU initiatives, including the Energy Performance Buildings Directive (EPBD) and its various recasts, the Energy Efficiency Directive (EED), the Renovation Wave, Fit for 55 and RePowerEU. However, from the discussions with the citizens and national stakeholders emerged that the practical implementations of these initiatives have been challenging in several respects.

For new buildings, a mandate for 'zero emissions buildings' has been set out by the EPBD for all new buildings by 2027. However, buildings exist for a long time, in many EU countries for hundreds of years, and by 2030, approximatively 95% of the building stock will be made up of existing buildings. As such, the renovation of the existing building stock is not as simple as purchasing new buildings which meet the latest standards, it is instead a difficult challenge for several social, financial, legal and regulatory reasons.

The EU initiatives also set out goals and targets to be met by each Member State but the initiatives do not provide practical suggestions for what solutions should be implemented to deliver on these targets and objectives. Discussions with citizens and national stakeholders pointed to many good and justifiable reasons why citizens will not and cannot undertake home renovation or integrate renewable energy systems to improve the energy efficiency of their buildings.

The following table proposes 13 priority actions suggested by citizens and national stakeholders only partially addressed by the EU which would aid with the practical implementation of the European Green Deal. Some of these actions have already been

proven to work in many Member States, e.g. one-stop-shops or media campaigns on 'reduce your energy use', but need to be standardised at the EU level and implemented on a larger scale. Others are new proposals never implemented by Members States, such as an EU energy expert label to build trust in professionals offering energy efficiency solutions, introducing energy efficiency of buildings into the curriculum for primary and secondary schools across Europe or campaigns to educate and encourage behavioural change of citizens.

Priority	Area of intervention needed	Current status	Relevant barriers	Actions to be taken by the EU
Enabling citizens to install renewable energy solutions	Legislation; Funding	Partially addressed by REPowerEU, Renovation Wave and Fit for 55	Lack of long-term commitments to renewable energy schemes; long bureaucratic process to obtain subsidies	EU legislation should ensure long-term commitment from governments to renewable energy schemes. Additional funding should be provided to local agencies responsible for subsidy permits to increase their resources and accelerate the application process
Development of Renewable Energy Communities (REC) and Local Energy Systems (LES)	Legislation	Partially addressed by EU Energy Community initiatives	There are still too many political and regulatory barriers to the development of Renewable Energy Communities (REC) and Local Energy Systems (LES) in many Member States	Top-down policies and innovative initiatives are required, e.g. the concept of sandboxes and innovative playgrounds. Distributed System and Network Operators (DSOs/DNOs) should be involved to accelerate the implementation of RECs and LESs
Support to deep renovation solutions for all buildings	Legislation	Partially addressed by the energy efficiency directive (EED) for vulnerable customers or those in energy poverty and by the energy performance of buildings directive (EPBD) in the Member States that need to develop long	Renovation is complex and hard to understand; it is difficult to find information about energy efficiency and available funding	A standardised framework or an EU Directive for one-stop-shop services should be developed for all types of building renovation and implemented across all Member States

		term renovation strategies		
Use of public buildings as an opportunity to raise awareness, upskill and educate professionals, create apprenticeships and increase the trust in the outcome of an energy efficient building	Funding; Raising awareness & education; Legislation	Partially addressed by the Renovation Wave and the EPBD	The public sector is conservative and slow to respond; There is a lack of technical knowledge within public administration; there is a lack of understanding amongst citizens relating to the benefits of energy efficient buildings from energy reduction to improved health and well-being; there is a lack of skills and labour	Funding should be available for 100% public building renovation, including upskilling and training programmes for tradespeople and energy and construction professionals. EU should implement awareness campaigns on the positive outcomes of energy efficiency measures. This would address multiple barriers raised by citizens and national stakeholders in a single action that could be driven by the EU. It would also increase the renovation rate across the public building sector
Overcoming the problems related to split incentive and co-ownership	Funding	Partially addressed by the Renovation Wave	Where there is a tenant and a landlord, the landlord pays for the renovation but the tenant benefits from it; where there is co-ownership, all the owners must agree on the building renovation measures	EU should create a publicly funded, not-for-profit ESCO model to renovate buildings where there is a split incentive or co-ownership. These ESCOs would be funded from public money initially, however a proportion of the savings would be paid back to the ESCO until the cost of the renovation is recovered. This money would then be distributed to renovate other buildings. It would take several years to

				recover the cost of renovation of the buildings, hence up-front capital would be required. These measures would also help create jobs across Europe
Improving energy efficiency in buildings	Funding	Partially addressed by the Renovation Wave and Financing Energy Efficiency in Buildings	Renovation is not affordable	Creation of standard and more wide-spread mechanisms for pre-finance or voucher schemes for energy efficiency subsidies across all EU Member States along with funding for free-energy audits to identify where improvements can be made in the short and long term
Building trust in experts offering energy efficiency solutions	Legislation	Partially addressed by the Renovation Wave	Lack of trust in experts offering energy efficiency solutions	EU should create a recognised EU label for energy efficiency renovation experts. Experts would be requested to take educational and upskilling programmes, apprenticeships, and University degree courses
Training skilled professionals in the area of energy efficient buildings	Education; Funding	Partially addressed by the Renovation Wave	Labour and skills shortages	EU should provide funding to universities to update their curriculums and include more topics on energy efficiency of buildings
Creating the next generation of energy efficient citizens	Raising awareness & education	Partially addressed by the EU	Lack of knowledge relating to how to improve energy efficiency in buildings	Education on how to improve energy efficiency in buildings should be part of the primary and secondary school curricula across Europe. Similarly, the importance of recycling was promoted in schools and recycling practices are now commonplace in all homes and buildings
Enabling citizens to carry	Raising awareness &	Partially addressed by	Renovation is complex and	EU should implement media campaigns to

out energy efficiency measures themselves	education	the EU	hard to understand	educate citizens and promote simple behavioural changes. Cf. e.g.: – Irish government add to 'reduce your use': https://www.youtube.com/watch?v=O8CC16j-InA – ESB networks pilot in Ireland: https://www.youtube.com/watch?v=0UJbkslADjs
Raising awareness regarding the circular economy and life cycle assessment	Raising awareness & education	Partially addressed by the Renovation Wave	Awareness of circular economy is present only in a small number of Member States	Renovation projects should also include an impact assessment of renovation on the environment, e.g. establishing whether is it better to renovate from a D to an A standard or a D to a C by comparing operational carbon savings versus embodied carbon savings

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This report summarizes the key findings of a project commissioned by DG RTD to develop national and EU roadmaps for achieving the European Green Goals in sustainable food systems, smart and sustainable mobility, and energy-efficient buildings. These roadmaps were created by thematic experts and were informed by consultations and deliberations with European citizens and stakeholders in 2021-2022.

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