

Citizen-led recommendations for the Horizon Europe Missions on sustainability



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Executive summary

The Horizon Europe Missions were created in 2021 as a specific instrument to address main societal challenges with tangible results by 2030, in a format committed to engaging citizens in their activities and processes. After over 3 years of implementation, this is the starting point for this report: given the prioritisation of citizens and societal needs and challenges within the Missions, the SSH CENTRE project consortium argues that a more sustained consideration of citizen perspectives is needed. As such, this report addresses this gap, by showcasing the views of 160 citizens from 25 different nationalities, gathered through 42 focus groups.

For each of the four sustainability-related Horizon Europe Missions ('100 Climate-neutral and smart cities by 2030'; 'Adaptation to climate change'; 'Restore our ocean and waters'; and 'A soil deal for Europe'), we provide topic-specific recommendations that directly build on the citizens' dialogue during the focus groups. These focus groups were led by Debating Europe (as affiliated entity of the SSH CENTRE consortium partner, Friends of Europe) and directly engaged citizens from EU countries, as well as Horizon Europe Associated Countries, on each of these four missions. The focus groups sought participant input on, for example: the EU's work regarding the specific Mission they were discussing; what they would like their local government to take action on; and how they thought citizens should be engaged in the work of the Missions. In addition to providing recommendations on each of the four sustainability-related missions, this report also provides some crosscutting recommendations to EU Missions more generally in terms of how citizen engagement (e.g. methods, considerations) may be strengthened.

Following the focus groups, Debating Europe organised four online policy panels (one per mission), which have also fed into the recommendations. These panels involved senior policy leaders reflecting on the emerging findings and recommendations from the focus groups. The panels also represented an opportunity to begin dialogue with key policy players and gatekeepers on the issues presented in this report.

Below, we share the resulting five sets of recommendations, which we expand on in the core text of the report itself.

Recommendations for gathering citizen perspectives in the context of the Horizon Europe Missions (Section 2):

- Leverage small, diverse, and well-moderated groups.
- Simplify and contextualise EU policy language.
- Adapt moderation practices for better engagement.
- Sustain engagement beyond the focus groups.

Recommendations for the '100 climate-neutral and smart cities by 2030' Horizon Europe Mission (Section 3):

- Foster local solutions and empower citizen participation.
- Enhance EU communication to boost awareness and engagement.
- Invest in green technologies and promote sustainable practices.
- Incentivise community energy production models.





• Ensure that climate solutions are 'just' in order to maximise socio-environmental co-benefits

Recommendations for the 'Adaptation to climate change' Horizon Europe Mission (Section 4):

- Foster local solutions and enhance citizen engagement.
- Address social and economic disparities to ensure equitable adaptation policies.
- Hold polluters accountable through legislative actions and incentives.
- Build more resilient infrastructures to withstand climate impacts.
- Improve waste management systems to promote sustainability.
- Make public funding more accessible and fairly distributed.

Recommendations for the 'Restore our ocean and waters' Horizon Europe Mission (Section 5):

- Foster citizen participation through transparent communication and engagement.
- Promote sustainable practices in coastal areas through regulation and protection.
- Regulate fish production and promote sustainable aquaculture practices.
- Hold companies accountable for environmental harm through stricter regulations.
- Phase-out plastic production and consumption.

Recommendations for the 'A soil deal for Europe' Horizon Europe Mission (Section 6):

- Enhance citizen participation in soil health initiatives.
- Encourage sustainable agricultural practices.
- Promote better conservation practices in infrastructure development.





1. Introduction

1.1. Background on Horizon Europe Missions

Mission-orientation has been adopted into the EU's research and innovation policy, as a means of stimulating and inspiring creativity, in particular through mobilising resources to tackle grand societal challenges. Primarily arising through the 2018 work of economist Mariana Mazzucato, this orientation was rapidly adopted into strategic agenda for the EU's Ninth Framework programme (Horizon Europe, 2021-2027). A mission-oriented approach to research and innovation is advocated as differing from the traditionally linear and market-skewed innovation approach. Specifically, a mission-oriented approach is argued as: recognising societal (as opposed to e.g. market) needs; setting the direction of innovation and investments; and coalescing around the willing actors whose participation is needed to achieve the changes that society needs and wants. Through consultative processes, the strategy for a mission-oriented approach¹ and governance plan for its implementation² have led to the selection of five Horizon Europe Missions – many of which directly align with the priorities of the European Green Deal too.

The five grand societal challenges that were identified as the Horizon Europe Missions, with targeted actions to achieve by 2030, were: (1) Adaptation to climate change; (2) Cancer; (3) Restore our ocean and waters; (4) 100 Climate-neutral and smart cities; and (5) A soil deal for europe. Four of these refer to sustainability challenges and one to health. Note that the scope of this report – given the focus of the SSH CENTRE on climate, energy and mobility – is restricted to the four sustainability-related Missions, and hence we do not address the Cancer Mission herein.

According to Mazzucato, "missions must be bold, activating innovation across sectors, across actors and across disciplines. They must also enable bottom-up solutions and experimentation". They are intended to result from a "participatory selection process" that will "trigger the imagination and ambition of participants in that process". A core aspect of the Missions' approach is to therefore open up the innovation process for widespread societal participation, beyond traditional, primarily private sector market interests and relatively hidden state support schemes. Citizen engagement is thus one of the three core dimensions for governing the Horizon Europe missions, intended to harness "social movements and citizen participation in a creative, open and empowering process of challenge-led innovation".

In a time of increasing political polarisation, polycrises, and anti-EU sentiments, the Missions offer an opportunity to bridge the perceived disconnection between citizens and policymakers. Citizen engagement enhances the democratic legitimacy

² Mazzucato, M., 2019. Governing Missions: Governing Missions in the European Union. Independent Expert Report. Directorate-General for Research and Innovation. Publications Office of the European Union, Luxembourg, p.3. https://www.doi.org/10.2777/618697



¹ Mazzucato, M., 2018. Missions: Mission-Oriented Research & Innovation in the European Union A problem-solving approach to fuel innovation-led growth. Directorate-General for Research and Innovation. Publications Office of the European Union, Luxembourg, p.2. https://www.doi.org/10.2777/360325



of policies, fosters trust in institutions, and strengthens the social fabric necessary for collective action. However, citizen participation in EU processes remains limited, often constrained to an EU-centric sphere of stakeholders³. While citizens may align with the overarching goals of the Missions, the tangible connection between EU policymakers and citizens remains an area for improvement.

By foregrounding citizen engagement, the Missions hold the potential to not only improve the quality of life and well-being across Europe but also empower individuals to shape policies that directly affect their futures. This sentiment was echoed during the 2024 SSH CENTRE Brussels event, 'EU Missions: catalysing multi-level governance across Europe'⁴, where senior policymakers underscored the importance of fostering trust and co-creation in mission governance.

Building on these foundations, we argue for strengthening and expanding the European Commission's efforts in engaging citizens. While substantial progress has been made⁵, more sustained and inclusive dialogue is needed to ensure the Missions achieve their transformative potential.

1.2. Report purpose, underlying data collection, and structure

The purpose of this report is to provide recommendations to policymakers and practitioners involved in implementing the four sustainability-related Horizon Europe Missions. We also provide an additional crosscutting set of recommendations focused on methodologies for gathering citizen perspectives. Together, our five sets of recommendations demonstrate how citizens understand the work of the EU in relation to the Missions, in addition to laying out citizen priorities in terms of future work and initiatives. We assert that these recommendations represent an opportunity for policymakers and practitioners to reflect on how the voices of citizens may be included in their Mission-related work.

The core of these five sets of recommendations were produced through Debating Europe's 42 focus groups: 7 on Adaptation to climate change mission; 13 on a soil deal for Europe mission; 15 on restore our ocean and waters by 2030 mission; and 7 on 100 climate-neutral and smart cities by 2030 mission. Each focus group lasted between 20 and 60 minutes, with most (28) being over 45 minutes, and the shorter ones being those with less participants (e.g. some focus groups only had one participant⁶; the maximum number of participants per focus group was capped at 10). In total, 160 people, representing 25 nationalities, took part during the period of September 2023 to April 2024. Further demographic information of the participants is provided in Appendix 1, but we note that more women took part than men, and that young people (aged 18-30) represented the majority of participants (nearly 70%). The nationalities most represented

Whilst we appreciate that a focus group with one participant is, in fact, an interview, we are using the term 'focus group' throughout this report for ease of reading and to reflect the overall methodology that Debating Europe have been deploying in SSH CENTRE and other projects.



³ For example, the EU-funded project COHESIFY studied the EU communications and perceptions of citizens on the impacts of EU Cohesion Policy: https://cordis.europa.eu/project/id/693427

⁴ A full event summary is freely available, courtesy of Friends of Europe who organised and hosted the event: https://www.friendsofeurope.org/wp/wp-content/uploads/2024/02/Friends-of-Europe_EU-on-a-mission-rethinking-governance-and-policymaking_report-2024.pdf

⁵ Examples of European Commission-led and -funded activities are available here: https://research-and-in-novation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-citizen-engagement-activities_en



were Italian (19.4%), Spanish (9.4%), German (8.8%), Portuguese (8.1%) French (7.5%) and Greek (7.5%).

Participants were recruited using Debating Europe's social media (LinkedIn, Instagram, and X/Twitter; Facebook was avoided due to previous negative experiences with recruitment on Facebook). There were three recruitment criteria: participants had to be from an EU or Associated country; they had to be 18+; and they had to be able to take part in a conversation in English (as all the focus groups were conducted in English). Participants were offered a €20 voucher to thank them for their participation. When coming forward to take part, participants had to select their preferred topic, and they were invited to indicate when they were available. Debating Europe then created groupings based on participants' availability, their age, gender and nationality, trying to strike a balance between all these aspects for each focus group.

Debating Europe has a track record of implementing a particular focus group method, which was used for these 42 groups. Their method consists of recruiting participants to discuss a given topic, using a set of pre-determined questions. The questions were collaboratively developed between SSH CENTRE consortium partners and included Mission-specific questions (i.e. used in only one of the four streams of focus groups), as well as more general questions (i.e. asked across all focus groups). Each focus group started with questions on the topic of the specific Mission being discussed, to elicit participants' views on the topic. However, a conscious decision was made to avoid using the language of 'Missions', to avoid technical jargon that might have discouraged people from participating. Participants were then broadly asked about their thoughts on the EU's work in that area, and about how they would like to see citizens engaged. At the end, participants were given the opportunity to talk about anything related to the topic of the Missions that may not have been covered up until that point. Following each focus group, the moderator immediately wrote a report capturing the participants' headline observations and their takeaway messages for each question, which wider SSH CENTRE partners then reflected upon as part of our analytical process. These reflections also directly assisted in drawing out key themes that would be used for lines of questioning in the live policy panels (see below). All of the focus group materials (e.g. moderator guides, sign-up forms, sampling approach to ensure diversity, reports) have been uploaded to Zenodo, so that they are freely available to all⁷.

For each Mission, Debating Europe organised recorded policy panels (details in Appendix 2), which consisted of inviting expert panel speakers (e.g. from the European Commission; from municipalities) into dialogue with one to two citizens who had attended a focus group. Dialogue centred around specific questions, prepared iteratively in collaboration between SSH CENTRE partners and based on reports prepared by Debating Europe about each focus group. The questions were circulated to the panel participants in advance. These policy panels were online events with no audience, but were recorded and later posted on the Debating Europe website and YouTube channel⁸.

We prepared these recommendations by drawing first and foremost on the focus groups, although the policy panels have supplemented and assisted in the evolution of the key messages we drew out from the focus groups.

⁸ Climate-neutral and Smart Cities panel video recording: 'Easy move: smoother journeys, better cities, happier citizens'; Adaptation to climate change: 'EU's road to fair climate adaptation: citizen voices and local impact'; A soil deal for Europe: 'Healthy soils, sustainable future: a citizen focused dialogue'; and Restore our ocean and waters: 'Voices for healthy oceans and waters: a citizen-focused dialogue'.



⁷ Focus group materials are freely available on Zenodo for each of the four focus group series: Climate-neutral and smart cities; Adaptation to climate change; A soil deal for europe; and Restore our ocean and waters.



2. Recommendations for gathering citizen perspectives in the context of the Horizon Europe Missions



The following recommendations build upon lessons the Debating Europe team learnt from implementing the online focus group methodology, and from informal feedback gathered from participants at the end of some of the focus groups. These suggestions aim to improve how the Horizon Europe Missions engage with citizens, and to support the bottom-up, participatory aspect on which the mission-oriented approach depends. Based on a focus group methodology to facilitate citizen engagement in EU debates, the recommendations respond to the need to improve participation rates in specific policy discussions to enhance the quality of insights gathered, and align discussions more closely with the objectives of the Horizon Europe Missions.

Recommendation #2.1: Leverage small, diverse, and well-moderated groups.

The use of small online focus groups with a maximum of 10 participants per online group discussion proved highly effective in creating an environment conducive to open dialogue. Ensuring diversity in terms of nationality, gender, and perspectives enriched the discussions by reflecting the diversity of European society. To maintain neutrality, moderators should refrain from sharing personal opinions and instead use pre-approved guiding questions to steer the conversation. Small, moderated focus groups foster an egalitarian atmosphere, where all participants are afforded equal speaking opportunities, minimising dominant voices and ensuring a range of insights.

Future initiatives should continue to prioritise these principles, as they are instrumental in gathering nuanced, citizen-centred input while maintaining high levels of trust in the process.

Recommendation #2.2: Simplify and contextualise EU policy language.

A critical factor in the success of our approach was the deliberate choice not to reference the Horizon Europe Missions explicitly during recruitment or discussions. This decision was driven by the recognition that technical jargon and institutional frameworks could intimidate participants or create barriers to engagement. By using accessible, citizen-focused language and framing questions around real-world challenges rather than institutional objectives, we were able to meet our recruitment targets, securing 40 participants for each Horizon Europe Mission topic investigated.

However, this strategy had a trade-off: the discussions did not directly address the specific goals and priorities of the Horizon Europe Missions. To bridge this gap, future citizen engagement should adopt a layered communication approach:

• *Phase 1: Preparing the participants* – Before the focus groups, provide participants with simple, accessible information sheets that outline key societal challenges





and topics to be discussed. These documents should be concise, visually engaging, and written in plain language to ensure they are easy to understand and approachable. The goal is to help participants feel informed and confident about the discussions without creating the impression of a homework assignment or imposing a burden that might discourage participation. Moderators should not assume that the material has been read in advance, and should be prepared to briefly summarise the content of any material shared in advance during the focus groups.

- *Phase 2: Framing the problem* Introduce discussions with broad, relatable societal challenges that resonate with participants' lived experiences (e.g. climate change resilience, sustainable cities, water pollution). At the start of the discussion, invite participants to reflect on the key points from the information sheets they received beforehand, encouraging them to share their initial thoughts or questions. This approach helps to ground the conversation in their prior understanding while fostering a sense of preparedness and confidence.
- *Phase 3: Bridging to the policy* Gradually introduce Horizon Europe Mission objectives during later stages of engagement (e.g. through emails or social media posts), using plain language and relatable examples to connect citizens' insights to the overarching framework of the Missions.

This approach balances inclusivity with alignment to institutional goals, ensuring discussions remain relevant to EU policy priorities without alienating participants.

Recommendation #2.3: Adapt moderation practices for better engagement.

The neutrality of moderators was instrumental in creating a safe and inclusive space for dialogue. However, to ensure deeper alignment with Horizon Europe Missions' objectives, moderators should receive targeted training (e.g. short meeting with EU officials in charge of the Missions; partners of the project with technical/scientific knowledge etc.) on the mission-oriented approach, specific goals and challenges of the Missions. This would enable them to subtly guide discussions toward relevant themes without explicitly referencing technical details. For example, moderators could employ scenario-based or problem-solving exercises9 related to Mission priorities to smoothly elicit participant-driven ideas aligned with institutional goals.

While focus groups are effective, complementing them with alternative formats by integrating digital tools such as interactive polls during discussions could make complex policy topics more accessible and engaging for participants. However, even though the focus groups were conducted online¹⁰, not all participants may have access to a smartphone or device to connect with such additional digital tools. Despite offering benefits for engagement, incorporating extra features could increase the technological complexity and duration of the focus groups, which might pose a challenge for participants with lower technical abilities and be a disincentive for participants with time constraints.

¹⁰ We acknowledge that this can both widen participation and exclude certain groups. This should be considered in future engagement exercises. For instance, online focus groups may be supplemented with smaller in-person events to mitigate for the digital divide that exists in Europe.



⁹ For a catalogue of many different engagement activities, please see http://actioncatalogue.eu/search



Recommendation #2.4: Sustain engagement beyond the focus groups.

To sustain interest and build long-term trust beyond the focus groups, it is vital to close the loop with participants by sharing how their contributions are integrated into policy discussions. This can be done at several stages of the process. In this case, Debating Europe stated that participants' insights would be shared with key stakeholders through online panels and in a report both in the participant recruitment form and at the start of each focus group. More generally, after the focus groups, participants should receive a concise, accessible summary of outcomes and, where possible, insights into how their input contributes to shaping the Horizon Europe Missions and what they can do next.

In our case, as a follow-up to the group discussions, we invited selected participants to join panel discussions with experts, structured around the insights gathered from the focus groups. These events provided a unique opportunity for focus group participants to explain their points of view, debate with experts, and challenge them in a constructive and interactive way. The recordings of these panels are made available on YouTube and the Debating Europe website, enabling participants and a broader audience to revisit these discussions. To foster ongoing engagement, Debating Europe always encourage participants to stay in touch with them via social media channels and to watch the panel discussions to continue reflecting on their contributions and the resulting debates. This practice ensures that participants remain connected to the process, reinforcing their sense of involvement and the visibility of their input.





3. Recommendations for the '100 climate-neutral and smart cities by 2030' Horizon Europe Mission





What is the Cities Mission?



General objective(s)

"To deliver at least 100 European climate-neutral and smart cities by 2030" and "To ensure that these cities also act as experimentation and innovation hubs for others to follow, to enable all European cities to become climate-neutral by 2050".

Specific objectives (to achieve overall general objectives)

- 1. "To develop and support a "demand driven" and city-focused process, based on research and innovation, and focused on the preparation of Climate City Contracts (CCC) including investment plans for deployment of innovative and smart solutions for climate neutrality."
- 2. "To support tailored Research & Innovation pilots and demonstrators within the Mission Platform that will be funded by Horizon Europe and to scale-up and replicate solutions developed in past R&I programmes."
- 3. "To develop synergies and complementarities and facilitate mutual support with existing Commission initiatives, including those policies focused on delivering co-benefits of climate neutrality, while reducing administrative costs for cities related to the need to work with many different EU initiatives on similar issues."
- 4. "To give access to city administrations and their local businesses to EU-wide skills and expertise and help cities connect in international networks (e.g. Global Covenant of Mayors, URBACT) in order to accelerate learning, replicability and scaling-up of solutions through sharing of good practices and joint actions and ultimately serve as an inspiration for cities across the world."
- 5. "To help cities develop, where necessary, the administrative, financial and policy capacity through innovative governance to overcome a silo approach and to ensure buy-in and commitment from citizens, local public and private stakeholders (i.e. industry, businesses) as well as regional and national authorities."
- 6. "To put in place a strong and transparent system of measuring and monitoring the progress towards climate neutrality for cities building on existing practice and methodologies."
- 7. "To increase the level of assistance from national, regional and local authorities as well as from NPBs, municipal banks and private sector investment, through regulatory, funding and financing levers to help cities implement the mission. Where cities selected by the Mission are also part of the entities that engage in the Climate Adaptation Mission (Objective 2), synergies will be sought between cities and these entities to ensure that climate neutrality activities also take into account climate adaptation requirements and vice versa."

Source: European Commission's '100 Climate-Neutral and Smart Cities by 2030' Implementation Plan¹¹ (2021, p.13 and p.15)

 $[\]frac{\text{https://research-and-innovation.ec.europa.eu/document/download/d2eb2069-3b4a-4015-9801-7daab749d31b_en?filename=cities_mission_implementation_plan.pdf}$





Recommendation #3.1: Foster local solutions and empower citizen participation.

This Mission emphasises that cities should act as hubs for innovation, and one way to ensure this is by incorporating local solutions driven by local communities. The focus group participants believed that by implementing participatory platforms – such as neighbourhood councils or public consultations – citizens can directly influence the development and implementation of climate-neutral strategies. The discussion considered how engaging citizens with clear, non-technical language can improve inclusivity and accessibility, which is crucial for broad public support and successful transition to smart, sustainable cities. During the panel event, speakers emphasised the importance of tailoring local solutions to specific contexts, rather than applying uniform policies across Europe.

Recommendation #3.2: Enhance EU communication to boost awareness and engagement.

Effective communication is a cornerstone of this Mission. Promoting the Mission in clear, engaging ways is essential for encouraging public interest and participation in the climate-neutral transformation. Focus group participants suggested that educational campaigns explaining this Mission's benefits and the specific actions citizens can take, could foster a greater sense of ownership and involvement. They also expressed that transparency in communication, alongside clear explanations of policies, increases trust in both the EU and local governments, which is essential for collective action on the climate goals. Overall, participants expressed that decisions about what a city looks like should involve the very people who live in the city, and that people should be supported (e.g., financially) so that they can meaningfully participate in decision-making.

Recommendation #3.3: Invest in green technologies and promote sustainable practices.

This Mission encourages the widespread adoption of green technologies to achieve climate neutrality. Focus group participants' suggestions included actions such as expanding electric vehicle charging stations, retrofitting energy-inefficient buildings, and reducing car traffic through sustainable transportation through sustainable transportation solutions, which all directly support this goal. This was reinforced during the panel discussion, where the panellists stated the need to prioritise investment in public transport. The transition to a carbon-neutral city requires both technological innovations and shifts in behaviours, such as encouraging the use of electric vehicles and implementing reliable, affordable public transport systems. Though these topics tend to be highly politicised, the participants reflected general agreement with the proposed solutions, believing that these efforts will help cities significantly reduce their carbon footprints.

Recommendation #3.4: Incentivise community energy production models.

Community energy production models, like community solar energy initiatives, align with this Mission's goal of decarbonising cities through citizen involvement. However, focus group participants reflected that they often feel left out of energy systems. Financial incentives can empower individuals and communities to adopt these technologies, reducing their dependence on traditional energy sources and contributing to broader climate neutrality objectives. This recommendation is directly linked to creating smart, energy-efficient cities, where citizens are





active participants in both energy generation and consumption, enhancing urban sustainability.

Recommendation #3.5: Ensure that climate solutions are 'just' in order to maximise socio-environmental co-benefits.

This Mission acknowledges the need for inclusive and socially just climate solutions. Integrating social and climate goals ensures that the transition to a sustainable future does not leave behind vulnerable communities. For example, focus group participants appreciated that creating green spaces, such as communal areas or green roofs, can serve social needs in addition to environmental goals, improving the well-being of residents. This approach contributes to social cohesion while addressing both climate and social challenges, reinforcing the idea that environmental sustainability is inherently linked to equity.





4. Recommendations for the 'Adaptation to climate change' Horizon Europe Mission





What is the Adaptation to Climate Change Mission?



General objective(s)

"The overall objective of the Mission is to support at least 150 European regions and communities in becoming climate resilient by 2030."

Specific objectives (to achieve overall general objectives)

- 1. "Preparing and planning for climate resilience provide general support to European regions and communities to better understand, prepare for and manage climate risks and opportunities"
- 2. "Accelerating transformations to climate resilience work with at least 150 regions and communities to accelerate their transformation to a climate resilient future, supporting them in the co-creation of innovation pathways and the testing of solutions"
- 3. "Demonstrating systemic transformations to climate resilience deliver at least 75 large-scale demonstrations of systemic transformations to climate resilience across European regions and communities"

Source: European Commission's 'Adaptation to Climate Change' Implementation Plan¹² (2021, p.2)

Recommendation #4.1: Foster local solutions and enhance citizen engagement.

To achieve climate change resilience at the regional and community levels, active citizen participation is essential. Focus group participants stressed the importance of engaging all segments of the population through campaigns, educational programs, and interactive platforms such as focus groups and digital tools. These approaches help to ensure that citizens have a meaningful role in climate adaptation strategies, thereby increasing public ownership and support for the necessary policy changes. The panel further emphasised the importance of involving local communities in decision-making, co-design, and implementation of greening initiatives in their areas, arguing that those are place-making activities that have the potential to build communities, but also to divide if not conducted carefully. Additionally, fostering intergenerational engagement through citizens'

¹² https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/adaptation-climate-change/publications_en





assemblies¹³ allows for diverse perspectives, enhancing the comprehensiveness and legitimacy of adaptation measures. By providing avenues for citizens of all ages to contribute, this approach can build stronger, more resilient communities and ensure that adaptation strategies are inclusive and widely supported.

Recommendation #4.2: Address social and economic disparities to ensure equitable adaptation policies.

The effectiveness of climate adaptation policies hinges on their inclusivity, particularly in addressing social and economic disparities. Focus group participants emphasised the need for policies that do not disproportionately burden vulnerable regions and populations, especially those less prepared for climate adaptation. Ensuring that adaptation measures offer realistic alternatives for all socio-economic groups is crucial for long-term sustainability and social cohesion. Multinational corporations and governments should prioritise the equitable distribution of the costs and benefits of climate adaptation, ensuring that no community is left behind in the transition to resilience. Tailoring policies to account for local contexts and challenges will enhance the fairness and success of this Mission's objectives. This was discussed during the panel, whereby the mapping activities to identify vulnerable areas and to support the identification of sites for intervention were advocated.

Recommendation #4.3: Hold polluters accountable through legislative actions and incentives.

Although this Mission is focused on adaptation, in practice in the focus groups, citizens did not separate adaptation and mitigation, but rather considered them together. This is unsurprising for two reasons. First, mitigation and adaptation, amongst other key terms, are part of a technical jargon used by climate scientists and policymakers and are not always easy to understand¹⁴. Second, the implementation plan itself of this Mission blurs the boundaries between adaptation and mitigation, notably with the use of the term 'resilience'. As a result, the recommendations for this Mission tackle both mitigation and adaptation aspects, with the present recommendation being an example of a mitigation intervention.

To drive effective climate resilience, focus group participants called for stronger accountability measures for polluters. The participants often advocated for "polluter pays" policies as a fair approach to ensure that those who contribute to climate degradation bear the financial responsibility for mitigating its impacts. This approach could involve both monetary and non-monetary incentives, such as regulatory actions or penalties for high-emission industries. By holding polluters accountable, the EU can both reduce emissions and generate funds that can be reinvested in adaptation measures, supporting this Mission's overall objective of fostering climate resilience in regions most at risk.

Recommendation #4.4: Build more resilient infrastructures to withstand climate impacts.

Participants were particularly concerned about the increasing frequency of climate-related events, such as floods, storms, and heatwaves, and several shared

¹⁴ Bruine de Bruin, W., Rabinovich, L., Weber, K. et al. 2021. Public understanding of climate change terminology. Climatic Change 167, 37. https://doi.org/10.1007/s10584-021-03183-0



¹³ More information on citizen assemblies is available here: https://www.knoca.eu/



direct lived experiences of those disasters. They identified that infrastructure able to withstand such challenges is required. Focus group participants recommended investing in resilient infrastructures that not only protect against immediate hazards but also support long-term adaptation efforts. Upgrading infrastructure to meet these challenges is crucial for ensuring the safety and stability of communities as they adapt to the evolving climate. By focusing on resilient infrastructure, this Mission can help mitigate the impacts of climate change on vulnerable regions and create communities better equipped to handle future challenges.

Recommendation #4.4: Improve waste management systems to promote sustainability.

Effective waste management is essential for reducing environmental impact and contributing to the broader goal of climate adaptation. Focus group participants expressed a need for improved recycling practices, not only at the individual level but also within the private sector. Additionally, moving toward a zero-waste approach would reduce the pressure on natural resources and promote sustainability in the long term. Despite showing willingness to adopt more sustainable individual behaviours, participants observed that supportive waste management systems are nevertheless not equally available to all citizens. Improved waste management can also enhance the resilience of communities by reducing the environmental footprint of waste and promoting circular economies. These measures are key for regions looking to adapt to climate change while minimising their contribution to further environmental degradation.

Recommendation #4.5: Make public funding more accessible and fairly distributed.

Focus group participants called for greater accessibility and more equitable distribution of public funding, particularly EU funds aimed at climate adaptation. Ensuring that funding reaches not only large corporations but also small entities, innovative start-ups, and individuals with creative solutions can enhance the diversity of adaptation strategies and ensure that all regions, especially those most vulnerable, benefit from EU resources. To support this, the panellists commented on the need for greater transparency in activities undertaken, with this extending to how funding is being used. A fairer distribution of funds across European regions will help to level the playing field, enabling both high-risk and underfunded areas to implement effective climate adaptation measures. This is crucial for meeting this Mission's target of building resilience in diverse regional contexts by 2030.





5. Recommendations for the 'Restore our ocean and waters' Horizon Europe Mission





What is the Ocean and Waters Mission?



General objective(s)

"This Mission's strategic objective therefore is to restore the health of our ocean and waters by 2030."

Specific objectives (to achieve overall general objectives)

- 1. "Protect and restore marine and freshwater ecosystems and biodiversity"
- 2. "Prevent and eliminate pollution of our ocean, seas and waters"
- 3. "Make the sustainable blue economy carbon-neutral and circular"

Source: European Commission's 'Restore our Ocean and Waterson by 2030' Implementation Plan¹⁵ (2021, p.5)



Recommendation #5.1: Foster citizen participation through transparent communication and engagement.

Focus group participants expressed the need for clearer and more frequent communication from local authorities about climate-related initiatives, particularly those targeting ocean and water preservation. By ensuring regular updates on ongoing efforts, this Mission could enhance trust and motivate active participation from communities. The idea of community engagement to support systemic environmental change was also raised during the panel event. Focus group participants also suggested alternative reward systems to incentivise involvement, offering tangible benefits to those who contribute to ocean conservation efforts. The rationale for this recommendation stems from the recognition that informed and engaged citizens are essential to the success of environmental missions, as they can foster widespread behavioural change and support policies aimed at sustainability.

Recommendation #5.2: Promote sustainable practices in coastal areas through regulation and protection.

The focus group participants advocated for a unified approach to managing coastal areas, emphasising the need for clear regulations to address the negative

^{15 &}lt;a href="https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters_en">horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters_en





effects of mass tourism and urban development. Examples raised by the participants particularly referred to Mediterranean coastal areas, showing a high awareness of this region and relative lack of awareness of the sustainability issues facing the Baltic and Atlantic coasts. By limiting construction near coastlines and prioritising environmental protection, this Mission could safeguard biodiversity and reduce habitat destruction. This recommendation aligns with this Mission's goal of restoring the health of marine and freshwater ecosystems, as sustainable management of coastal zones is crucial in mitigating human impact and preserving the resilience of aquatic environments.

Recommendation #5.3: Regulate fish production and promote sustainable aquaculture practices.

Focus group participants underscored the importance of regulating fish farming practices, particularly intensive farming methods, as well as halting harmful practices like bottom trawling and deep-sea mining. These participants also recommended the reduction of fish production to lessen environmental damage. This recommendation directly supports this Mission's goal to protect ocean biodiversity by addressing overfishing, unsustainable aquaculture, and destructive fishing practices. By integrating stricter regulations and promoting sustainable alternatives, the EU can help protect marine life and ensure healthier oceans for future generations.

Recommendation #5.4: Hold companies accountable for environmental harm through stricter regulations.

Amongst the focus group participants there was strong support for holding companies accountable, particularly regarding waste disposal and harmful industrial practices that impact all watercourses. Focus group participants called for legal consequences for businesses that pollute or degrade water resources. This recommendation echoes this Mission's objective to enhance corporate responsibility in the fight to protect oceans and waters. A similar point was raised during the panel event in the context of establishing an "ocean pact" for coherent governance. By enforcing stronger regulations and creating incentives for sustainable corporate practices, the EU can drive significant reductions in pollution and foster a culture of environmental stewardship within the private sector.

Recommendation #5.5: Phase-out plastic production and consumption.

The phasing out of plastic, particularly single-use plastics, was a central concern for focus group participants. They suggested that stricter regulations are needed, beyond just banning items like plastic cups. Additionally, many focus group participants pointed to the role of tourism in increasing plastic waste, calling once more for targeted regulations to curb intensive tourism. This recommendation aligns closely with this Mission's focus on reducing marine pollution, as plastic waste is one of the most persistent threats to ocean health. By enacting comprehensive plastic reduction measures, the EU can significantly reduce plastic pollution and support the Mission's goals to restore aquatic ecosystems. During the panel event, the importance of tackling plastic pollution was discussed, and the "Mediterranean Cleanup" program introduced, whereby fishermen remove significant plastic waste from the sea, turning it into recycled products.





6. Recommendations for the 'A soil deal for Europe' Horizon Europe Mission





What is the Soils Mission?



General objective(s)

"100 living labs and lighthouses to lead the transition to healthy soils by 2030. Soil health has been defined as the continued capacity of soils to support ecosystem services."

Specific objectives (to achieve overall general objectives)

- 1. "Reduce land degradation relating to desertification"
- 2. "Conserve and increase soil organic carbon stocks"
- 3. "No net soil sealing and increase the reuse of urban soils"
- 4. "Reduce soil pollution and enhance restoration"
- 5. "Prevent erosion"
- 6. "Improve soil structure to enhance habitat quality for soil biota and crops"
- 7. "Reduce the EU global footprint on soils"
- 8. "Increase soil literacy in society across Member States"

Source: European Commission's 'A Soil Deal for Europe' Implementation Plan¹⁶ (2021, p.14-17)



Recommendation #6.1: Enhance citizen participation in soil health initiatives.

This Mission emphasises the importance of involving citizens in soil health and sustainability efforts. Yet, we observed a particularly low engagement with this topic: this was the most difficult to recruit participants for and to engage participants in conversation with. It is reflected in the lower number of recommendations we were able to draw out for this Mission compared to others. In line with this observation, focus group participants expressed the need for greater public engagement through awareness campaigns, educational programs, and hands-on initiatives like soil testing kits and community gardens. These actions directly support this Mission's goal of increasing awareness and participation in soil preservation, as well as fostering a sense of ownership in soil-related issues. The necessity of involving local communities in soil health initiatives was also discussed during the panel event, with the co-benefits of citizen participation, such as resilience, improved

^{16 &}lt;a href="https://research-and-innovation.ec.europa.eu/document/download/1517488e-767a-4f47-94a0-bd22197d18fa_en?file-name=soil_mission_implementation_plan_final.pdf">https://research-and-innovation.ec.europa.eu/document/download/1517488e-767a-4f47-94a0-bd22197d18fa_en?file-name=soil_mission_implementation_plan_final.pdf





biodiversity, and improved community well-being outlined. Creating participatory platforms and spaces for public input further aligns with the EU's commitment to engaging citizens in environmental policymaking. Empowering citizens through workshops, campaigns, and educational resources will help create a more informed and active public that contributes to the long-term success of soil health strategies across Europe.

Recommendation #6.2: Encourage sustainable agricultural practices.

Focus group participants mostly associated the Soils Mission with agriculture, the negative environmental impacts of intensive farming, and positive impacts of sustainable farming practices on human health. Participants highlighted the importance of policies that regulate agriculture and promote organic farming, which aligns with this Mission's objective of reducing harmful chemical inputs, such as pesticides and fertilisers. The focus group participants recommended the enhancement of funding and tax breaks for farmers adopting soil-friendly practices, which would directly support the EU's goal of incentivising environmentally sustainable farming. Moreover, during the focus groups, discussions emphasised how knowledge-sharing programs and grants for sustainable techniques can help farmers transition more smoothly to soil-conscious practices, ensuring that soil health remains a priority in agricultural policy. This recommendation is crucial for advancing this Mission's aim of supporting regenerative agriculture across Europe.

Recommendation #6.3: Promote better conservation practices in infrastructure development.

Though many of the focus group participants lacked knowledge specifically about soil issues, they were able to relate to cross-cutting issues of urban development, land use change, and landscape impacts of climate change such as drought and wildfires. The need to improve understanding and acknowledgement of soil health and monitoring was raised during the panel event. Focus group participants recommended conducting thorough assessments when building new infrastructure projects, ensuring that these do not negatively impact soil health. This recommendation aligns with the EU's objectives of integrating soil sustainability into urban planning and construction practices, thus reducing soil degradation linked to urban sprawl. By incorporating soil conservation measures in infrastructure assessments, governments can ensure that economic growth does not come at the expense of environmental health. This approach supports the Soil Mission's broader aim of fostering a sustainable and resilient soil ecosystem across Europe.





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We would like to extend our sincere gratitude to all focus group participants whose insights and contributions have been invaluable to the success of this project. Their perspectives and thoughtful engagement have played a crucial role in shaping our work. Similarly, we are also grateful to policy panellists for their reflections on the emerging focus group findings.

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8. Appendices

8.1. Appendix 1. Breakdown of focus group participant characteristics by Horizon Europe Mission

		Climate Adaptation	Ocean and Waters	Healthy Soils	Climate-neutral & Smart Cities	Total
_	Total participants	38	41	40	41	160
GENDER	Man Woman Non-binary Prefer not to say	10 (26.3%) 27 (71.1%) 0 (0%) 1 (2.6%)	15 (36.6%) 26 (63.4%) 0 (0%) 0 (0%)	18 (45.0%) 22 (55.0%) 0 (0%) 0 (0%)	18 (43.9%) 22 (53.7%) 1 (2.4%) 0 (0%)	61 (38.1%) 97 (60.6%) 1 (0.6%)
AGE	18-30 31-40 41-50 51-65 66+ Prefer not to say	31 (81.6%) 7 (18.4%) 0 (0%) 0 (0%) 0 (0%) 0 (0%)	29 (70.7%) 11 (26.8%) 1 (2.4%) 0 (0%) 0 (0%) 0 (0%)	23 (57.5%) 14 (35.0%) 0 (0%) 1 (2.5%) 1 (2.5%)	28 (68.2%) 12 (29.3%) 0 (0%) 1 (2.4%) 0 (0%)	111 (69.4%) 44 (27.5%) 1 (0.6%) 2 (1.3%) 1 (0.6%)
NATIONALITY	Albanian Austrian Belgian Bosnian Herzegovinian British Bulgarian Czech Danish Dutch Estonian Finnish French German Greek Hungarian Icelandic Irish Italian Latvian Moldovan North Macedonian Polish Portuguese Romanian Serbian Slovakian Spanish	0 (0%) 0 (0%) 1 (2.6%) 0 (0%) 1 (2.6%) 0 (0%) 2 (5.3%) 1 (2.6%) 0 (0%) 2 (5.3%) 0 (0%) 1 (2.6%) 5 (13.2%) 3 (7.9%) 2 (5.3%) 0 (0%) 0 (0%) 8 (21.1%) 0 (0%) 1 (2.6%) 0 (0%) 2 (5.3%) 2 (5.3%) 2 (5.3%) 2 (5.3%) 2 (5.3%) 3 (7.9%)	1 (2.4%) 0 (0%) 2 (4.9%) 0 (0%) 1 (2.4%) 0 (0%) 0 (0%) 0 (0%) 0 (0%) 0 (0%) 0 (0%) 4 (9.8%) 5 (12.2%) 4 (9.8%) 1 (2.4%) 0 (0%) 2 (4.9%) 8 (19.5%) 0 (0%) 0 (0%) 1 (2.4%) 0 (0%) 5 (12.2%) 1 (2.4%) 0 (0%) 5 (12.2%) 1 (2.4%) 0 (0%) 5 (12.3%) 1 (2.4%) 0 (0%) 5 (12.3%) 1 (2.4%) 0 (0%) 5 (12.3%) 1 (2.4%) 0 (0%) 5 (12.3%) 1 (2.4%) 0 (0%) 5 (12.3%) 1 (2.4%) 0 (0%)	0 (0%) 2 (5.0%) 1 (2.5%) 0 (0%) 0 (0%) 1 (2.5%) 2 (5.0%) 0 (0%) 1 (2.5%) 2 (5.0%) 6 (15.0%) 1 (2.5%) 2 (5.0%) 1 (2.5%) 2 (5.0%) 1 (2.5%) 0 (0%) 8 (20.0%) 1 (2.5%) 0 (0%) 1 (2.5%) 0 (0%) 1 (2.5%) 0 (0%) 1 (2.5%) 1 (2.5%) 0 (0%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%) 1 (2.5%)	1 (2.4%) 1 (2.4%) 1 (2.4%) 1 (2.4%) 0 (0%) 1 (2.4%) 0 (0%) 1 (2.4%) 0 (0%) 1 (2.4%) 0 (0%) 1 (2.4%) 3 (7.3%) 3 (7.3%) 3 (7.3%) 2 (4.9%) 0 (0%) 7 (17.1%) 0 (0%) 0 (0%) 0 (0%) 2 (4.9%) 3 (7.3%) 2 (4.9%) 3 (7.3%) 5 (12.2%) 5 (12.2%)	2 (1.3%) 3 (1.9%) 5 (3.1%) 1 (0.6%) 1 (0.6%) 4 (2.5%) 1 (0.6%) 2 (1.3%) 3 (1.9%) 3 (1.9%) 12 (7.5%) 14 (8.8%) 12 (7.5%) 6 (3.8%) 1 (0.6%) 2 (1.3%) 31 (19.4%) 1 (0.6%) 1 (0.6%) 1 (0.6%) 5 (3.1%) 13 (8.1%) 6 (3.8%) 1 (0.6%) 6 (3.8%) 1 (0.6%) 6 (3.8%) 1 (0.6%) 6 (3.8%) 1 (0.6%)
	Spanish Turkish	3 (7.9%) 1 (2.6%)	3 (7.3%) 3 (7.3%)	4 (10.0%) 0 (0%)	5 (12.2%) 0 (0%)	15 (9.4%) 4 (2.5%)





8.2. Appendix 2. Overview of four online policy panels

100 climate-neutral and smart cities panel

On 12 September 2024, Debating Europe (Friends of Europe) hosted its first online panel discussion titled 'Easy move: smoother journeys, better cities, happier citizens – a citizens focused dialogue'. The discussion featured Valentin Lungenstrass (Vice Mayor in charge of Mobilities, Urban Logistics, Public Spaces, and Sustainable Tourism of the city of Lyon), Philipp Rode (Executive Director, LSE Cities), and Ivo, a citizen from Bulgaria who participated in one of our focus groups. The panel focused on the evolution of public transport and its role in creating smarter, cleaner, and more liveable cities.



https://www.youtube.com/watch?v=mtDd-3ZkM8Y



 $\underline{https://debatingeurope.eu/activity/easy-move-smoother-journeys-better-cities-happier-citizens/}$

Adaptation to climate change panel

On 24 October 2024, Debating Europe (Friends of Europe) hosted its second online panel discussion 'EU's road to fair climate adaptation: citizen voices and local impact', which used citizens' insights from the group discussions. Sofia Hedén (Deputy Mayor in charge of Environmental and Climate Issues of the city of Malmö), Marine Cornelis (Founder of Next Energy Consumer and of the podcast Energ'Ethic: Voices of Change in Sustainability and Climate Justice) and one citizen from Italy, Micol, joined our recorded panel to discuss how we can achieve fair and just climate adaptation.



https://www.youtube.com/watch?v=ZLfPPfXOH-Y



 $\frac{https://debatingeurope.eu/activity/eus-road-to-fair-climate-adaptation-citizen-voices-and-local-impact/$

A soil deal for Europe panel

On 5 December 2024, on World Soil Day, Debating Europe (Friends of Europe) hosted its third online panel discussion titled 'Healthy soils, sustainable future: a citizen focused dialogue'. The discussion featured Ion Codescu (Head of Unit, Land Use & Management (DG ENV) at the European Commission), Anna Jørgensen (General Manager of Cortes de Cima and 2024 European Young Leader), as well as two citizens who participated in one of our focus groups: Gregorio from Italy, and Niilo from Finland. The panel focused on the critical role of soil ecosystems in enhancing biodiversity and driving sustainability across Europe.



https://www.youtube.com/watch?v=ZzUugxOs_zE



 $\underline{https://debatingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope.eu/activity/healthy-soils-sustainable-future-a-citizen-focused-dialogue/linearingeurope-future-a-citizen-focused-dialogue/linearingeurope-future-a-citizen-focused-dialogue/linearingeurope-future-a-citizen-future-$

Restore our Ocean and Waters panel

On 12 December 2024, Debating Europe (Friends of Europe) hosted its fourth and final online panel discussion titled 'Voices for healthy oceans and waters: a citizen-focused dialogue'. The discussion featured Andreea Strachinescu (Head of Unit Maritime innovation, marine knowledge and investments (DG MARE) at the European Commission), Lefteris Arapakis (Co-Founder & Director of Enaleia and 2024 European Young Leader), as well as two citizens who participated in one of our focus groups: Samira from France, and Alba from Spain. The panel focused on the crucial role that policy, business, and local action play in tackling pollution, preserving biodiversity, and ensuring sustainable management of our waters.



https://www.youtube.com/watch?v=MFr1dBQFzoU



https://debatingeurope.eu/activity/voices-for-healthy-oceans-and-waters-a-citizen-focused-dialogue/





Social Sciences & Humanities for Climate, Energy aNd Transport Research Excellence



























