



EN

Horizon Europe
Work Programme 2023-2025

12. Missions and Cross-cutting Activities

(European Commission Decision C(2024) 2371 of 17 April 2024)



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Introduction

EU Missions

EU Missions aim to address some of the greatest challenges facing our society. They are bold and inspirational with clear objectives that are time-bound, realistic, measurable and targeted.

Rooted in research and innovation, missions aim to tackle societal challenges with systemic solutions, leading to societal transformations and social impact.

Five mission areas have been included in the Horizon Europe Regulation (Adaptation to Climate Change, including Societal Transformation; Cancer; Healthy Ocean, Seas, Coastal and Inland Waters; Climate-Neutral and Smart Cities; Soil Health and Food). In 2021, Missions went through an initial preparatory phase, during which implementations plans were developed. These included detailed objectives, specific interventions, investment strategy and performance indicators for each mission. In summer 2021, the implementation plans have been assessed against objective criteria ¹ and all five proposed EU Missions have now entered their full implementation²:

- Adaptation to Climate Change: support at least 150 European regions, local authorities and communities to become climate resilient by 2030;
- Cancer: improving the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better;
- 100 Climate-Neutral and Smart cities by 2030;
- Restore our Ocean and Waters by 2030;
- A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

Missions will continue to help deliver key EU policy priorities such as the European Green Deal, Europe's Beating Cancer Plan, NextGenerationEU, the EU Industrial Strategy and A Europe fit for the Digital Age, amongst others.

To achieve their goals and promote societal change, missions will implement the reuse and reproducibility of research results such as FAIR research data and open access to scientific publications. Also, the missions will closely involve citizens in their implementation and monitoring throughout their duration, also showcasing the added value of the EU.

The five EU Missions work programme parts for 2023-2024 contain actions to support the full implementation of missions according to their implementation plans. The work programme will contain actions in synergy and coordination with other missions, parts of

¹ https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe/assessment-criteria_en

² [COM\(2021\) 609 final](#)

Horizon Europe, in particular with European Partnerships and Clusters, and including also bottom-up parts such as the Marie Skłodowska-Curie Actions, the European Institute of Innovation and Technology or the European Research Council, as well as with other EU funding instruments and policies.

Furthermore, missions will need to be implemented in close synergy with funding, programmes and strategies both at Member State / Associated Country and regional levels, as well as with civil society and the private sector.

Critical to the success of the missions will be the extent of wide engagement across the EU and Associated Countries and beyond, including citizens, in particular young people. To this end, Missions will contribute to the European Solidarity Corps scheme with the aim of engaging with the younger generation to deliver on the five EU Missions goals.

Please note that legal entities established in China are not eligible to participate in Innovation Actions in any capacity. More details are found in the Annex B of the General Annexes of this Work Programme.

Cross-cluster activities

The New European Bauhaus³ (NEB) is a pioneering movement bringing together all types of stakeholders – from technology to culture, from art to research, from industry to community. These actors are united in their actions by one goal: to bring the European Green Deal closer to the people, translating it into tangible change that improves citizens' daily life while reducing greenhouse gas emissions – especially from the built environment – towards more circular and regenerative approaches.

Three years after its launch, the New European Bauhaus has become a catalyst for the European Green Deal transformation, supporting it to be people-centric, putting societal needs first. The New European Bauhaus is a strategic opportunity to mobilise essential research- and innovation- based solutions, placing the inhabitants of Europe's cities and rural areas at the heart of the green transformation. To make the most of this potential, the European Union wants to put the New European Bauhaus on a stable footing going forward as a self-standing Facility.

The cross-cluster activities included in this Work Programme part will focus on transforming neighbourhoods through design for sustainability and inclusion as a preparation towards the NEB Facility. The actions to be supported will address the following three strands:

- Circular and regenerative approaches for the construction ecosystem, including materials, regenerative design and cutting-edge technologies;
- Connecting the green transformation and local democracy by integrating social sciences and humanities, culture and design, harnessing the transformative potential of

³ https://new-european-bauhaus.europa.eu/index_en

participatory practices and governance models, and enhancing democratic values on the ground;

- Innovative funding for new, more holistic and more accessible business models in the built environment⁴

Actions will also support horizontal activities, notably for collecting, consolidating and connecting the relevant knowledge and inputs to better inform the implementation of the NEB Facility.

Cross-cutting activities

This work programme part also contains cross-cutting activities, i.e. actions of horizontal nature that will impact transversely on several clusters and missions. They aim to respond to new needs and experiment with new approaches in specific crucial sectors. In particular, they aim to boost the impact of social innovation actors and processes across the EU, and strengthen universities and research organisations as focal points for regional research and innovation partnerships in the EU Missions.

⁴ This strand will be addressed through the NEB Facility as of 2025.

Mission: Adaptation to Climate Change

In February 2021, the European Commission adopted an **EU strategy on adaptation to climate change** that sets out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050.

Pushing further on the belief that we must adjust now to tomorrow's climate, the EU has launched a specific mission to foster the resilience of all, be it regions, cities, local communities, to climate change. Rooted in research and innovation, the Mission aims to align towards its concrete objectives all relevant actors and stakeholders to deliver tangible solutions and concrete impacts⁵.

The Commission Communication on Missions COM(2023) 457 adopted on 19 July 2023, confirmed the strategic importance of the **Mission Adaptation to Climate Change**, to enable Europe to prepare for unavoidable climate impacts and accelerate the transformation to a climate-resilient Europe. It also confirmed its objectives and the strength of its approach.

A regional approach

The Mission wants to mobilise all actors, such as countries, regional and local authorities, research institutes, industry, investors and citizens to create real and lasting **impact** and to accelerate their transformation to become **climate resilient**. By signing the Mission Charter, more than 300 regions, cities and local authorities have committed to working together to transition faster to a climate resilient Europe.

In line with the Horizon Europe legal basis, all the actions supported by this Work Programme are open to actors from EU Member States and Horizon Europe Associated Countries, and in particular, regions and local authorities. However, regions and local authorities already engaged in the Mission activities (e.g. Charter Signatories, Community of Practice) have already proven their commitment and motivation to work towards the objectives of the mission and, as such, they provide an ideal test-bed where the testing and demonstration of innovative approaches could take place.

As confirmed by the survey of regions and local authorities who adhered to the Mission Charter, some regions, cities and local authorities in Europe are well prepared to climate change, others are striving for solutions to address their vulnerabilities. The Mission aims to support as priority less developed regions and local authorities that are more vulnerable to climate impacts and have low adaptive capacity. The mission fosters, -- by the mean of the Mission Implementation Platform and its Community of Practice – the sharing of experiences and lessons learnt from others, accompanying regions and local authorities in finding and possibly reapplying solutions adapted to their climatic situation and socio-economic context.

The R&I support will be provided in different ways:

⁵

https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/climat_mission_implementation_plan_final_for_publication.pdf

1. Provide general support to European regions, local authorities and communities to better understand, prepare for and manage climate risks and opportunities
2. Accelerate transformations to climate resilience: cooperate with at least 150 regions, local authorities 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. Demonstrate systemic transformations to climate resilience: deliver at least 75 large-scale demonstrations of systemic transformations to climate resilience across European regions, local authorities and communities.

For 2023, the Mission will focus on supporting regions, local authorities and communities in demonstrating, at real scale and in real life, climate resilience solutions that address one or more of the systems locally identified as key to build climate resilience, and as the most vulnerable to effects of climate change. Indeed, the Mission will support the innovation still needed to implement the solutions at scale, in the specific environment where the demonstration will take place, and to transform the key systems into a more climate resilient systems, with Nature-Based Solutions to be explored as priority.

For both years, the support will boost and complement the supporting structures already in place for the Mission, to foster the multi-level governance across national, regional and local level and to facilitate exchanges and replication between the different actors. The support will address the improvement of indicators to measure progress of regions and local authorities in their efforts of becoming better prepared and will also address the complexity of cascading and compounding effects of climate change as those can diminish the effectiveness of the measures undertaken. In line with the overall objective of the Mission to support regional and local authorities to accelerate their transformation, support will be oriented towards regions, local authorities and communities demonstrating at real scale and in real life climate resilience solutions, with Nature-Based Solutions to be explored as priority. The demonstration projects would ideally be part of the adaptation roadmaps developed to address the climate risks identified at the local scale and will contribute to the implementation of the National Adaptation Plans and regional adaptation pathway/strategy, where available. In the spirit of the Mission, those projects should also be co-designed, co-developed and co-implemented with the engagement and support of the local stakeholders, such as citizens, businesses and /or social partners.

Engagement and commitment by the Regions and the local authorities directly in the demonstration activities will ensure the solutions are kept in place after the end of projects. This will contribute to the aim to deliver at least 75 large-scale demonstrations of systemic transformations to climate resilience across European regions, local authorities and communities by 2030, scaling up and fostering large-scale deployment of tested innovative solutions for climate resilience, the enabling of their diffusion and the removal of barriers for their uptake.

The following call(s) in this work programme contribute to this Mission:

***Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities***

Call	Budgets (EUR million)		Deadline(s)
	2023	2024	
HORIZON-MISS-2023-CLIMA-01	82.81		20 Sep 2023
HORIZON-MISS-2024-CLIMA-01		123.97	18 Sep 2024
Overall indicative budget	82.81	123.97	

Call - Demonstration of climate resilience solutions in support of the implementation of the Adaptation to Climate Change Mission

HORIZON-MISS-2023-CLIMA-01

Conditions for the Call

Indicative budget(s)⁶

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁷	Indicative number of projects expected to be funded
		2023		
Opening: 10 Jan 2023 Deadline(s): 20 Sep 2023				
HORIZON-MISS-2023-CLIMA-01-01	IA	30.00 ⁸	8.00 to 10.00	3
HORIZON-MISS-2023-CLIMA-01-02	IA	34.81 ⁹	8.00 to 11.00	3
HORIZON-MISS-2023-CLIMA-01-03	IA	18.00 ¹⁰	4.50 to 6.00	3
Overall indicative budget		82.81		

⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁸ Of which EUR 3.21 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 5.58 million from the 'Digital, Industry and Space' budget and EUR 0.66 million from the 'Civil Security for Society' budget and EUR 19.86 million from the 'Climate, Energy and Mobility' budget and EUR 0.69 million from the 'Culture, Creativity and Inclusive Society' budget.

⁹ Of which EUR 3.73 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 6.48 million from the 'Digital, Industry and Space' budget and EUR 0.76 million from the 'Civil Security for Society' budget and EUR 23.04 million from the 'Climate, Energy and Mobility' budget and EUR 0.79 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁰ Of which EUR 1.93 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.35 million from the 'Digital, Industry and Space' budget and EUR 0.39 million from the 'Civil Security for Society' budget and EUR 11.92 million from the 'Climate, Energy and Mobility' budget and EUR 0.41 million from the 'Culture, Creativity and Inclusive Society' budget.

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

In 2023, the Mission will support the development and testing of solutions addressing one or more of the systems identified in the Mission Implementation Plan as key for climate resilience building. It will foster the development of a balanced portfolio of solutions across the different climate risks and the different biogeographical regions, as defined by the European Environment Agency.

Proposals for topics under this Mission should set out a credible pathway to adapting to Climate Change in Europe, and more specifically to all of the following impacts:

- Accelerate the transformation to a climate resilient future in a number of regions
- Deploy at full scale the systemic transformations locally needed to build climate resilience, mainstreaming nature-based solutions in the approach.

In the spirit of the Mission Implementation Plan, all proposals should also adopt a participatory approach that takes full consideration of the local dimension of climate change and climate adaptation strategies, and entails collaboration and engagement with the local communities that are affected, in the first place, by climate challenges. Engagement of citizens should be, therefore, foreseen in the design and/or implementation of the solutions, strategies and developments.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CLIMA-01-01: Testing and demonstrating transformative solutions increasing climate resilience of the agriculture and/or forestry sector.

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The conditions are described in General Annex B.</p> <p>In addition to the standard eligibility conditions, proposals must include demonstration activities to be carried out in 4 different regions/local authorities/ communities located in 3 different Member States /Associated Countries, involving and including in the consortium partners from these three countries.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Seals of Excellence will be awarded to applications exceeding all of the evaluation thresholds set out in this work programme, but cannot be funded due to lack of budget available to the call.</p>
<i>Evaluation and award procedure</i>	<p>Proposals that attain thresholds for each evaluation criteria will be ranked based on overall score. Following the overall ranking, the highest ranked proposals for each biogeographical area¹¹ will be selected first, and until budget allows. Should budget be sufficient, eventually the second ranked proposals for each biogeographical area will be selected following the overall ranking and so forth, until budget is available.</p> <p>The biogeographical area focus of each proposal should be specified in the</p>

¹¹ As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions): Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

	free keywords section of the proposal.
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Expected Outcome: Projects results are expected to contribute to all of the following expected outcomes:

- Regions and communities have undertaken action transforming into tangible projects their roadmaps designed with the aim of fostering a systemic approach to climate resilience towards the different and multi-risks locally identified as relevant, with particular emphasis on the development of nature-based solutions, biodiversity and climate mitigation synergies, and ecosystem restoration.
- Regions and communities have taken the leadership and have been involved in development and testing of solutions that can transform the agriculture and the forestry sectors, making them more resilient to foreseen climate change, while making progress in the sustainable transformation required implementing the European Green Deal.
- Solutions contribute to the implementation at the local level of the Common Agriculture Policy and the related National Strategic Plans, and they are well in line with the foreseen measures for drought management and the river basin management plans where those are in place.
- Developed solutions are close to nature, are at least neutral or support biodiversity, improve or at least do not harm water quality and availability (retentiveness in the landscape), making the agriculture/forestry sector and nature at large more resilient to climate change and supporting implementation of the EU Biodiversity Strategy for 2030.
- Solutions making the agriculture and/or forestry business models more resilient to long term effects of climate change have been developed, tested and brought closer to the market.
- Potential economic, social and environmental losses caused by extreme weather events to the agricultural, forestry and other related sectors, are reduced, making them more resilient through better preparation.
- Accompanying measures for enabling conditions, that would boost the outcomes, such as support instruments for environmental services, the use of digital monitoring, access to relevant data and knowledge, facilitation of financing and mobilisation or resources, are piloted.
- Agriculture and other related businesses, in particular those offering to the food-water nexus, are better prepared to cope with the changing climate, also through climate adaptation targeted education, up- and re-skilling programmes.
- Available or emerging climate-resilient solutions particularly relevant for small farms, organic farms or farms in conversion or any type of farms looking for alternative to

intensive agriculture are also made known and available to the regions and communities, contributing to the implementation of the Farm to Fork Strategy.

Scope: This topic relates to the Mission's objectives to mobilise at least 150 regions in testing the solutions locally most needed to build climate resilience and to deliver at least 75 deep demonstrations of systemic transformations to climate resilience.

The proposal should **develop and test at least one innovative solution**, combining technological, social and business innovation, leading to an increase of the resilience and adaptation capacity to climate change in the involved regions and communities of the agriculture sector and the related value chains. Nature based solutions¹² and the restoration of cropland and grassland should be explored as priority and at the very heart of the development whenever possible.

The proposed solution should address at least some of the following aspects:

- Improving resilience of the **agriculture and /or forestry sector**, improving the capacity of the sector to withstand dry periods and extreme droughts while protecting the ecological flows, preserving biodiversity in and around the catchment channels, preserving longitudinal connectivity of the flowing streams, slowing the falling level of the groundwater table and reversing the loss of biodiversity. This should include for example exploring value of culture rotation and other means to improve soil quality, improving soil structure by circular approaches, establishment and maintenance of landscape features (such as hedges reducing wind erosion), innovative silvo-pasture, management of genetic resources in an agro-ecological perspective and other agro-ecology approaches in farmland, in particular in relation to droughts and water multi-usage and management;
- Exploiting **agro-ecology** as an approach to enhance the climate resilience of the farming system, its functionality and sustainability, while bringing sustainable solutions and multiple benefits, such as more stable yields from adapted food crops, water efficiency, enhanced farmer livelihoods from income generation, increased biodiversity, improved water quality and water use efficiency, the ecological status of waters, improved soil structure and health, reduced erosion, and/or a higher level of carbon sequestration.
- Exploring integration of available **smart farming** approaches (and improvements of the same based on updated data) and the use of technologies such as the AI, remote sensing and the Internet of Things (IoT) to improve climate resilience through the modification and improvement of nutrient and crop protection processes, such as fertilization, pest control and irrigation, to ensure sufficient crop yields both in terms of quality and quantity, while also reducing emissions, water consumption and preserving biodiversity.

¹² The EU Commission defines nature-based solutions as “Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.” Nature-based solutions must therefore benefit biodiversity and support the delivery of a range of ecosystem services.

- Development of **more natural ecosystems**, generating combined benefits for climate mitigation, reduction of water flooding and soil erosion, (by increasing green infrastructures, tree planting, or increasing of permeable green surfaces) and maintaining or restoring rivers, peatland, wetland and natural floodplain.
- Further demonstrate and increase awareness of the **value of maintaining and restoring existing natural systems**, preservation of cultural landscapes and socio-ecological systems as providing a rich spectrum of climate services compared to other anthropogenic solutions, including integration of cultural heritage considerations as the legacy from the past, to be experienced in the present, and for transmitting to future generations. In line with the Mission Implementation Plan and the new EU Climate Adaptation Strategy, implementing nature-based solutions with adequate social and environmental standards on a larger scale would increase climate resilience. Blue-green (as opposed to grey) infrastructures represent multipurpose, “no regret” solutions, which simultaneously provide environmental, social and economic benefits and help build climate resilience, whose uptake can be facilitated by better quantification and communication of their benefits. Nature based Solutions (NBS) essential role for sustaining healthy water, oceans and soils was recognised, together with their potential to reduce costs, provide climate-resilient services, and improve compliance with Water Framework Directive requirement for good ecological status, if they were to play a bigger role in land-use management and infrastructure planning. The forthcoming Nature Restoration Law will also play an important role in requiring MS to plan restoration activities across a range of ecosystems.

As climate impacts, adaptive capacities and disaster risk reduction capabilities differ greatly across regions, the proposed development and innovation should address specific needs identified **at regional and local scale** (both at the rural, urban-rural interface and eventually in urban context) with tailor-made responses and measures, fully acknowledging place-based governance, socio-economic and identity characteristics and other place-based data.

In line with the Mission objective to **build systemic climate resilience**, the proposal should address the **multi-risks locally identified**, design and implement a systemic solution to reduce the identified vulnerabilities of the agriculture and/or forestry sector to climate change and to mitigate its negative potential impacts.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/communities facing similar challenges are highly encouraged. To this purpose, the proposals **must include at least 4 demonstrations taking place in different regions/local authorities/ communities**, which should collaborate in addressing the common climate change challenges identified and in testing the most suitable solutions. These at least 4 demonstrations must be **located in at least 3 different EU Member States and/ or Horizon Europe associated countries**. Involvement in the proposal of regions eligible for Cohesion

funds¹³ to conduct at least one of the proposed demonstrations shall be regarded as a positive element.

The proposals should clearly identify the biogeographical area, for which the proposed solution is relevant and to which the proposal is focussed. Moreover, the proposal should explore possible **reapplication to other regions**, starting from those located in the same biogeographical areas.

To support a large impact, the proposed solutions should be widely re-applicable. To this purpose, identification and inclusion of **at least three “replicating” regions/local authorities/communities**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is strongly encouraged; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions.

In addition to the local/regional authorities owning the climate challenge, the consortium may include other type of partners, such as private or public research organisations, enterprises and NGOs, to ensure that all needed capabilities are available to develop and implement real life actions.

Proposals should build (when relevant) upon previous developed or existing knowledge and adaptation solutions, designed and developed from previous projects, including from beyond the EU, addressing climate change adaptation and funded by European and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme. Moreover, proposals should look into opportunities to scale up the solutions demonstrated and to foster their broad deployment across in Europe in particular through the LIFE programme and its integrated projects, and through the European Regional Development Fund programmes.

The European Institute of Innovation and Technology (EIT) and its Knowledge and Innovation Communities (KICs), with their experience in delivering holistic, transformative, citizen-driven and systemic adaptation solutions and innovations to specific global challenges, should contribute to this topic and the proposal should build on the activities of the EIT Climate-KIC or EIT Food.

Proposals should include a mechanism and the resources to establish operational links with the Climate-ADAPT platform (run by the European Environment Agency (EEA) together with DG CLIMA) that will act as a central element for the monitoring, support and visualisation of the Mission progress in European Regions. To this purpose, projects will feed their results to the Climate-ADAPT and EEA assessments.

Projects funded under this topic are strongly encouraged to participate in the Mission Community of Practice that will be established amongst the Mission Charter signatories and

¹³ Territories eligible for Cohesion funds are defined under the Cohesion policy: https://ec.europa.eu/regional_policy/sources/graph/poster2021/eu27.pdf?

and in **networking and joint activities** with other projects funded under other topics in the Mission Climate Adaptation as well as in other relevant Missions and partnerships, as appropriate. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources. Beyond the Mission, the projects funded under this topic are also encouraged to exchange and identify cooperation opportunities with other projects funded under Horizon Europe, in particular those funded under Cluster 6, the Mission A Soil Deal for Europe and the future partnership on agro-ecology living labs.

The European Commission intends to establish a network and coordination activities amongst all the projects funded for the implementation of the Climate adaptation Mission, under the Horizon 2020 European Green Deal call and under Horizon Europe, and that will be coordinated by the soon to be established Mission Implementation Platform. The projects under this topic will be requested to contribute to this effort. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

To ensure a **balanced portfolio** covering the different climate risks as identified in the Mission Implementation Plan and to maximize the footprint across all the different biogeographical areas¹⁴, the best ranked proposals for each biogeographical area will be selected.

HORIZON-MISS-2023-CLIMA-01-02: Testing and demonstrating transformative solutions to protect critical infrastructure from climate change, mainstreaming nature based solutions.

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 34.81 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

¹⁴ As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions): Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

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	<p>The conditions are described in General Annex B.</p> <p>In addition to the standard eligibility conditions, proposals must include demonstration activities to be carried out in 4 different regions/local authorities/ communities located in 3 different Member States /Associated Countries, involving and including in the consortium partners from these three countries.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Seals of Excellence will be awarded to applications exceeding all of the evaluation thresholds set out in this work programme, but cannot be funded due to lack of budget available to the call.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>In grants awarded under this topic, costs for infrastructure construction or renovation works shall not constitute more than 20% of the total eligible costs. Beneficiaries’ own resources and/or mobilisation and leverage of additional investments from national and other EU programs and initiatives (such as EU Structural and Investment Funds) and/or other sources, private or public, should make up the remaining investment costs to secure the economic and financial sustainability of the project.</p>
<i>Evaluation and award procedure</i>	<p>Proposals that attain thresholds for each evaluation criteria will be ranked based on overall score. Following the overall ranking, the highest ranked proposals for each biogeographical area¹⁵ will be selected first, and until budget allows. Should budget be sufficient, eventually the second ranked proposals for each biogeographical area will be selected following the overall ranking and so forth, until budget is available.</p> <p>The biogeographical area focus of each proposal should be specified in</p>

¹⁵ As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions); Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

	the free keywords section of the proposal.
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Expected Outcome: Projects results are expected to contribute to all of the following expected outcomes:

- Regions, local authorities and communities have taken the leadership and have been involved in identifying weaknesses and interlinkages between critical infrastructures¹⁶, and development and testing of solutions that will make their existing or new critical infrastructure more resilient to climate change, in line with the most recent guidelines for climate proofing.¹⁷
- Nature based solutions¹⁸ (with adequate social and environmental standards) protecting infrastructure from adverse effects of climate change have been developed, tested and brought closer to the market, increasing evidence for their viability and business potential. Green, climate neutral and zero pollution technology solutions are broadly supported and opportunities for further inter-sectorial cooperation are fostered.
- Potential economic and social losses caused by extreme weather events and interruption of service due to critical infrastructures becoming unavailable are reduced, making the economy and the society as a whole more resilient through better preparation.
- Businesses, public and private actors are made more prepared to cope with the changing climate, also through climate adaptation targeted education and training, up- and re-skilling programmes.
- Prevention and management of emergency events linked to adverse climate effects is improved, thanks to “by design” integration of digital monitoring and relevant data sources in the solutions.

Scope: This topic relates to the Mission’s objectives to mobilise at least 150 regions in testing the solutions most locally needed to build climate resilience and to deliver at least 75 deep demonstrations of systemic transformations to climate resilience.

It complements the Climate Adaptation Mission topic 2021-CLIMA-02-03, which focussed on modelling aspects, as it mainly addresses demonstration of solutions on the ground,

¹⁶ As defined in art. 2(a) and art. 2(b) of Directive 2008/114/EC, ‘critical infrastructure’ means an asset, system or part thereof located in Member States which is essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being of people, and the disruption or destruction of which would have a significant impact in a Member State (or more Member States) as a result of the failure to maintain those functions

¹⁷ “Technical guidance on the climate proofing of infrastructure in the period 2021-2027”, published in OJ C373 on 16.9.21

¹⁸ The EU Commission defines nature-based solutions as “Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.” Nature-based solutions must therefore benefit biodiversity and support the delivery of a range of ecosystem services

therefore providing a relevant context to eventually take further promising approaches already identified.

The proposal should identify weaknesses and interlinkages of critical infrastructures, in order to **develop and test innovative solutions**, combining technological and social innovation, leading to an increase of the resilience and adaptation capacity to climate change in the involved regions, local authorities and communities, assuring that nature-based solutions are explored as priority and at the very heart of the development whenever possible.

In line with the Mission Implementation Plan and moreover with the new EU Climate Adaptation Strategy, implementing nature-based solutions on a larger scale would increase climate resilience. Blue-green (as opposed to grey) infrastructures represent multipurpose, “no regret” solutions, which simultaneously provide environmental, social and economic benefits and help build climate resilience, which uptake can be facilitated by better quantification and communication of their benefits. Nature based solutions (NBS) essential role for sustaining healthy water, oceans, ecosystems and soils was recognised, together with their potential to reduce costs, provide climate-resilient services, and improve compliance with Water Framework Directive¹⁹ requirement for good ecological status, if they were to play a bigger role in land-use management and infrastructure planning. The resilience of nature-based solutions to climate change should also be taken into account.

As climate impacts, adaptive capacities and disaster risk reduction capabilities differ greatly across regions, the proposed scientific development and innovation should address specific needs identified **at regional and local scale** with tailor-made responses and measures, fully acknowledging place-based governance, socio-economic and identity characteristics and other place-based data. The successful methodologies and protocols are expected to be adapted to other regions, for further uptake.

In line with the Mission objective to **build systemic climate resilience**, the proposal should address the local vulnerabilities in order to mitigate the potential risks on the infrastructure being it as potential natural disasters, extreme weather events or long-term changes in average climate), as well as their potential negative impacts on critical assets and infrastructures and the interdependencies between those.

For example, the acceleration of deployment of renewable energy is not without consequences on other environmental and geopolitical challenges. The interdependency of water and energy is set to intensify in the coming years, with significant implications for both energy and water security. Coal and gas power plants require a lot of water, but also renewable sources could increase water stress or be challenged by it, either during operation or during the construction stage. For instance, hydropower requires water to be operated, so that droughts and water shortages that are likely to increase in the future may significantly affect its generation capacity in certain regions; on the other side, the expected increased water availability in certain regions might increase hydropower generation potential. Simultaneously, hydropower reservoirs can help in mitigating floods and store water, providing it during droughts. While

¹⁹ Water Framework Directive (2000/60/EC)

wind or solar technologies require little water for their operation (but a significant amount, per unit of installed power capacity, during their manufacturing process), biofuels, concentrated solar power, carbon capture, renewable hydrogen produced through electrolysis or even low-carbon technologies like nuclear are water-intensive. Understanding these interlinkages and developing and testing solutions is therefore critical for the resilience of our economy and society, and to reduce sources of conflict.

Similarly, the achievement of a more interconnected Europe faces key challenges in the development of the interconnected transport networks and corridors, as changing groundwater levels, coastal storms frequency and their spatial incurrence, extreme temperatures, accelerated coastal erosion linked to sea level rise can have very negative effects on stability of rail and road infrastructures in coastal areas (clearly, this also affecting the development and lay down of energy and water networks laid in the proximity of coastal areas).

On that basis, the proposal should design and test solutions with the potential to reduce negative impacts both of long terms climate change and also of sudden extreme events attributable to climate change.

More specifically, the proposed solution should address:

- **Protecting critical infrastructure** from climate impacts and making it ready to withstand the changing climate and its consequences, in particular in terms of maintaining efficiency of operations, minimizing downtime, reducing maintenance costs and protecting the capital invested;
- Solutions for building and/or managing new critical infrastructure and/or upgrading/regenerating/revitalising/refurbishing existing ones through green/blue/hybrid infrastructure and if needed different governance structures, in particular in relation to climate-proofing it towards extreme events. Lifecycle ecological and CO₂ footprint considerations, from sourcing the materials, including water and energy needed, through transportation of the material, building, maintenance and utilisation, should be embedded in the decision concerning the type of infrastructure approach to pursue;
- Inclusion of digital and space solutions and services to better predict, monitor and report on climate events, in particular towards improved forecasts of adverse events and triggering adequate risk management and emergency procedures, to protect both business and population, in particular the most vulnerable and marginalised, taking into consideration the interconnections between critical infrastructures and their operation;

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/ communities facing similar climate risks and similar infrastructure challenges are highly encouraged. To this purpose, the proposals must **include at least 4 demonstrations taking place in at least 4 different regions/cities/communities**, which should collaborate in addressing the challenge. These (at least) 4 demonstrations must be **located in at least 3 different EU Member States and/or Horizon Europe associated**

countries. Involvement in the proposal of regions eligible for Cohesion funds²⁰ to conduct at least one of the proposed demonstrations shall be regarded as a positive element. In agreement with the authorities responsible for the territories where the actions will be implemented, the consortium should develop a scalability plan including the diffusion of the innovative solutions, and a process for commitments (including funding and governance) in assuring their large-scale deployment and long-term operation beyond the time-life of the project itself. The consortium should seek guarantees for the non-reversibility, sustainability and continuity of the action after the end of the project.

The proposals should clearly identify the biogeographical area, for which the proposed solution is relevant and should explore possible **reapplication to other regions**, starting from those located in the same biogeographical areas. To support a large impact, the proposed solutions should be widely re-applicable. To this purpose, identification and inclusion of **at least three “replicating” regions/local authorities/communities**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is strongly encouraged; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions.

In addition to the local/regional authorities owning the climate challenge, the consortium may include other type of partners, such as private or public research organisations, enterprises, and NGOs to ensure that all needed capabilities are available to develop and implement real life actions.

Proposals should build (when relevant) upon previous developed or existing knowledge and adaptation solutions, designed and developed from previous projects, including from beyond EU, addressing climate change adaptation and funded by European and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme. Moreover, proposals should look into opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe through the LIFE programme, and its integrated projects in particular, and through the European Regional Development Fund programmes.

Proposals should include a mechanism and the resources to establish operational links with the Climate-ADAPT platform (run by the European Environment Agency (EEA) together with DG CLIMA) that will act as a central element for the monitoring, support and visualisation of the Mission progress in European Regions. To this purpose, projects will feed their results to the Climate-ADAPT and EEA assessments.

Projects funded under this topic are strongly encouraged to participate in the Mission Community of Practice that will be established amongst the Mission Charter signatories by the Mission Implementation Platform in the course of 2023 and in the **networking and joint**

²⁰ Territories eligible for Cohesion funds are defined under the Cohesion policy: https://ec.europa.eu/regional_policy/sources/graph/poster2021/eu27.pdf

activities with other projects funded under other topics in the Mission Climate Adaptation as well as in other relevant Missions, as appropriate. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources.

The European Commission intends to establish a network and coordination activities amongst all the projects funded for the implementation of the Climate adaptation Mission, under the Horizon 2020 European Green Deal call and under Horizon Europe, and that will be coordinated by the soon to be established Mission Implementation Platform. The projects under this topic will be requested to contribute to this effort. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance. Beyond the Mission, the projects funded under this topic are also encouraged to exchange and identify cooperation opportunities with other projects funded under Horizon Europe, in particular those funded under Cluster 3, and its Destination 1 “Resilient Infrastructures”.

To ensure a **balanced portfolio** covering the different climate risks as identified in the Mission Implementation Plan and to maximize the footprint across all the different biogeographical areas²¹, the best ranked proposals for each biogeographical area will be selected.

HORIZON-MISS-2023-CLIMA-01-03: Testing and demonstrating transformative solutions to build resilience towards health risks caused by the effects of climate change

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.50 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The conditions are described in General Annex B. In addition to the standard eligibility conditions, proposals must include

²¹ As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions): Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

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	<p>demonstration activities to be carried out in 4 different regions/local authorities/ communities located in 3 different Member States /Associated Countries, involving and including in the consortium partners from these three countries.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 7 by the end of the project – see General Annex B
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Seals of Excellence will be awarded to applications exceeding all of the evaluation thresholds set out in this work programme, but cannot be funded due to lack of budget available to the call.</p>
<i>Evaluation and award procedure</i>	<p>Proposals that attain thresholds for each evaluation criteria will be ranked based on overall score. Following the overall ranking, the highest ranked proposals for each biogeographical area²² will be selected first, and until budget allows. Should budget be sufficient, eventually the second ranked proposals for each biogeographical area will be selected following the overall ranking and so forth, until budget is available.</p> <p>The biogeographical area focus of each proposal should be specified in the free keywords section of the proposal.</p>

Expected Outcome: Projects results are expected to contribute to all of the following expected outcomes:

- regions, local authorities and communities have been involved in development and testing of a whole range of transformative solutions that will help to mitigate the effect of climate change on health and human wellbeing, including making the public health sector more climate resilient and better prepared to mitigate the climate change related health challenges.
- climate resilience solutions that protect human health have been developed, tested and are made largely available

²² As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions); Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

Scope: This topic relates to the Mission's objectives to mobilise at least 150 regions in testing the solutions most locally needed to build climate resilience and to deliver at least 75 deep demonstrations of systemic transformations to climate resilience.

The proposals should test and demonstrate solutions that address both the two aspects below, including in the scope at least some of the individual points related to improve prevention and policy-making and at least some points related to improve preparedness of the health system.

1. Improve prevention and policy-making, by:

- **Improved insights into short- and long-term health effects of climate-related stressors**, including **planetary health** considerations (interactions between global climate change, ecosystem, animal and human health as described in the One Health concept). Taking into consideration differences between infectious and non-communicable diseases, and the particularities of each. With regard to the infectious diseases, emphasis should be given on the surveillance and prevention of zoonotic diseases. These improved insights should be made available and be integrated by the regional and local authorities in their planning. The European Climate and Health Observatory can contribute to these efforts and, reversely, learnings from the projects supported under this topic would contribute to the Observatory knowledge basis.
- **Strengthening comprehensive and user friendly epidemiological surveillance and modelling and forecasting tools**, including socio-economic trajectories and adaptation scenarios of exposure and vulnerability to climate determinants. These tools should be suitable for assessing and predicting impact of moderate, extreme and record-breaking events and disasters associated with climate change, including impacts on mental health. Environmental stressors should also be considered when relevant for the prevention of major non-communicable such as cardiovascular and respiratory diseases e.g. combination of heat waves and air pollution or increase in pollens. Surveillance, modelling and forecasting tools should be piloted in the partner regions and communities. Reflecting the One Health concept, the link between animal health impacts due to climate change and subsequent human health impacts should also be considered, when relevant.
- Development of **better forecast, early-warning and early response systems and decision-making models for health impacts** of climate change which are able to monitor both the impact and the effectiveness of solutions.
- Development and **health impact assessment of adaptation measures** and monitoring of effectiveness of solutions to improve resilience of countries, regions and cities, including effective nature-based solutions (NBS).

2. Improve preparedness of health systems by:

- **Development of innovative solutions (technological solutions, NBS, etc) to reduce impact of climate change on human health and wellbeing.** Heat and cold waves and

floods should be among the stressors considered, but proposals should not limit their work to only these two stressors and might consider the association with environmental conditions such as the association of heat waves and air quality or exposure to pollens. Solutions should be designed with a win-win objective so to not have a negative effect on climate mitigation efforts, after sufficient consideration of positive and negative interactions.

- **Preparing training curricula on health and climate change** for medical and other healthcare professionals across Europe. The proposed curricula should be trailed in the partner regions, local authorities and communities, training pilot group of professionals.
- **Development of innovative, fit-for-purpose, end-user driven early warning and response systems or improving existing ones**, including a demonstration of their predictive/response capacity, to ensure a rapid response from health services and civil protection authorities and testing/pilot such systems in the partner regions/local authorities/communities.
- Providing feedback and sharing best practice from pilots to the new Health Emergency Preparedness and Response Authority. Such tests should be accompanied by **public awareness campaigns** in relation to climate forecasts and health early warning systems, identifying the warning communication chain, role, tasks and responsibilities of science advisors and decision-makers.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/ communities facing similar challenges are highly encouraged. To this purpose, the proposals must **include at least 4 different regions/local authorities/ communities**, which should collaborate in addressing the common challenge identified and conducting demonstration activities of the most suitable solutions. These (at least) 4 demonstrations must be **located in at least 3 different EU Member States and/or Horizon Europe associated countries**, for which the proposed solution is relevant. Involvement in the proposal of regions eligible for Cohesion funds²³ to conduct at least one of the proposed demonstrations shall be regarded as a positive element.

The proposals should clearly identify the biogeographical area, for which the proposed solution is relevant and should explore possible **reapplication to other regions**, starting from those located in the same biogeographical areas. To support a large impact, the proposed solutions should be widely re-applicable. To this purpose, identification and inclusion of **at least three “replicating” regions/local authorities/communities**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is strongly encouraged; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions.

²³ Territories eligible for Cohesion funds are defined under the Cohesion policy: https://ec.europa.eu/regional_policy/sources/graph/poster2021/eu27.pdf?

In addition to the local/regional authorities owning the climate challenge, the consortium may include other type of partners, such as private or public research organisations, enterprises and NGOs, to ensure that all needed capabilities are available to develop and implement real life actions.

Proposals should build (when relevant) upon previous developed solutions or existing knowledge and adaptation solutions, designed and developed from previous research projects, including from beyond EU, addressing climate change adaptation and funded by European and National programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme. Moreover, proposals should look into opportunities to scale up the solutions demonstrated and to foster their broad deployment across in Europe through the LIFE programme, and its integrated projects in particular, and through the ERDF programmes.

Proposals should include a mechanism and the resources to establish operational links with the Climate-ADAPT platform (run by the European Environment Agency (EEA) together with DG CLIMA) that will act as a central element for the monitoring, support and visualisation of the Mission progress in European Regions. To this purpose, projects will feed their results to the Climate-ADAPT and EEA assessments.

Projects funded under this topic are strongly encouraged to participate in the Mission Community of Practice that will be established amongst the Mission Charter signatories by the Mission Implementation Platform in the course of 2023 and in the **networking and joint activities** with other projects funded under other topics in the Mission Climate Adaptation as well as in other relevant Missions, as appropriate. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources. Beyond the Mission, the projects funded under this topic are also encouraged to exchange and identify cooperation opportunities with other projects funded under Horizon Europe, in particular those funded under Cluster 1 and its destination 2 “Living and working in a health-promoting environment”

The European Commission intends to establish a network and coordination activities amongst all the projects funded for the implementation of the Climate adaptation Mission, under the Horizon 2020 European Green Deal call and under Horizon Europe, and that will be coordinated by the soon to be established Mission Implementation Platform. The projects under this topic will be requested to contribute to this effort. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

To ensure a **balanced portfolio** covering the different climate risks as identified in the Mission Implementation Plan and to maximize the footprint across all the different

biogeographical areas²⁴, the best ranked proposals for each biogeographical area will be selected.

Call - Supporting the implementation of the EU Mission Adaptation to Climate Change

HORIZON-MISS-2024-CLIMA-01

Conditions for the Call

Indicative budget(s)²⁵

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁶	Indicative number of projects expected to be funded
		2024		
Opening: 24 Apr 2024 Deadline(s): 18 Sep 2024				
HORIZON-MISS-2024-CLIMA-01-01	CSA	2.00 ²⁷	Around 2.00	1
HORIZON-MISS-2024-CLIMA-01-02	CSA	4.00 ²⁸	Around 4.00	1
HORIZON-MISS-2024-CLIMA-01-03	RIA	2.97 ²⁹	Around 3.00	1

²⁴ As defined by the Habitat Directive Council Directive 92/43/EEC of 21 May 1992 and the related Nature2000 legislation and as indicated by the EEA: [Biogeographical regions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/biogeographical-regions): Alpine, Atlantic, Black Sea, Boreal, Continental, Macaronesian, Mediterranean, Pannonian, Steppic

²⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

²⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²⁷ Of which EUR 0.30 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.33 million from the 'Digital, Industry and Space' budget and EUR 0.04 million from the 'Civil Security for Society' budget and EUR 1.28 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁸ Of which EUR 0.60 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.66 million from the 'Digital, Industry and Space' budget and EUR 0.09 million from the 'Civil Security for Society' budget and EUR 2.55 million from the 'Climate, Energy and Mobility' budget and EUR 0.10 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁹ Of which EUR 0.44 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.49 million from the 'Digital, Industry and Space' budget and EUR 0.06 million from the 'Civil Security for Society' budget and EUR 1.89 million from the 'Climate, Energy and Mobility' budget and EUR 0.07 million from the 'Culture, Creativity and Inclusive Society' budget.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

HORIZON-MISS-2024-CLIMA-01-04	RIA	8.00 ³⁰	Around 4.00	2
HORIZON-MISS-2024-CLIMA-01-05	RIA	8.00 ³¹	Around 4.00	2
HORIZON-MISS-2024-CLIMA-01-06	IA	27.00 ³²	Around 9.00	3
HORIZON-MISS-2024-CLIMA-01-07	IA	22.50 ³³	Around 7.50	3
HORIZON-MISS-2024-CLIMA-01-08	IA	22.50 ³⁴	Around 7.50	3
HORIZON-MISS-2024-CLIMA-01-09	IA	27.00 ³⁵	Around 9.00	3
Overall indicative budget		123.97		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.

³⁰ Of which EUR 1.20 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.32 million from the 'Digital, Industry and Space' budget and EUR 0.17 million from the 'Civil Security for Society' budget and EUR 5.10 million from the 'Climate, Energy and Mobility' budget and EUR 0.20 million from the 'Culture, Creativity and Inclusive Society' budget.

³¹ Of which EUR 1.20 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.32 million from the 'Digital, Industry and Space' budget and EUR 0.17 million from the 'Civil Security for Society' budget and EUR 5.10 million from the 'Climate, Energy and Mobility' budget and EUR 0.20 million from the 'Culture, Creativity and Inclusive Society' budget.

³² Of which EUR 4.04 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 4.47 million from the 'Digital, Industry and Space' budget and EUR 0.58 million from the 'Civil Security for Society' budget and EUR 17.23 million from the 'Climate, Energy and Mobility' budget and EUR 0.68 million from the 'Culture, Creativity and Inclusive Society' budget.

³³ Of which EUR 3.37 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.73 million from the 'Digital, Industry and Space' budget and EUR 0.48 million from the 'Civil Security for Society' budget and EUR 14.36 million from the 'Climate, Energy and Mobility' budget and EUR 0.57 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁴ Of which EUR 3.37 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.73 million from the 'Digital, Industry and Space' budget and EUR 0.48 million from the 'Civil Security for Society' budget and EUR 14.36 million from the 'Climate, Energy and Mobility' budget and EUR 0.57 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁵ Of which EUR 4.04 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 4.47 million from the 'Digital, Industry and Space' budget and EUR 0.58 million from the 'Civil Security for Society' budget and EUR 17.23 million from the 'Climate, Energy and Mobility' budget and EUR 0.68 million from the 'Culture, Creativity and Inclusive Society' budget.

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

As part of the Mission on Adaptation to Climate Change, proposals for topics under this call will contribute to the implementation of the EU Adaption Strategy, making EU Member States and Horizon Europe Associated Countries better prepared for the unavoidable impacts of climate change. They will act as accelerators and show the way in making climate adaptation smarter, swifter and more systemic. More specifically, proposals under this call will contribute to all the following impacts:

- Accelerate the transformation to a climate resilient future in a number of regions.
- Deploy at full scale the systemic transformations locally needed to build climate resilience, mainstreaming nature-based solutions in the approach.

In the spirit of the Mission, all proposals should also adopt a participatory approach that takes full consideration of the local dimension of climate change and climate adaptation strategies and entails collaboration and engagement with the local communities that are affected, in the first place, by climate challenges. Engagement of citizens should be, therefore, foreseen in the design and/or implementation of the solutions. Proposals should also contribute to bring forward solutions or demonstrations based on the circular economy principles that could have positive consequences for climate adaptation.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CLIMA-01-01: Bringing available and actionable solutions for climate adaptation to the knowledge of the regions and local authorities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of</i>	The rules are described in General Annex G. The following exceptions apply:

<i>the Grant Agreements</i>	<p>Grants awarded under this topic will be linked to the following action(s): Call for tenders CINEA/2022/OP/0013.</p> <p>Collaboration with MIP4Adapt, the Mission Implementation Platform, is essential, and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Implementation Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.</p>
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Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the Mission on Adaptation to climate change, the successful proposal will specifically complement and reinforce the work of the Mission Implementation Platform, by addressing Missions' current untapped potential, as highlighted in Commission's Communication COM(2023) 457 final³⁶ and underlying "Study supporting the assessment of EU missions and the review of mission areas. Mission Adaptation to Climate Change assessment report"³⁷.

Proposals are expected to contribute to **all of** the following expected outcomes:

- The project serves information and offers **the latest available solutions** on adaptation to climate change to regional and local authorities, namely via a number of multilingual communications products, services and activities. It does so by closely cooperating with and under the umbrella of the Mission Implementation Platform³⁸, which continues to be stakeholders' main contact point to engage with Adaptation Mission.
- Knowledge and understanding of the policy implications of adaptation solutions is increasingly utilised in the policy cycles at EU, national, and regional and local levels.
- The wide range of solutions tested and deployed in the context of the EU Mission on Adaptation to Climate Change and the good practices emerged in its Community of Practice are harvested, analysed and systematised to support the implementation of the Mission.
- The Mission actors (i.e., Secretariat and regions and local authorities participating in the Adaptation Mission) get comprehensive and structured information on available solutions identified, developed, tested, and deployed via relevant funding programmes and at various level of governance. Such comprehensive and structured information is also shared with the "National Adaptation Hubs" created by HORIZON-MISS-2024-CLIMA-01-02, in cooperation and coordination with the Mission Implementation Platform.

³⁶ COM(2023) 457 final: [com_2023_457_1_en_act_part1.pdf\(europa.eu\)](#)

³⁷ <https://op.europa.eu/en/publication-detail/-/publication/52e75b81-537f-11ee-9220-01aa75ed71a1/language-en>

³⁸ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI.2.884597 funded by the European Union. About MIP4Adapt (europa.eu)

Scope: Regional, local authorities are the target group of the proposed activities and the customers of the in-depth knowledge provision on solutions; as such they are not expected to participate as part of the consortium, but they should receive tailor made services from the project funded by this action, which should primarily use the Mission Implementation Platform's channels to feed them with new information products, also based on the needs (already) expressed by them (e.g. see Analysis of information provided by the signatories of the charter of the Mission Adaptation to Climate Change when adhering to the Charter³⁹).

It is expected that the project will have a duration of about 2 years.

The proposal should address **all of** the following aspects:

- **Support and closely cooperate with the ongoing Mission Implementation Platform**, in close contact with the Mission's Secretariat, to avoid duplications and by structurally analysing and summarising the good practices shared and discussed by regions and local authorities in the context of the Mission Implementation Platform's Community of Practice, both as part of Community of Practice's events and as part of the online discussion in the Mission Portal's restricted webpages. Moreover, where possible, the project will seek to use existing channels to serve information products to Mission's regions and local authorities so as to avoid duplications, namely using those established by the Mission Implementation Platform and in the Mission Portal.
- **Seek cooperation with existing platforms and initiatives** fostering climate adaptation in EU Member States and Associated Countries (in particular the Mission Portal⁴⁰ hosted by the European Environment Agency, the NCP4missions⁴¹ and the TRAMI⁴² projects or followers). This is to avoid duplication of efforts and make sure Mission's regions and local authorities have easy access to such information and communications products. In particular, any communications action should be integrated as much as possible into the existing Mission portal, in cooperation with the European Environment Agency. Moreover, particular attention should also be given to make appropriate links with the Joint Research Centre's Risk Data Hub⁴³, if relevant.
- **Produce a detailed inventory of adaptation solutions**, in coordination with the Mission Implementation Platform, in which each solution should be classified according to how it could help to address the needs of the biogeographical zones or most recurring climate risks. The results of such an inventory should be made available, also leveraging the Mission Implementation Platform, to all local, regional and national players, so to facilitate their access to all scientific available previous knowledge. The solutions should be analysed, and their inventory structured in line with the Mission Implementation

³⁹ https://research-and-innovation.ec.europa.eu/system/files/2023-03/ec_rtd_charter-signatories-survey-report.pdf

⁴⁰ <https://climate-adapt.eea.europa.eu/en/mission/>

⁴¹ <https://cordis.europa.eu/project/id/101121092>

⁴² <https://cordis.europa.eu/project/id/101056814>

⁴³ <https://drmkc.jrc.ec.europa.eu/risk-data-hub#/>

Plan⁴⁴'s approach (in particular, adopting a priority scope along the Plan's "key community systems and enabling conditions") in view of ensuring maximum coherence. These solutions should also be proactively promoted with the regions and local authorities participating in the Adaptation Mission.

- Local, regional and even national players who have already financed and/or experimented with solutions may also need to be given the opportunity to **“publicize” effective solutions that can be scaled up or replicated elsewhere.**
- Give particular attention to **available solutions at National, regional and local levels**, including those of cross-border nature. As the current scope and support by the Mission Implementation Platform to the Community of Practice is limited in terms of number of regions and local authorities involved, the proposal should also identify and analyse available solutions in regions that are not directly involved with the Mission's Community of Practice – and in turn feed those to the Community of Practice discussions. To retrieve such information, the project funded under this topic is expected to closely cooperate with the project stemming from the topic HORIZON-MISS-2024-CLIMA-01-02 and the different projects in the Adaptation Mission Portfolio. It should closely build on solutions identified or discussed along the multi-level governance axis (also defined as “National hubs”), in turn supporting it with hands-on knowledge products that can be disseminated within its own structures. This cooperation will also be key to ensure that information-sharing targeting the regions and the local authorities is also tailored to the specific National governance context, to maximize its impacts and provide a basis for transforming information-sharing into building up know-how and skills.
- The proposals should identify and harvest knowledge and solutions from relevant Horizon Europe projects, with particular attention to projects funded by the Adaptation Mission calls (including demonstrators) and projects identified as 'mission-relevant' in other EU funding programme (e.g., LIFE, Interreg) or legacy projects from Horizon2020 or FP7, as well as from partnerships, and from the other EU Missions, in particular the cities, soil and ocean missions. The proposals should also build on previous analyses or information already harvested by mission-relevant projects, in particular past and ongoing coordination and support actions (including but not limited to Regilience⁴⁵, NetworkNaturePlus⁴⁶, MAIA⁴⁷, MAGICA⁴⁸). This is to avoid duplications of efforts and to improve the overall understanding of the wide range of solutions available to regions and local authorities.
- As the scope of the EU Mission on Adaptation to Climate Change goes beyond Horizon Europe, the proposal should also structurally consider solutions identified, developed,

⁴⁴ Mission Implementation Plan of Mission Adaptation, page 7 box 1, link: [Implementation Plans for the EU Missions \(europa.eu\)](#)

⁴⁵ <https://cordis.europa.eu/project/id/101036560>

⁴⁶ <https://cordis.europa.eu/project/id/101082213>

⁴⁷ <https://cordis.europa.eu/project/id/101056935>

⁴⁸ <https://cordis.europa.eu/project/id/101056920>

tested, and deployed via other relevant funding programmes (in particular the EU cohesion policy incl. ERDF, INTERREG, as well as LIFE Programme, the Digital Europe Programme, etc.), initiatives (including Cohesion4Transitions, etc.), and actors (JRC, EIB, EBRD, etc.). Moreover, the scope should not be limited to EU programmes and initiatives only, but rather look at National and regional opportunities as well (funding programmes, national or regional hubs or initiatives, including the potential of relevant business-led or private initiatives).

- Develop multilingual operational information and communication products aiming at facilitating regions and local authorities' understanding of the said solutions and their effectiveness, through a dedicated communications strategy tailored to the different target audiences within the regions and local authorities (in particular policy makers, practitioners and social partners). The proposals should also provide tools to support the authorities in the development and implementation of such solutions in their regional and local contexts (i.e., know-how).
- When bringing available solutions to the knowledge of the regions and of the local authorities, the proposal should also include a dedicated task aiming at feeding the EU policy cycle **by identifying good practices that merit particular attention by EU policymakers** in view of strengthening policy innovation in coming cycles (feedback to policy task).

HORIZON-MISS-2024-CLIMA-01-02: Bringing together the national level with the engaged regional and local levels (multi-level governance)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s): Call for tenders CINEA/2022/OP/0013.</p> <p>Collaboration with MIP4Adapt, the Mission Implementation Platform, is essential, and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Implementation Platform must be formalized through a</p>

	Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.
<i>Grant Conditions</i>	<p>For grants awarded under this topic beneficiaries may provide support to third parties as described in part K of the General Annexes of the Work Programme. The support to third parties can only be provided in the form of grants. The respective options of Article 15.1 and Article 15.3 of the Model Grant Agreement will be applied.</p> <p>The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the Mission on Adaptation to climate change, the successful proposal will specifically complement and reinforce the work of the Mission Implementation Platform, by addressing Missions' current untapped potential, as highlighted in Commission's Communication COM(2023) 457 final⁴⁹ and underlying "Study supporting the assessment of EU missions and the review of mission areas. Mission Adaptation to Climate Change assessment report"⁵⁰.

More specifically, the successful project is expected to contribute to **all of** the following outcomes:

- The national relevant governance for innovation and climate adaptation is further engaged and mobilised to contribute to the objectives of the EU Mission on adaptation to climate change, and benefit from it.
- The EU Mission is deeply connected with national multi-level governance feeding into Member States, regions and local authorities' efforts to implement the European Climate Law's requirements on climate adaptation, and to further develop and update their national, regional and local adaptation plans.
- A set of 'National Adaptation Hubs' bridge the gap between the EU and regional/local levels, in the Adaptation mission and further disseminate the solutions emerging from the Mission to other regions and local authorities that are not Charter Signatories.
- A robust twinning scheme grouping of regions and local actors facing similar challenges ensures peer-learning and cross-fertilisation of experiences, further strengthening ongoing peer learning opportunities within the EU Mission, and also providing a tool to disseminate EU Mission's knowledge beyond the regions and local authorities directly participating in the EU Mission.

Scope: Regional and local authorities are the target groups of the proposed activities and as such they are not expected to participate directly in the consortium, but they should receive services from the project funded by this action.

⁴⁹ COM(2023) 457 final: [com_2023_457_1_en_act_part1.pdf \(europa.eu\)](#)

⁵⁰ <https://op.europa.eu/en/publication-detail/-/publication/52e75b81-537f-11ee-9220-01aa75ed71a1/language-en>

In order to achieve the indicated scope, the project could provide direct financial support in the form of grants to maximum one entity in each of the MS in facilitating the creation and animation of the “National Adaptation Hub”. To implement the support to third parties, the consortium should include partners with relevant operational and financial experience and viability.

It is expected that the project will have a duration of about 2 years.

Proposals should address two axes of action: 1) establishing and managing so-called “National adaptation hubs”; and 2) implementing a structural grouping scheme as organic component of the multi-governance approach.

For each of the axes of action, proposals should address **all** the following aspects identified :

1. *National adaptation hubs*

- Identify relevant actors at National level, in cooperation with existing national experts/working groups (such as Climate Advisory bodies⁵¹ or members of the Working Group on adaptation of the Horizon Europe Strategic Programme Committee and the Working Group on Adaptation (WGA) under the Climate Change Committee or the managing authorities of the cohesion policy or rural development funds), as well as at regional and local level, to facilitate the connection and integration of the Mission’s approach at national level.
- Concretely, proposals should aim at mobilising National, regional, and local actors and foster the **creation of dedicated “National adaptation hubs”** for the EU Mission on adaptation to climate change. Such hubs (one per country) consist in a sort of task force or working group composed of the relevant contact points from each level of governance relevant in the individual countries. Those structures are meant to be light, agile, and flexible, to be tailored to the national context. Some countries are already piloting national structures aiming at supporting and complementing the EU Mission at national level (in some cases with more formal and complex structures than the flexible working groups foreseen in this project). In such cases National hubs would consist or would be an integration of such existing structures, which can be served by the project via information products or logistic support in view of helping them to better align and cooperate with the Adaptation Mission. If relevant in the national context, some of those hubs could also tackle the interface between climate adaptation and mitigation by integrating or cooperating with any existing structure dedicated this objective.
- Foster **knowledge and solutions sharing** and implement dedicated horizontal supporting actions, such as help shaping the National adaptation hubs identifying and connecting national and subnational priorities, create multilingual horizontal information and communication products to help feed the feedback-loop between Adaptation Mission and the National adaptation hubs, including by identifying good practices exchanged as part of the grouping scheme. To retrieve such information, the project

⁵¹ For example, the European Environment Information and Observation Network (Eionet)

funded under this topic is expected to closely cooperate with the project stemming from the topic HORIZON-MISS-2024-CLIMA-01-01 and the different projects in the Adaptation Mission Portfolio, under the coordination of the Mission Implementation Platform.

- Ensure that the knowledge gained by the regions directly participating in the Adaptation Mission is shared with other regions within a certain Member State, further disseminating such knowledge via their own existing channels. These hubs can, in fact, be a first step to bring EU Mission’s knowledge to the regions and local authorities that are not directly participating in EU Mission’s activities, while the EU Mission continues to work with a limited set of regions and local authorities as testbeds for climate adaptation solutions.
- National adaptation hubs should also feed and contribute to countries and regional and local authorities’ efforts related to the adaptation objectives in the Climate Law – with particular reference to the adoption and implementation of national adaptation strategies and plans. National adaptation hubs should support the implementation of adaptation plans, liaising with the relevant national, regional or local authorities to integrate the knowledge developed within the Mission into the development and selection process of projects on the ground, in particular when financed by EU funds. Moreover, in this light, they should also help connect public authorities with existing support opportunities such as TAIEX-EIR PEER 2 PEER⁵², the Commission’s Technical Support Instrument, etc.
- Build on existing relevant initiatives, such as the TRAMI project⁵³ [or followers] and the NCP4missions⁵⁴, the new National Contact Points Network, as well as other relevant thematic national hubs, to avoid duplications, ensure horizontal synergies and complement existing structures when relevant for the Adaptation Mission. The proposal should also ensure close collaboration with the Mission Implementation Platform⁵⁵, which, at the moment, does not foresee specific budget to organise activities at National level. In such context, the project will remain in close contacts with the Mission’s Secretariat. The project will connect the exchange done via the EU Mission’s Community of Practice (managed by the Mission Implementation Platform) with the subsequent follow-ups, dissemination, and further discussion at “National adaptation hubs” level, effectively connecting and helping the coordination of their activities. Moreover, the project should also ensure that National adaptation hubs connect with the EU Mission Board, to fully exploit further synergies with its members.

⁵² https://environment.ec.europa.eu/law-and-governance/environmental-implementation-review/peer-2-peer_en

⁵³ [About TRAMI | TRAMI \(trami5missions.eu\)](#)

⁵⁴ <https://cordis.europa.eu/project/id/101121092>

⁵⁵ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

- Build on the EU Mission’s key community systems and enabling conditions⁵⁶ to identify the priority areas of work of the “National adaptation hubs”, by engaging and exchanging with the National and regional contact points. These priority areas should reflect what is included in the National Strategies and/or Plans on Adaptation to Climate Change. In addition, the action should also identify areas of exchange that are particularly suited for discussion at National level (such as the concept of just transition, including by addressing the social angle of adaptation to climate change) or where existing gaps require specific attention (such as access to finance), or there is high potential for cooperation (the nexus climate adaptation and mitigation).
- Last, National adaptation hubs could be suited to engage with the private sector at national, regional, local level. They should also involve climate pact ambassadors (when relevant), to help amplifying the impacts of these initiative with the civil society.

1. *Grouping scheme*

- To facilitate the concrete dissemination of knowledge, the proposal should foresee a **structural grouping scheme**. In particular, the scheme should bring together regions and local actors facing similar challenges, and it should help consolidate the multi-level governance. Such scheme might see groups or pairs from the same Member State (to feed the knowledge sharing within each “national adaptation hubs” and cascade knowledge across a national territory) or between different countries. In turn, the proposal should ensure close connections with the Mission’s Community of Practice.
- The grouping exercise will also help disseminating the Mission’s knowledge beyond the regions directly served by the Mission – hence substantiating the new “multi-level governance”. In this context, the proposal should identify the right grouping and pairing participants able to bring the knowledge they acquired by participating in Mission-funded and Mission-related activities (for example, when testing adaptation solutions as part of Mission projects’ work) to other regions in the EU, with particular attention to vulnerable regions. Moreover, in some cases the scheme might group and /or pair, depending on demand, less advanced regions with front-runners. When developing the scheme, the proposal should ideally involve the National level into the peer learning scheme, including by ensuring that the best practices shared via the grouping scheme can also feed the National level in view of policy innovation (see point on Climate Law requirements).

Likewise, the grouping should be equally open and encouraged for Mission’s signatories to be clustered and/ or paired with other Mission’s signatories so as to complement ongoing matchmaking and peer learning efforts as part of the Mission Implementation Platform, and other Mission’s initiatives.

⁵⁶ As defined in the Mission Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/climat_mission_implementation_plan_final_for_publication.pdf

HORIZON-MISS-2024-CLIMA-01-03: Develop and refine outcome indicators to measure progress on climate resilience at national, regional and local levels, including knowledge and feedback developed from the Mission

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.97 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the Mission on Adaptation to climate change, successful proposals will contribute to the monitoring of the adaptation progress across Europe.

Projects results are expected to contribute **to all of** the following expected outcomes:

- Better capture the state and progress of climate adaptation efforts implemented at local, regional and national levels across European Union and Associated Countries.
- Better measure the effectiveness of adaptation measures and solutions - analysing social, ecological, and economic benefits and trade-offs, including on just climate resilience.
- Accelerate the implementation of adaptation efforts across the European Union and Associated Countries, 1) by making the benefits of adaptation actions more visible; and 2) by demonstrating how appropriate governance -- supported by adequate organisational structures -- policy actions and financial planning improve climate resilience.

Scope: The sixth assessment report of the Intergovernmental Panel on Climate Change made clear that, despite recent progress, adaptation in Europe is not implemented at the depth, scope and speed needed⁵⁷. As impacts from climate change are increasingly felt, the need for

⁵⁷ <https://www.ipcc.ch/report/ar6/wg2/chapter/chapter-13/>

systematic and consistent monitoring of adaptation efforts is becoming more urgent. At the same time, indicators on adaptation outcomes (as opposed to process-related indicators) and adaptive capacity are lacking.

This topic aims at strengthening the EU's capacity, knowledge, and involvement of relevant stakeholders in the monitoring and evaluation of current adaptation policies. It aims to facilitate policy, financial, corporate, and individual planning and decisions affecting resilience to climate impacts. Lessons learnt from currently available indicators, the literature, efforts underway surveying the use and prospects for indicators within the framework⁵⁸ of United Nations Framework Convention on Climate Change, and feedback from the experience in the first years of the EU Mission on Adaptation to Climate Change work provide the basis for further developments.

Proposals should address **all of** the following aspects:

- Develop an **integrated framework for monitoring, evaluating, and learning from implemented adaptation measures**, as a set. This framework should be based on outcome indicators, i.e., effectively measure levels of climate resilience rather than measuring activities and outputs, as it is often the case. It should consider maladaptation⁵⁹ and be useable in all parts of Europe, by relying on common features for the whole of Europe while allowing for regional specificities. It should integrate different kinds of qualitative and quantitative data, methods, and indicators that could rely on satellite imagery, models, or local knowledge. The use of Artificial intelligence systems (e.g., machine learning) is encouraged, if appropriate. Methodology and error assessment should be documented/referenced adequately.
- **Develop or refine earth observation indicators for adaptation, together with a set of visualisation tools**. Those indicators should consider governance, social, economic, and environmental aspects, including adaptation of human behaviours to climate change.
- **Complement the data collection with citizen science**⁶⁰ to help engage and involve all actors and socialize results. To achieve this, proposals should also find ways to engage citizens through citizen science initiatives, in particular vulnerable groups.
- **Develop a strategy to visualize and communicate the benefits of adaptation efforts** to the relevant stakeholders.
- Provide **training and dissemination material** for different target groups, including regions and local authorities.

⁵⁸ E.g. [AC TP GlobalGoalOnAdaptation.pdf \(unfccc.int\)](#); OECD (2021) Monitoring, Learning and Evaluation for Climate Risk Management [58665de0-en.pdf \(oecd-ilibrary.org\)](#);

⁵⁹ Maladaptation is when people, assets or systems become more vulnerable or exposed to climate-related hazards and extreme events after implementing adaptation measures.

⁶⁰ **Citizen science is any activity that involves the public in scientific research and thus has the potential to bring together science, policy makers, and society as a whole in an impactful way.**

The project will contribute to the monitoring of the Mission and should therefore feed their results to and collaborate closely with the Mission Implementation Platform⁶¹. It should build on the work of past and ongoing projects and initiatives, such as the indicator set developed by the REGILIENCE⁶² or RESCCUE⁶³ projects.

Additionally operational links and collaboration should be established with the Climate-ADAPT platform⁶⁴; ESPON CLIMATE⁶⁵, and the relevant mission projects, in particular CLIMAAX⁶⁶ and Pathway2resilience⁶⁷. Linking the project to the second European Climate Risk Assessment (EUCRA), if confirmed, or any relevant project from Horizon Europe is encouraged. Applicants should acknowledge these requests and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

HORIZON-MISS-2024-CLIMA-01-04: Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy, the Biodiversity Strategy for 2030 and the Mission on Adaptation to climate change and the Global Biodiversity Framework, successful proposals will contribute to addressing the climate and biodiversity crises in a more systemic way.

⁶¹ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

⁶² <https://regilience.eu/reports-and-findings/> (see for instance “Concept note for the indicator set (D3.2, 2022)”, “Indicator set (D3.3)” or “Finalised indicator set and monitoring road maps (D3.5)”

⁶³ <https://cordis.europa.eu/project/id/700174>

⁶⁴ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the [European Environment Agency](#). <https://climate-adapt.eea.europa.eu/>

⁶⁵ <https://www.espon.eu/climate>

⁶⁶ <https://cordis.europa.eu/project/id/101093864>

⁶⁷ <https://www.pathways2resilience.eu/>

Projects results are expected to contribute **to all of** the following expected outcomes:

- improved capability of the research community in assessing and modelling, in a systemic way, the impacts of the climate and biodiversity crises on the key community systems considered in the Mission implementation plan⁶⁸, and their interdependencies.
- public administration from national to local level are using evidence-based information provided by the project to prioritise actions that address cascading, compound risks from both crises, increasing climate resilience while, at the same time preserving and restoring biodiversity.
- Public regional and local authorities are better able to prioritise investments and select effective options that allows to reduce/manage the risk and effects from both crises on the key community systems considered in the Mission implementation plan⁶⁹;
- improved regional and risk assessments that capture more effectively interdependencies between both crises and cascading, compound risks and tipping points.

Scope: Climate change and biodiversity loss are two interdependent crises that are complex, cascading, and compounding. Tackling them in an effective way must rely on a much more systemic approach than what has been achieved so far, which requires a better understanding of their interdependencies and feedback loops.

This topic aims at:

1. Better understanding how the climate and biodiversity crises interact, how they reinforce each other and how they are best addressed together.
2. Building tools and designing solutions to break siloes and address multiple risks stemming from the climate and biodiversity crises in a systemic way, maximising the synergies and minimising the trade-offs between both crises.

To achieve those goals, proposals should address **all of** the following aspects:

- Investigate case studies on cascading, compound climate risks triggered by extreme weather and climate events, as well as slow onset event in relation to changes in biodiversity, ecosystem services, food security, natural resources and water systems.
- Investigate case studies on how biodiversity loss accelerates climate change or reduces resilience to climate change (by increasing vulnerability and exposure).
- identify co-benefits of the implementation of nature-based solution for adaptation to climate change and for biodiversity conservation and restoration.

⁶⁸ Mission Implementation Plan of Mission Adaptation, page 7 box 1, link: [Implementation Plans for the EU Missions \(europa.eu\)](https://research-and-innovation.ec.europa.eu/system/files/2021-09/climat_mission_implementation_plan_final_for_publication.pdf)

⁶⁹ https://research-and-innovation.ec.europa.eu/system/files/2021-09/climat_mission_implementation_plan_final_for_publication.pdf

- Identify and evaluate maladaptation actions or negative impacts of climate adaptation options on other aspects or sectors, particularly on biodiversity and, conversely, identify and evaluate how biodiversity restoration actions might negatively impact climate adaptation capacity.
- Look into how the combination of climate adaptation and biodiversity actions reinforce or weaken each other and how the combined effect of adaptation and biodiversity actions differs from the sum of individual actions.
- All of the above should lead to the **identification of actions that simultaneously halt the loss of and restore biodiversity and enhance the resilience of societies and ecosystems in a changing climate.** In other words, proposals should provide concrete policy recommendations (e.g., the field of land use, spatial and urban planning, etc.) that address the biodiversity and climate crises in a more systemic way and that minimise trade-offs between different risks.

To ensure that the knowledge produced by the projects useful to policymakers, proposals should present a credible plan to engage with public administrations at various levels, including regional/local authorities and to pass on the information to them.

Proposals should include a mechanism and the resources to establish operational links and collaboration with Mission Implementation Platform⁷⁰; the Climate-ADAPT platform⁷¹; and the Joint Research Centre’s Risk Data Hub⁷².

Linking the project to the second European Climate Risk Assessment, if confirmed, or any relevant project from Horizon Europe is encouraged.

Additionally, proposals should build on and connect to other relevant projects funded by Horizon Europe, in particular projects CLIMAAX⁷³, MYRIAD-EU⁷⁴, ACCREU⁷⁵, SPARCCLE⁷⁶, as well as the projects funded by the “HORIZON-CL4-2023-SPACE-01-31: Copernicus for Atmosphere and Climate Change, including CO2”, and Horizon Europe Cluster 6 projects on biodiversity, including the European Partnership for Biodiversity (Biodiversa+), and on nature-based solutions.

Finally, proposals should explore synergies with the projects funded under the topic “HORIZON-MISS-2024-CLIMA-01-09: Systemic and cross-sectoral solutions for climate resilience, tailored to the specific needs of regions and local authorities” of this call.

⁷⁰ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

⁷¹ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the [European Environment Agency](#). <https://climate-adapt.eea.europa.eu/> /

⁷² <https://drmkc.jrc.ec.europa.eu/risk-data-hub/>

⁷³ <https://cordis.europa.eu/project/id/101093864>

⁷⁴ <https://cordis.europa.eu/project/id/101003276>

⁷⁵ <https://cordis.europa.eu/project/id/101081358>

⁷⁶ <https://cordis.europa.eu/project/id/101081369>

HORIZON-MISS-2024-CLIMA-01-05: Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the Mission on Adaptation to climate change successful proposals will contribute to a resilient and just transformation.

Projects results are expected to contribute **to all of** the following expected outcomes:

- Fostering societal transformation towards a just climate resilient society
- Improved capability of local and regional authorities in assessing and modelling the joint impacts of adaptation measures with regional transformative approaches.
- Improved knowledge on how to integrate adaptation measures with regional transformative approaches, in a systemic way on a macro-scale so to avoid maladaptation.
- Approaches to facilitate the application of available adaptation solutions while integrating other policy objectives are used by regional and local authorities and ready to be scaled up.
- A better understanding of the mechanisms that drive transformation of the social and economic systems towards climate resilience through social and user-driven innovation.
- Increased capacity of regional and/or local authorities, industries, businesses and citizens to make informed choices and play active roles in transition to climate resilience.

Scope: According to the IPCC, adaptation should be transformative, changing the fundamental attributes of a social-ecological system in anticipation of climate change and its impacts. However, the portfolios of climate change adaptation policies remain embryonic and fragmented today: instruments focus mostly on building adaptive capacity through the creation of locally relevant databases and monitoring systems, awareness raising and capacity building actions, education and training⁷⁷. For example, the increasing attention to ‘just resilience’ at strategic level is not matched with corresponding actions in the field and ‘issues of equity and social justice are still rarely considered in local-level adaptation planning and actions’; ‘many climate adaptation measures focus on technological interventions, without accounting for the social characteristics of cities, and thus fail to address the unequal burdens of climate impacts’.

Local adaptation to climate change measures should never be taken in isolation. They are part of the socio-economic fabric of the region and its bio-geographic constraints (for example, its position in a certain river basin, along a certain coastline or in mountainous areas).

This topic aims to better integrate the Mission on adaptation to climate change into the regional socio-economic policies and the just transition. This should be also coupled with raising the awareness of local authorities for co-creation opportunities between adaptation and other investments.

Proposals should address **all of** the following aspects:

- Develop knowledge on how to integrate adaptation measures with regional transformative approaches such as the Smart Specialisation and regional innovation Agendas.
- Understand triggers for and barriers to behavioural changes from citizens and economic sectors in relation with just transformation and adaptation to climate change.
- Operationalise knowledge and understanding of the effects of local available adaptation projects on just transition goals on the macro-scale (such as for example in large river basin and regions across borders) and avoid maladaptation.
- Develop methods and tools promoting win-win solutions for adaptation and the socio-economic activities such as residential areas, tourism, transport, and energy, are made available to regional and local authorities.
- Operationalise knowledge to encourage co-creation of adaptation measures between different economic sectors and political objectives (taking down silos).
- Assess the impacts on climate justice, equity, jobs and climate resilience for specific themes and adaptation programmes.
- Assess the impacts on ecosystems and the cascading effects on neighbouring regions.

⁷⁷ Harding & Nauwelaers (2023) Transformative Innovation for Climate Change Adaptation A mapping-based framework. under publication European Commission Joint Research Centre JRC134623

- The findings should be presented and tested in at least 3 regions/localities/communities with their neighbours, which include a mix of at least urban and industrial areas. The proposal should consider the opportunities offered by regions already engaged in the Mission (e.g., Charter Signatories, Community of Practice) as possible stakeholders.
- Develop a training module for the regions/localities/communities in the local languages on how to best include adaptation measures in their just transition policy. The training should be made accessible through the Mission Implementation platform.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals should connect to other relevant projects funded by Horizon- Europe, in particular on just climate resilience funded by the topic HORIZON-MISS-2024-CLIMA-01-08: Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)

Additionally, Proposals should include a mechanism and the resources to establish operational links and collaboration with Mission Implementation Platform and the Climate-ADAPT platform⁷⁸ as well as with other relevant initiatives such as the New European Bauhaus the Cohesion policy, and Regional smart specialisation strategies.

HORIZON-MISS-2024-CLIMA-01-06: Demonstration of approaches to improve bankability of solutions by design, addressing the co-benefits (mitigation and adaptation) to improve revenues streams

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 27.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: proposals must include demonstration activities to be carried out in 3 different regions/localities/

⁷⁸ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the [European Environment Agency](https://climate-adapt.eea.europa.eu/).<https://climate-adapt.eea.europa.eu/>

	communities located in 3 different Member States /Associated Countries, involving and including as beneficiaries in the consortium legal entities established in these three countries.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 7 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute **to all of** the following expected outcomes:

- climate resilience solutions have been developed, tested and brought closer to the market, thanks to improvements in the way their bankability is looked at and assessed by the private and public investors.
- regions, cities and local communities are empowered for and have actively participated in the development and testing of a whole range of transformative solutions for climate resilience.
- private investors direct participation in the Mission is significantly increased, stimulating increased private (co-)financing of climate adaptation.
- regions and local authorities have assured maintaining the solutions in place for the future, beyond the implementation duration of the project, contributing to fostering deployment of innovative solutions for climate resilience, the enabling of their diffusion and the removal of barriers for their uptake.

Scope: While evidence suggests that there is financing available to address climate adaptation⁷⁹, it is also evident that there is a shortage of bankable opportunities. Most promising climate adaptation projects rely on grants and public investments for their development. In many cases, while they benefit the public good, they struggle to prove any profitability and they risk getting abandoned at the end of the project when the initial financing comes to an end.

The European Investment Bank has shown that climate projects succeeding in securing investments are very rarely only addressing adaptation to climate change and in most of the cases they rather add a climate proofing component to a bigger project (for example, over dimensioning of an urban sewage system to take into account future scenarios of extreme rainfall events). The integration of climate change adaptation and mitigation theoretically provides co-benefits: efficiencies in the project implementation can provide capital savings (e.g., realising a green space for a city provides also water storage capacity in addition to a recreational opportunity); the mitigation component of the project can provide measurable outcomes in shorter timelines, reducing the scientific uncertainty of future climate scenarios. Furthermore, implementation can be faster as benefits can be faster monetized, and social acceptance facilitated.

⁷⁹ For example, by the EIB: [Climate Adaptation Investment Advisory Platform \(ADAPT\) \(eib.org\)](https://www.eib.org/en/press/2023/04/04230001-climate-adaptation-investment-advisory-platform-adapt)

Proposals should identify financially valuable cases of climate projects including climate adaptation dimension on top of other benefits, while safeguarding the principle of do-not significantly harm any environment objective (such as, biodiversity and ecosystems, freshwater etc). They should develop and test solutions, based on technological, social and / or business innovation, that deliver at once an increase of the resilience and adaptation capacity to climate change in the involved regions, cities, local authorities and communities, while also contributing to reduce or neutralise carbon emissions, improve water efficiency and/or safeguard biodiversity. To prove the financial viability of the proposed solutions, proposals should include business and/or investor partners and/or private sector actors (for example from the financial and / or insurance sector) in the consortium, interested in investing in the project (by participating directly in the consortium) as more resilient / less risky / more sustainable and assuring that they will maintaining the solutions in place beyond the duration of the project.

The proposed solution should address specific climate vulnerabilities identified as relevant at regional and local scale, with tailor-made responses and measures taking into account place-based data, socio-economic, identity characteristics and local governance.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/communities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To this purpose, while the demonstration is expected to take place in at least three regions, the proposals should already identify other regions/local authorities/ communities (sharing common climate challenges), where reapplication of the proposed approach will be suitable. Inclusion already in the proposal of at least three “replicating” regions/local authorities/communities, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is required; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions. Replicating regions are not expected to also conduct a demonstration or carry out on the ground activities already in the course of the project but they should at least prepare, the theoretical framework for implementing the replication through the lessons exchanged with the demonstration regions.

Proposals should build (when relevant) upon previous developed or existing knowledge and adaptation solutions, designed and developed from previous projects⁸⁰. Those previous projects and initiatives that address climate change adaptation can be funded by National programmes; EU programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe), as well as the LIFE and Cohesion programmes but can also come from beyond the EU. Moreover, proposals should look into opportunities to scale up the solutions demonstrated and to foster their broad deployment across the European Union through the LIFE programme, and its integrated projects in particular, and through the European Regional Development Fund programmes.

⁸⁰ See for instance NAIAD (<http://naiad2020.eu/>) NATURANCE (<https://www.naturanceproject.eu/>) or Invest4Nature (<https://invest4nature.eu/>)

Projects should also connect to the work of the Climate Resilience Dialogue⁸¹ and link to the EU's sustainable finance agenda and taxonomy work and the use of sustainable investment ratings, when relevant.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform⁸² and the Climate-ADAPT platform⁸³ and should also link with projects awarded under the topic HORIZON-MISS-2022-CLIMA-01-02 on “Unlocking of financial resources for investments into climate resilience”.

Projects funded under this topic will get direct access to participate in the Mission Community of Practice and to the networking activities supported by the Mission Implementation Platform. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources.

In addition, projects will be requested to feed results and contribution to progress towards the objectives of the Mission Implementation Platform, as the central Mission action for monitoring, support and visualisation of the Mission progress in Regions in EU Member States and Associated Countries. Under the facilitation of Mission Implementation Platform, projects might provide an ideal space to improve cooperation with the European Investment Bank (EIB) on adaption finance. Regions participating in the projects will also be required to feed their results to the Climate-ADAPT and EEA assessments. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

HORIZON-MISS-2024-CLIMA-01-07: Demonstration of solutions specifically suited to rural areas and small/ medium size population local communities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.50 million.
<i>Type of Action</i>	Innovation Actions

⁸¹ https://climate.ec.europa.eu/eu-action/adaptation-climate-change/climate-resilience-dialogue_en

⁸² Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

⁸³ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the [European Environment Agency](https://climate-adapt.eea.europa.eu/) <https://climate-adapt.eea.europa.eu/>

<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: proposals must include demonstration activities to be carried out in 3 different regions/localities/communities located in 3 different Member States /Associated Countries, involving and including as beneficiaries in the consortium legal entities established in these three countries.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 7 by the end of the project – see General Annex B.

Expected Outcome: Projects results are expected to contribute to **all of** the following expected outcomes:

- communities in rural areas provide examples for reapplication on how to become better prepared for the anticipated effects of climate change, as they have designed and experimented measures and implemented interventions that increase resilience.
- small and medium size local communities⁸⁴ have been directly involved in development and testing of transformative solutions, which improve their capacity to identify and implement solutions that improve climate resilience of their territories, becoming active actors of change.

Successful proposals will support the European Green Deal, the Adaptation Strategy, the Mission on Adaptation to climate change and the implementation of the long-term vision for the EU’s rural areas.

Scope: While many larger cities and regions have identified the potential impacts of climate change in their territories and have in many cases already developed adaptation scenarios, their smaller and medium-sized counterparts often lack the necessary resources for conducting climate risks analysis and planning and have so far been limited in addressing climate risks effectively. As a very large number of localities are indeed small or medium in size, with large and rural territories, their lack of preparedness translates in a crucial weakness of the overall continent preparedness and response to the changing climate. The shortage of skilled labour and in particular of experts with climate assessment and environmental skills prevent a majority of municipalities from implementing local investments⁸⁵.

This capacity limitation, coupled with the typical large territorial responsibility of the involved authorities and the very diverse risks they are exposed, makes in many cases difficult to leverage efficiencies of scale as it is the case in more densely populated areas. This has unluckily translated in many cases into more deadly impacts of extreme weathers events in relation to the population exposed.

⁸⁴ defined as towns with between 5000 and 50000 inhabitants – ESPON TOWN project - [TOWN – Small and Medium-Sized Towns | ESPON](#)ect -

⁸⁵ Skills shortage is delaying the green transition, EIB Municipality Survey shows

Proposals should identify approaches and innovative solutions leading to an increase of the resilience and adaptation capacity to climate change which are particularly suitable for implementation by small and medium local authorities and the rural context. These solutions could include technological, social and business-related aspects or a combination of those. Nature-based solutions should be explored as priority and be at the very heart of the development whenever possible. Moreover, particular attention should be given to the potential of digital solutions in a rural or small/medium size population entity context, to also support their twin digital transition. Opportunities of circular economy to increase resilience and reduce dependencies should be seized⁸⁶.

The proposed solutions should specifically address the most urgent climate risks identified at the local scale, with tailor-made responses and measures taking into account local specificities, such as, socio-economic, identity characteristics and governance. Alongside the solutions, the proposal should support small and medium local authorities to close skills gaps and strengthen in-house capabilities for climate adaptation. To best focus the approaches and solutions to the local challenges, the proposal is expected to clearly identify the type of actors it addresses, being those either rural areas or small sized urban areas.

The participation of small and medium-sized local authorities in the consortium is strongly encouraged and would be evaluated positively as this can support the development in-house capacities and skills. However, as the capacity and availability for engagement of small / medium size local communities and in the rural area might be too limited to directly participate in the consortium, the proposal should at a minimum include specific considerations on how to facilitate their engagement and how their needs are reflected. This could take, for example, the form of a board or of a consultation body where they are directly engaged singularly or in association and/or grouping between themselves, should this be the preferred approach and form for the local authorities to delegate specific local competences, or could be achieved potentially leveraging the support already put in place by the Mission Implementation Platform⁸⁷.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/communities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To this purpose, while the required demonstration is expected to take place in at least three locations, the proposals should already identify other regions/local authorities/ communities, where reapplication of the proposed approach will be suitable as sharing common climate change challenges. Inclusion already in the proposal of at least three “replicating” regions/local authorities/communities, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is required; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions. Replicating regions/local authorities/communities are not expected to

⁸⁶ See as reference the Circular Cities and Regions Initiative <https://circular-cities-and-regions.ec.europa.eu>

⁸⁷ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](https://mip4adapt.europa.eu)

also conduct a demonstration or carry out on the ground activities in the course of the project but they should at least prepare already the theoretical framework for implementing the replication through the lessons exchanged with the demonstration regions.

Proposals should build (when relevant) upon previous developed or existing knowledge and adaptation solutions, designed and developed from previous projects, including from beyond EU, addressing climate change adaptation and funded by EU and National programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme. Synergies with other funding sources (EU and national) should be sought, in order to support common approach towards climate adaptation, sustainability, transfer of knowledge and innovative solution and including to identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe through other programmes such as the LIFE programme, and its integrated projects in particular, the European Regional Development Funds, the European Agricultural Fund for Rural Development, or the Just Transition Fund.

Additionally, proposals should connect to other relevant projects funded by Horizon- Europe, in particular on just climate resilience and transformative approach funded by the topic HORIZON-MISS-2024-CLIMA-01-05: Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation. Synergies and cooperation could also be beneficial with the projects funded under the topic HORIZON-CL6-2024-COMMUNITIES-02-1-two-stage: Innovating for climate-neutral rural communities by 2050.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation and the Climate-ADAPT⁸⁸ platforms.

Projects funded under this topic will get direct access and are expected to contribute into the Mission Community of Practice and to the networking activities supported by the Mission Implementation Platform. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources.

In addition, projects will be requested to feed results and contribution to progress towards the objectives of the Mission to Mission Implementation Platform, as the central Mission action for monitoring, support and visualisation of the Mission progress in Regions in EU Member States and Associated Countries. Regions participating in the projects will also be required to feed their results to the Climate-ADAPT and EEA assessments. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

⁸⁸ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the European Environment Agency. <https://climate-adapt.eea.europa.eu/>

HORIZON-MISS-2024-CLIMA-01-08: Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: proposals must include demonstration activities to be carried out in 3 different regions/localities/communities located in 3 different Member States /Associated Countries, involving and including as beneficiaries in the consortium legal entities established in these three countries.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 7 by the end of the project – see General Annex B.

Expected Outcome: Projects results are expected to contribute to **all of** the following expected outcomes:

- Examples of equitable adaptation measures are made available for replication, fostering just resilience transformation.
- Appropriate guidance for decision-makers is produced on equitable adaptation options design and implementation, shared and made available for wide reapplication.
- Regional and local public administrations increase their capacity to involve, understand and cater for the needs of vulnerable and marginalised groups.

Scope: Despite efforts to adapt to climate change in Europe, the most vulnerable people in society are still the most affected, due to their age, health, place of residence, or socio-economic status ⁸⁹, while often contributing the least to climate change. Projected climate change, an ageing society and persisting socio-economic inequalities mean that differences in vulnerability and exposure to climate change are likely to continue. In addition, adaptation responses may worsen existing inequalities or even create new ones.

⁸⁹ EEA Briefing no. 09/2022 – “Towards just resilience: leaving no one behind when adapting to climate change” - ISBN: 978-92-9480-479-2 - ISSN: 2467-3196 - doi: 10.2800/043692

Vulnerable and marginalised groups are particularly exposed to the impacts of climate change, especially high temperature and flooding. Moreover, nearly half of city hospitals and schools are in areas with strong urban heat island effects, thus exposing their vulnerable users to high temperatures. With approximately 10% of schools and 11% of hospitals across Europe located in potential flood-prone areas, the areas at higher risk of floods tend to have higher proportions of disadvantaged people than areas at lower risk of floods.

The climate adaptation measures in place do not benefit everyone in society to the same extent. For example, the most vulnerable groups tend to have lower access to green spaces and are least able to pay for flood insurance or flood-proofing measures.

Proposals should identify, develop, test and demonstrate equitable adaptation actions and solutions, increasing adaptive capacity, reducing vulnerability and risks and addressing specific climate vulnerabilities identified as relevant at regional and local scale, taking into account place-based climate data, socio-economic information, and local governance.

Proposals should specifically address how the most vulnerable⁹⁰ groups in relation to their age, gender, health, socio-economic status or other social vulnerability characteristic would be catered for. This should include how these groups are identified; how they are meaningfully included in the development of the adaptation actions (process); and in what ways they are expected to benefit from these actions (outcome).

Regional and/or local authorities should be directly involved in the development of equity-oriented policies and measures so as to assure their up-take during the course of the project and their continuous application beyond the end of the project. As a limited capacity and availability for engagement of the target groups might prevent them from directly participating in the consortium, the proposal should include specific considerations on how to ensure that insights from the target group are reflected in the project; how solutions can be co-designed with the target group; and on how the outcomes and results can be used on the ground. Proposals should also leverage the methodologies and approaches toolbox for citizens engagement made available by other projects [in particular CLIMAS⁹¹ and AGORA⁹² funded by the Horizon Europe Mission Work Programme], and initiatives [such as the JRC Competence Centre on Participatory and Deliberative Democracy], and by the Missions Implementation Platform⁹³.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/communities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To this purpose, while the required demonstration is expected to take place in at least three regions / local communities, the

⁹⁰ Vulnerability as defined by the IPCC as the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt. In line with the EU Gov reporting guidelines (Art 17 d, 2021b), vulnerable groups definition also covers gender, displaced peoples, minorities & other.

⁹¹ <https://cordis.europa.eu/project/id/101094021>

⁹² <https://cordis.europa.eu/project/id/101093921>

⁹³ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

proposals should already identify other regions/local communities/ communities, where reapplication of the proposed approach will be suitable as sharing common climate change challenges. Inclusion already in the proposal of at least three “replicating” regions/local authorities/communities, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is required; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions. Replicating regions are not expected to also conduct a demonstration or carry out on the ground activities in the course of the project but they should at least prepare in the course of the project the theoretical framework for implementing the replication through the lessons exchanged with the demonstration regions.

Proposals should build (when relevant) upon existing knowledge and lessons learnt on questions of climate justice, vulnerability and inequality including from other regions in the world. Similarly, they should build on adaptation solutions designed and previously developed from previous projects addressing climate change adaptation, funded by EU and National programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme and also beyond EU. Synergies with other funding sources (EU and national) should be sought, in order to support common approach towards climate adaptation, sustainability, transfer of knowledge and innovative solution and including to identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe through other programmes such as the LIFE programme, and its integrated projects in particular, the European Regional Development Funds or the Just Transition Fund. Regions with Territorial Just Transition Plans are encouraged to participate in this call to strengthen their climate adaptation capacity, secure the sustainability of regional investments and avoid maladaptation.”

Proposals should include a mechanism and the resources to establish operational links and collaboration with Mission Implementation Platform and Climate-ADAPT⁹⁴.

Projects funded under this topic will get direct access to participate in the Mission Community of Practice and to the networking activities supported by the Mission Implementation Platform. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources. In addition, projects will be requested to feed results and contribution to progress towards the objectives of the Mission to the Mission Implementation Platform, as the central Mission action for monitoring, support and visualisation of the Mission progress in Regions in EU Member States and Associated Countries. Regions participating in the projects will also be required to feed their results to the Climate-ADAPT and EEA assessments. Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

⁹⁴ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the European Environment Agency.<https://climate-adapt.eea.europa.eu/>

HORIZON-MISS-2024-CLIMA-01-09: Systemic and cross-sectoral solutions for climate resilience, tailored to the local needs of regions and local authorities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 27.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: proposals must include demonstration activities to be carried out in 3 different regions/localities/communities located in 3 different Member States /Associated Countries, involving and including as beneficiaries in the consortium legal entities established in these three countries.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 7 by the end of the project – see General Annex B.

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the Mission on Adaptation to climate change, successful proposals will contribute to adapt to climate change in a more systemic way.

Projects results are expected to contribute to all of the following expected outcomes:

- regions and communities are empowered and have actively participated to the development and testing of a range of transformative solutions, which are fit to address local vulnerabilities and risks.
- regional and local public administrations increase their foresight capacity and anticipate and prepare better for climate disruptions.
- cross-sectorial climate resilience solutions, which can systemically transform our society and support its preparedness to climate change, have been developed, tested and brought closer to the market.

Scope: The growing complexity, interdependencies and interconnectedness of modern societies and economies require that climate action is tackled with a systemic approach. Effectively adapting to climate change relies on cross-sectoral approaches, looking at the system as a whole, and on the inclusion of a variety of actors.

Proposals should integrate multi-faceted technological, digital, business, governance and environmental aspects with social innovation into the development of solutions contributing to increase preparedness to changing climate for specific regions, cities or local communities. For example, they should assess and identify management solutions that best minimise and compensate the loss of ecosystem services (e.g., water cycling and cooling that were previously provided by soil and trees) while improving climate preparedness. The proposed solution should address climate risk identified as relevant at regional and local scale, with tailor-made responses and measures taking into account place-based data, socio-economic, identity characteristics, local governance and the regional sustainable and smart specialization strategies when available.

In its approach, the proposed solution should go 'far beyond addressing a specific sector', taking into account and addressing wide-ranging impacts. It should take a systemic approach, looking at the interconnections and interdependencies between them. For example, proposals could explore solutions addressing the interlinkages between climate, water, food, soil, biodiversity loss and others, which form a nexus where resource use and availability rely heavily on one another. Considering the current increasing trend of water scarcity (periods of drought followed by storms and floods, with a decreasing overall annual precipitations) tackling the pollution problem linked to these extreme climate events would be relevant. Another example of systemic approach can relate to the integration of multilevel planning, which integrates spatial and urban planning with the design of different services such as transport, mobility, energy, connectivity in a city. Interesting examples in this sense may come for instance from the New European Bauhaus initiative, which intends to accelerate the green transition by combining sustainability with inclusion and aesthetics/quality of experience.

Interconnections and interdependencies need to be well understood and are further complicated as amplitude of climate change in the future is uncertain. In the medium and long term, for example, we know that climate change will affect water availability and crop yields with wide-ranging implications and that certain adaptation options (such as broader use of desalination for provision of drinking water to cope with water scarcity) can be energy intensive which compounds the problem of global warming, have local impacts on coastal and marine ecosystems, have side-effects that impact the environment (as is the case of brine from desalination, or water abstractions to produce hydrogen). Furthermore, it is not known to which level those adaption options could be implemented locally based on the relevance of the expected impacts or would be bashed away.

Proposals should look to how tackle and possibly minimise trade-offs, maximise co-benefits and leverage opportunities a systemic approach offers to address the challenges of a changing climate in the specific local context. In doing this, they should produce state-of-the-art-analysis in a multidisciplinary approach addressing the science-policy nexus; they should go beyond theoretical research and/or theoretical discussions or the pure understanding and quantifying of the links between the different elements and sectors. On the contrary, proposals should turn them into operational and practical insights and tangible solutions experimented on the regional and local grounds, clearly addressing trade-offs and co-benefits, with a view

of achieving optimum outcomes. Proposals should also consider how to turn the proposed solutions into new standards so to allow faster uptake at scale.

In addition, proposals should mobilise and include all value chain actors and pay careful attention to matching innovators and solutions providers with end-users/regions interested in testing and further developing the proposed solutions on the ground; they should also foster the development of business models that can support the sustainability of the proposed solutions.

Under the Mission approach, collaborations to develop and test effective solutions between regions/local authorities/communities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To this purpose, while the required demonstration is expected to take place in at least three regions, the proposals should already identify other regions/local authorities/communities, where reapplication of the proposed approach will be suitable as sharing common climate change challenges. Inclusion already in the proposal of at least three “replicating” regions/local authorities/communities, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories is required; this could take the form of inclusion in the consortium of one or more partners providing support for the technical exchanges and the knowledge uptake in the “replicating” regions. Replicating regions are not expected to also conduct a demonstration or carry out on the ground activities in the course of the project but they should at least prepare in the course of the project the theoretical framework for implementing the replication through the lessons exchanged with the demonstration regions.

Proposals should build (when relevant) upon previous developed or existing knowledge and adaptation solutions, designed and developed from previous projects, including from beyond EU, addressing climate change adaptation and funded by EU and National programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as the LIFE programme. Synergies with other funding sources (EU and national) should be sought, in order to support common approach towards climate adaptation, sustainability, transfer of knowledge and innovative solution and including to identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe through other programmes such as the LIFE programme, and its integrated projects in particular, the European Regional Development Funds or the Just Transition Fund.

Proposals should include a mechanism and the resources to establish operational links and collaboration with Mission Implementation Platform⁹⁵ and Climate-ADAPT⁹⁶ (. Proposals should also explore synergies with the projects funded under the topic “HORIZON-MISS-2024-CLIMA-01-04: Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions” of this call.

⁹⁵ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](https://europa.eu)

⁹⁶ The European Climate Adaptation Platform Climate-ADAPT is a partnership between the DG Climate Action and the [European Environment Agency](https://climate-adapt.eea.europa.eu/).<https://climate-adapt.eea.europa.eu/>

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Projects funded under this topic will get direct access to participate in the Mission Community of Practice and to the networking activities supported by the Mission Implementation Platform. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. To this extent, proposals should provide for dedicated activities and earmark appropriate resources.

In addition, projects will be requested to feed results and contribution to progress towards the objectives of the Mission to Mission Implementation Platform, as the central Mission action for monitoring, support and visualisation of the Mission progress in Regions in EU Member States and Associated Countries. Regions participating in the projects will also be required to feed their results to the Climate-ADAPT and EEA assessments.

Applicants should acknowledge this request and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission governance.

Mission: Cancer

The goal of the Mission on Cancer is to improve the lives of more than 3 million people by 2030, through prevention, cure and for those affected by cancer including their families, to live longer and better. The objectives include: Understand; Prevent what is preventable; Optimise diagnostics and treatment; Support quality of life; Ensure equitable access in all aforementioned areas. The Mission on Cancer will address all cancers including poorly-understood cancers⁹⁷ in men and women, cancers in children, adolescents and young adults as well as in the elderly, cancers in socio-economically vulnerable populations, living in either cities, rural or remote areas, across all Member States and Associated countries.

The Mission on Cancer is implemented using a health-in-all policies approach⁹⁸; through infrastructure support; regional, social and citizen community development; through investments; support and commitments from public and private sources, including from Member States, Associated countries and industry; through cooperation with third countries; and through synergies with other existing EU programmes including EU4HEALTH, EURATOM, Digital Europe, Erasmus+, the EU Strategic Framework on Health and Safety at Work 2021-2027 and other initiatives related to cancer.

It also relates to the European Green Deal, including the Farm to Fork strategy⁹⁹. The mission proposes research and policy directions and objectives to identify effective strategies for the development and implementation of cancer prevention, including on environmental factors (e.g. exposure to workplace carcinogens, air pollution, unhealthy diet, nutrition and low physical activity).

Furthermore, it is also in line with the industrial¹⁰⁰ and digitalisation strategy¹⁰¹. The mission proposes a further upscaling and digitalisation of services, innovation in diagnostics and interventions, and establishing living labs, contributing to the positive impact of efforts by industry and SMEs on the health of citizens. Envisaged opportunities are in the fields of: cancer biomarkers; cloud computing and digital applications, smart apps/sensors. The mission also supports the integration of AI, machine learning and deep learning approaches to facilitate a better understanding of cancer, to improve prevention screening and early detection, diagnosis, clinical decision-making, administration of combinational therapies, and clinical management of patients living with and after cancer.

⁹⁷ Includes refractory cancers or cancer subtypes, at any stage of the disease in any age group and part of society with a 5-year overall survival that is less than 50% from time of diagnosis.

⁹⁸ Health in All Policies is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity.
https://www.who.int/social_determinants/publications/health-policies-manual/key-messages-en.pdf

⁹⁹ https://ec.europa.eu/food/farm2fork_en

¹⁰⁰ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

¹⁰¹ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en

Calls for proposals under this mission should contribute to setting out a credible pathway for implementing the Mission on Cancer, thereby contributing to mission objectives.

Proposals for topics under this Mission should set out a credible pathway to improving Cancer control, and more specifically to all of the following impacts:

- Improve understanding of the development of cancer in the context of the environment, work, and lifestyle in the broadest possible sense,
- Enhance cross-policy cancer prevention strategies,
- Optimise the diagnostics and treatment of cancer based on the principle of equitable access,
- Improve the quality of life of cancer patients, survivors and their families through widely analysing all key factors and needs that are related to the quality of life,
- Accelerate the digital transformation of research, innovation and health systems.

The implementation plan specifies the goal and four main objectives as well as implementation details of the Mission on Cancer¹⁰².

In the calls described below, the Commission envisages several actions¹⁰³.

For 2023 on the Cancer Mission objective *Understanding*, the Commission plans to address tumour-host interactions to enhance prevention, treatment and care interventions in poorly-understood childhood as well as adult cancer patients. On the Cancer Mission objective *Prevention*, the Commission foresees an action on behavioural change. On the Cancer Mission objective *Diagnosis and treatment*, the Commission envisages an action on minimally invasive diagnostics, which will also improve the quality of life. On the Cancer Mission objective *Quality of life*, the Commission envisages to enhance the quality of life for survivors of childhood cancer by setting up oncology-centred living labs. The society will benefit from a reduced burden of cancer and solving healthcare barriers.

For 2024, on the Cancer Mission objective *Understanding*, the Commission plans to support the implementation of a broad portfolio of cancer use cases, preparing the operationalisation of the UNCAN.eu research data platform. On the Cancer Mission objective *Prevention*, the Commission foresees an action to support the development of tests for early detection of heritable cancers. On the Cancer Mission objective *Diagnosis and treatment*, the Commission envisages an action to facilitate coordination among charities and other relevant stakeholders for the establishment and implementation of a funding programme for pragmatic clinical trials. On the Cancer Mission objective *Quality of life*, the Commission envisages to enhance the quality of life for survivors of adolescent and young adult (AYA) cancer by improving the

¹⁰²

https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/cancer_implementation_plan_for_publication_final_v2.pdf

¹⁰³ The listed areas for potential actions are tentative and non-binding.

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understanding and management of late effects of treatments. In addition, under the same objective, the Commission will support the development of a pilot information portal for cancer patients, survivors and caregivers, which will form the basis of the future European Cancer Patients Digital Centre.

Lastly, the Commission envisages to foster the dialogue at national level between relevant actors and stakeholders, for example to further support the establishment and implementation of both the UNCAN.eu and ECPDC digital platforms.

The following call(s) in this work programme contribute to this Mission:

Call	Budgets (EUR million)		Deadline(s)
	2023	2024	
HORIZON-MISS-2023-CANCER-01	110.68		12 Apr 2023
HORIZON-MISS-2024-CANCER-01		119.00	18 Sep 2024
Overall indicative budget	110.68	119.00	

Call - Research and Innovation actions supporting the implementation of the Mission on Cancer

HORIZON-MISS-2023-CANCER-01

Conditions for the Call

Indicative budget(s)¹⁰⁴

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰⁵	Indicative number of projects expected to be funded
		2023		
Opening: 12 Jan 2023 Deadline(s): 12 Apr 2023				
HORIZON-MISS-2023-CANCER-01-01	RIA	36.68 ¹⁰⁶	7.00 to 12.00	4
HORIZON-MISS-2023-CANCER-01-02	RIA	25.00 ¹⁰⁷	4.00 to 6.00	5
HORIZON-MISS-2023-CANCER-01-03	RIA	43.00 ¹⁰⁸	6.00 to 8.00	7
HORIZON-MISS-2023-CANCER-01-04	IA	6.00 ¹⁰⁹	Around 6.00	1
Overall indicative budget		110.68		

General conditions relating to this call

¹⁰⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

¹⁰⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹⁰⁶ Of which EUR 1.39 million from the 'Digital, Industry and Space' budget and EUR 34.74 million from the 'Health' budget and EUR 0.55 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁰⁷ Of which EUR 0.56 million from the 'Digital, Industry and Space' budget and EUR 23.68 million from the 'Health' budget and EUR 0.77 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁰⁸ Of which EUR 1.32 million from the 'Digital, Industry and Space' budget and EUR 40.72 million from the 'Health' budget and EUR 0.96 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁰⁹ Of which EUR 0.13 million from the 'Digital, Industry and Space' budget and EUR 5.68 million from the 'Health' budget and EUR 0.18 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CANCER-01-01: Addressing poorly-understood tumour-host interactions to enhance immune system-centred treatment and care interventions in childhood, adolescent, adult and elderly cancer patients.

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 36.68 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply:

	In order to ensure a balanced Cancer Mission project portfolio and to achieve the Mission’s goal, grants will be awarded to applications not only in order of ranking but also to at least one application that fully addresses cancer in children, adolescents or young adults (meaning people between birth and the age of 24), provided that the application attains all thresholds.
<i>Exceptional page limits to proposals/applications</i>	The page limit of the applications is 70 pages.

Expected Outcome: Proposals under this topic should aim to deliver results that are directed and tailored towards, and to contribute to all of the following expected outcomes:

- Researchers and health professionals understand tumour-host processes that spur cancer development and progression in patients and how this forms the basis for the future design and optimisation of treatment or care interventions for poorly-understood cancers and their subtypes, including in children, adolescents, adults and the elderly.
- Researchers, innovators, and professionals from different disciplines and sectors ensure accessibility and re-usability of their data, models, tools and technology to support the UNCAN.eu¹¹⁰ platform, which is currently in preparation.
- Health policy makers are aware of an improved understanding of tumour-host interactions in cancer patients that would allow the co-design of cancer-related innovation and health policies in the Member States, Associated Countries and beyond, including those aimed at delivering treatment and care developing care solutions for and with cancer patients.

Scope: This topic will contribute to the achievement of the Mission’s objective to better understand cancer by studying tumour-host interactions underpinning the development and progression of cancer, including in advanced localised or metastatic disease. The focus should be on poorly-understood¹¹¹ cancers and their subtypes in children, adolescents, adults and the elderly.

Despite important progress and recent successes with, for example immune system-centred therapeutic interventions¹¹² understanding of tumour-host interactions in cancer patients remains incomplete. Challenges include uncovering which patients benefit from interventions or risk potentially debilitating side-effects, as well as ensuring affordability of interventions

¹¹⁰ Under the Mission work programme a Europe-wide research and data platform, UNCAN.eu, will be established, utilising existing, relevant research infrastructures. Once operational, the platform should enable integration of innovative models and technologies with longitudinal patient data, data beyond research, or the health domain, samples and biomarkers for translation to patients. The 4.UNCAN.eu project is preparing a blueprint. See: <https://cordis.europa.eu/project/id/101069496>

¹¹¹ Includes refractory cancers and their subtypes, at any stage of the disease in any age group and part of society, with a 5-year overall survival less than 50% from time of diagnosis.

¹¹² Such as cell-based and oncolytic viral therapy, therapeutic antibodies, therapeutic DNA, RNA and peptide vaccines; and multimodal interventions combining surgery, chemotherapy, and radiotherapy with immune system-centred interventions

across Europe, across all age groups. This requires a new dimension and level of investment in innovative research with a view to intercept disease. It also requires investing in high-risk, high-reward research projects to deliver a proof-of-concept of potentially disruptive new approaches. These approaches include monitoring treatment and disease progression and disclosing disease pathways, such as through single-cell -omics technologies, innovative disease models, advanced imaging technologies, or artificial intelligence and machine learning.

Proposals should address all of the following:

- Obtain a systematic understanding of processes underpinning tumour-host interactions in poorly-understood cancers and their subtypes in childhood, adolescent, adult and elderly cancer patients. Applicants should take into account social, ethnical, cultural and gender aspects, with a focus on the transition from a healthy state to cancer initiation and progression, including in advanced localised or metastatic disease (where relevant), using any relevant *in silico*, *in vitro*, *in vivo*, *ex vivo*, preclinical, or clinical disease models as well as computational, simulation and visualisation tools and technologies where appropriate.
- Combine knowledge and high-quality data from biomedical and clinical studies, and real-world data, using advanced digital tools and technologies such as computer modelling and artificial intelligence with the objective to understand relevant tumour-host interactions and their impact on treatment and care solutions for cancer patients.
- Demonstrate access to and use of multiple comprehensive databases in and beyond health research or health domains. Proposals should build on longitudinal clinically annotated, stratified patient cohorts, case-control studies, biobanks, registries and many other initiatives¹¹³, use state-of-the art digital and other tools for data analyses and modelling, wherever possible.
- Based on results obtained, propose socially acceptable, affordable novel treatment or care interventions or health technologies for uptake into health systems in the areas of treatment or care, using approaches that involve the end-user using participative research models.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Due consideration should be given to EU-funded initiatives such as: HealthyCloud¹¹⁴, EOSC-Life¹¹⁵, the Photonics21 partnership – including its Photon Hub Europe support service¹¹⁶, the

¹¹³ Many retrospective, prospective cohorts, case-control studies and initiatives -in health and well-beyond health- at local, regional, national, European and international level, exist.

¹¹⁴ <https://healthycloud.eu/>

¹¹⁵ <https://www.eosc-life.eu>

¹¹⁶ <https://www.photonics21.org/index.php>; Photon Hub Europe: <https://www.photonhub.eu>

Innovative Health Initiative partnership¹¹⁷, the European Health Data Space (EHDS) Joint Action¹¹⁸, 1+ Million Genomes (1+MG)¹¹⁹ / Beyond One Million Genomes (B1MG)¹²⁰, the EBrains¹²¹ research infrastructure and the EIT Health Knowledge Innovation Community initiatives¹²². Links with the research infrastructure projects EOSC4cancer¹²³ and canSERV¹²⁴, as well as projects funded by other EU programmes¹²⁵ are encouraged.

Successful applicants will be asked to liaise with these and other initiatives where applicable¹²⁶. The successful proposals are expected to liaise with and build on resources made available by the Knowledge Centre on Cancer (KCC)¹²⁷ in order to foster EU alignment and coordination.

The Commission will facilitate Mission-specific coordination through future actions, notably fostering exchanges with other proposals funded under this topic. Hence, successful applicants will be asked to join the 'Understanding' cluster for the Mission on Cancer established in 2022¹²⁸. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate.

Therefore, proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples of these activities are the organisation of joint workshops, the exchange of knowledge, the establishment of best practices, or the initiation of joint communication activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2023-CANCER-01-02: Enhance primary cancer prevention through sustainable behavioural change

Specific conditions

¹¹⁷ <https://www.ih.europa.eu/>

¹¹⁸ <https://tehdas.eu/>

¹¹⁹ <https://digital-strategy.ec.europa.eu/en/policies/1-million-genomes>

¹²⁰ <https://b1mg-project.eu/>

¹²¹ <https://ebrains.eu/>

¹²² <https://eithealth.eu/who-we-are/>

¹²³ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101058427/program/43108390/details>

¹²⁴ <https://cordis.europa.eu/project/id/101058620>

¹²⁵ E.g. pilot projects on artificial intelligence for diagnosis and treatment of paediatric cancer selected for funding from the calls PPPA-AIPC-2020 and PPPA-AIPC-2021; Joint Action “JANE” under the EU4Health programme (“Network of Comprehensive Cancer Centres: Establishment of new EU Network of Expertise on Cancers and Cancer Conditions”).

¹²⁶ Applicants are not expected to contact these initiatives before the submission of proposals.

¹²⁷ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR), see https://knowledge4policy.ec.europa.eu/cancer_en

¹²⁸ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: In order to ensure a balanced Cancer Mission project portfolio and to achieve the Mission's goal, grants will be awarded to applications not only in order of ranking but also to at least one application that fully addresses cancer in children, adolescents or young adults (meaning people between birth and the age of 24), provided that the application attains all thresholds.

Expected Outcome: Enhance interventions and scale these up in different geographical, socio-economic and cultural settings as well as in different environmental conditions. Proposals should aim to deliver results through sustainable behavioural change, which are directed and tailored towards and contribute to all of the following expected outcomes:

- Citizens, including people at high risk of developing cancer, cancer patients and survivors benefit from health promotion and primary prevention programmes that reflect behavioural change and psycho-social approaches tailored to the specific needs of different population groups both in urban and rural areas;
- Citizens, including people at high risk of developing cancer, cancer patients and cancer survivors benefit from easy-to-understand and accessible, tailored recommendations and support programmes on sustainable behavioural changes¹²⁹, including psycho-social care, that are easy to implement in their daily lives, including through the use of digital tools to facilitate healthier choices;
- Regional, local and national policymakers and authorities, promote healthy environments¹³⁰ as well as design and implement the most suitable, sustainable health

¹²⁹ For example: OECD (2017), Behavioural Insights and Public Policy: Lessons from Around the World, OECD Publishing, Paris, <https://doi.org/10.1787/9789264270480-en>; https://knowledge4policy.ec.europa.eu/behavioural-insights/topic/behavioural-insights-health_en

¹³⁰ Such as living, work, study and urban environments, etc.

promotion and prevention programmes, which take account of behavioural change and psycho-social requirements.

Scope: With about 40% of cancer cases being preventable¹³¹, prevention represents the most cost-efficient and sustainable cancer control strategy. The Mission on Cancer and Europe's Beating Cancer Plan aim to exploit the potential of primary cancer prevention by addressing key risk factors and health determinants¹³².

Achieving sustainable behavioural change can play a major role in enhancing the impact of health promotion and preventive measures and thus contribute to reducing the number of preventable cancer cases. Despite having access to peer-reviewed existing evidence and recommendations¹³³ on cancer prevention, widely accepted by policymakers across the EU, their uptake to effectively change behaviour needs to be enhanced.

In the past, evidence on how to achieve behavioural change has not been sufficiently taken into account when designing health promotion and primary prevention programmes. This is because behavioural change is a complex challenge, which is subject to manifold influences that could be better understood at individual and systems level, through public engagement and interdisciplinary approaches.

This requires a systemic approach involving all the main actors at different levels who can facilitate sustainable behavioural change including public authorities, policymakers, health care providers, employers, educational institutions, industry, non-governmental consumer and patient organisations, citizens and media.

Investments are needed to establish, scale-up or improve health promotion and cancer prevention programmes through increased awareness among citizens about cancer risk factors and related behavioural change, with a focus on hard-to-reach and vulnerable groups of the population.

Proposals should further address all of the following:

- Develop, test and evaluate the effective impacts of innovative primary cancer prevention programmes, possibly through the use of novel, including digital, solutions¹³⁴, for different population groups which should be involved in the design;
- Provide evidence-based cost-benefit analyses of the proposed programmes;
- Identify and address specific bottlenecks and barriers that prevent the uptake of sustainable behavioural change for different target populations, taking into account

¹³¹ Soerjomataram et al. (2018). <https://pubmed.ncbi.nlm.nih.gov/30445359/>

¹³² All known risk factors and health determinants, including socio-economic and commercial ones, e.g.: tobacco; alcohol; genetics; bacterial and viral pathogens; chemicals from air, soil, water, and food; physical inactivity; diet and nutrition; gut dysbiosis; behavioural patterns; exposure to ionising radiation, UV, radon; occupational exposure; socio-economic background, education, employment.

¹³³ For example: <https://policydatabase.wcrf.org/>

¹³⁴ Such as e-learning platforms, apps and wearables

sectorial, socio-economic, cultural and geographical¹³⁵ conditions as well as gender and age;

- Identify the most appropriate actors and develop incentives promoting sustainable behavioural change, such as increasing the uptake of the European Code against Cancer¹³⁶;
- Assess and validate parameters and factors facilitating or impeding behavioural change, and measure their impact;
- In addition, attention should be paid to health determinants, including occupational and environmental factors (e.g. pollution). Furthermore, education, socio-economic status, gender, age, and inequalities to access prevention programmes, which affects for example elderly people, people with disabilities, or minorities and people living in rural areas should be taken into consideration.
- Approaches on how to best reach and involve disadvantaged socio-economic population groups, vulnerable groups, and people living in rural areas, should be developed.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Due consideration should be given to EU-funded initiatives such as: the Climate-neutral and Smart Cities Mission, the Soil Health and Food Mission, as well as the successful proposals resulting from the topics HORIZON-MISS-2022-CANCER-01-01 (*Improving and upscaling primary prevention of cancer through implementation research*), known by mid-2023, and HORIZON-CL6-2021-FARM2FORK-01-15 (*Transition to healthy and sustainable dietary behaviour*)¹³⁷. Activities should, where appropriate, complement the EU Non-Communicable Diseases Initiative “Healthier together”¹³⁸.

Successful applicants will be asked to liaise with these and other initiatives where applicable¹³⁹. The successful proposals are expected to liaise with and build on resources made available by the Knowledge Centre on Cancer (KCC)¹⁴⁰ in order to foster EU alignment and coordination.

¹³⁵ Across and within countries, covering the urban-rural dimension.

¹³⁶ [European Code Against Cancer - International Agency for Research on Cancer \(IARC\). European Commission: 12 ways to reduce your cancer risk.](#)

¹³⁷ Proposals FEAST and PLANEAT, see: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl6-2021-farm2fork-01-15>

¹³⁸ https://health.ec.europa.eu/non-communicable-diseases_en

¹³⁹ Applicants are not expected to contact these initiatives before the submission of proposals

¹⁴⁰ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR), see https://knowledge4policy.ec.europa.eu/cancer_en

The Commission will facilitate Mission-specific coordination through future actions, notably fostering exchanges with other proposals funded under this topic. Hence, successful applicants will be asked to join the ‘Prevention’ cluster for the Mission on Cancer, established in 2022¹⁴¹. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate.

Therefore, proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples of these activities are the organisation of joint workshops, the exchange of knowledge, the establishment of best practices, or the initiation of joint communication activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2023-CANCER-01-03: Pragmatic clinical trials on minimally invasive diagnostics

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 43.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: In order to ensure a balanced Cancer Mission project portfolio and to achieve the Mission’s goal, grants will be awarded to applications not only in order of ranking but also to at least two applications that fully address cancer in children, adolescents or young adults (meaning people between birth and the age of 24), provided that the applications attain all thresholds.

¹⁴¹ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

Expected Outcome: Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to all of the following expected outcomes:

- Cancer patients and their caregivers have access to optimised and affordable, minimally-invasive diagnostic interventions that increase their quality of life, across European regions, Member States and Associated Countries;
- Healthcare professionals and academia deliver better outcomes through routine healthcare, including quality of life, for men and women with cancer who often suffer from sex-related co-morbidities and side-effects;
- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries will have the evidence to implement optimised and affordable minimally-invasive diagnostics in their healthcare systems, including in everyday medical practice.

Scope: While cancer research and innovation have generated novel treatment options, cancer patients across Europe need access to minimally-invasive, patient-centred diagnostic interventions which keep up with increasing demand in a complex and fragmented oncology healthcare landscape with increasing healthcare costs.

Furthermore, the COVID-19 pandemic with its detrimental impact on cancer control has demonstrated the need for different clinical trial designs with fewer inclusion and exclusion criteria that would allow for the evaluation of real-world effectiveness, driving better and affordable diagnostic solutions that are widely accessible across European regions, Member States and Associated Countries.

Healthcare professionals and academia generate clinical evidence, by evaluating effectiveness in randomised or cluster-randomised academic investigator-initiated¹⁴² pragmatic clinical trials, on how to best perform and deploy evidence-based, minimally-invasive diagnostic interventions.

Pragmatic clinical trials focus on choosing between care options. Pragmatic trials evaluate effectiveness, the effect of diagnostics in routine (real-world) clinical practice.

Proposals should address all of the following:

- Design and conduct randomised or cluster-randomised academic investigator-initiated pragmatic clinical trials to deliver effective and evidence-based diagnostic interventions for implementation by healthcare systems at the level of local communities, European regions, Member States and Associated Countries, taking into account stratification, such as biology, molecular features, sex, gender, cancer stage, and age. Clinical trial design and conduct could be aided by computational, simulation and visualisation tools and technologies where appropriate.

¹⁴² Clinical trials in which a health technology (e.g. a medicinal product, a medical device, an in-vitro diagnostic medical device, a surgical or other medical intervention) is tested in humans, independently from commercial interest and for public health benefits.

- The chosen diagnostic intervention(s) should be adapted to the particular needs of the target population and to the specificities of the provision of care at local, regional, or national level, duly reflecting the diversity across Member States and Associated Countries. Furthermore, affordability and accessibility should be taken into account.
- The successful proposals should clearly justify and describe the evidence supporting the chosen diagnostic intervention.
- The primary and secondary endpoints of the pragmatic clinical trial should support overall survival, patient-reported outcomes and quality of life issues considered important by and for cancer patients and their caregivers.
- Such endpoints should be defined together with patients and their caregivers through research that uses open knowledge, (social) innovation systems and support end-user engagement, such as living labs¹⁴³ or other participative research models.
- These pragmatic clinical trials should include stakeholders such as physicians, academia, patients and their caregivers, patient representatives, SMEs, insurance companies, charities and foundations, research organisations, civil society, regional and national research, innovation and health authorities.
- Successful pragmatic clinical trials, including their analyses, should be completed within 5 years from the start of the project. Translational research is not within the scope of this topic.
- In all instances, sex- and gender-related issues must be taken into account. All data should be disaggregated by sex, gender, age and other relevant variables, such as by measures of socio-economic status or ethnicity.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The successful proposals are expected to liaise with and build on resources made available by the Knowledge Centre on Cancer (KCC)¹⁴⁴ in order to foster EU alignment and coordination.

The Commission will facilitate Mission-specific coordination through future actions, notably fostering exchanges with other proposals funded under this topic. Hence, successful applicants will be asked to join the 'Diagnosis and Treatment' cluster for the Mission on

¹⁴³ <https://enoll.org/>

¹⁴⁴ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR), see https://knowledge4policy.ec.europa.eu/cancer_en

Cancer¹⁴⁵. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate.

Therefore, proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples of these activities are the organisation of joint workshops, the exchange of knowledge, the establishment of best practices, or the initiation of joint communication activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate.

The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2023-CANCER-01-04: Establish best practices and tools to improve the quality of life for childhood cancer patients, survivors and their families in European regions

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: A written commitment is required from the participating regions in which the action proposed will be implemented, expressed by a letter of intent annexed to the proposal and signed by the corresponding authority/ies.
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.

Expected Outcome: Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to all of the following expected outcomes

¹⁴⁵ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

- Childhood cancer patients, survivors and their families benefit from enhanced quality of life through better supportive care, personalised counselling approaches, and digital tools that are accessible and affordable. Consequently, they can better achieve their values and personal life goals.
- Health care professionals, supportive workers and councillors enhance the quality of life for childhood cancer patients, survivors and their families.

Scope: Best practices and tools to improve the quality of life for survivors of childhood cancer exist at national, regional and local level. These practices and tools should be scaled up or deployed in regions in at least three different Member States or Associated Countries in order to serve as demonstrators for wider uptake.

Proposals should address all of the following:

- Best practices and validated tools (such as digital tools) related to for example education, sports, employment, medical follow-up including mental and physical health and well-being, or reproductive matters, should be tested and scaled up in regions in at least three different Member States or Associated Countries;
- Address hurdles, factors and situations that impede implementation of good practices and tools in real-life settings with the intention to make the life of childhood cancer survivors easier and better. Effectiveness and general applicability should be assessed and evaluated to provide enhanced real solutions in practice;
- Attention should be paid to social and health determinants, including sex, gender, age and other relevant variables, such as socio-economic status, living in rural or remote areas and education;
- Several best practices and tools should be chosen and scaled up together with childhood cancer survivors and their families. The use of participative research models, such as oncology-centred living labs¹⁴⁶ or other approaches to deliver (social) innovation should be considered.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The successful proposal is expected to liaise with and build on resources made available by the Knowledge Centre on Cancer (KCC)¹⁴⁷ in order to foster EU alignment and coordination.

¹⁴⁶ <https://enoll.org/>

¹⁴⁷ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR), see https://knowledge4policy.ec.europa.eu/cancer_en

Successful applicants should closely monitor and take into account the outcomes of the project supported under topic HORIZON-MISS-2021-CANCER-02-02, (*Develop and validate a set of quality of life and patient preference measures for cancer patients and survivors*¹⁴⁸).

The Commission will facilitate Mission-specific coordination through future actions. Hence, successful applicants will be asked to join the ‘Quality of life’ cluster for the Mission on Cancer together with the aforementioned project¹⁴⁹. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate.

Therefore, proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples of these activities are the organisation of joint workshops, the exchange of knowledge, the establishment best practices, or the initiation of joint communication activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate.

The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

Call - Research and Innovation actions supporting the implementation of the Mission on Cancer

HORIZON-MISS-2024-CANCER-01

Conditions for the Call

Indicative budget(s)¹⁵⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁵¹	Indicative number of projects expected to be
		2024		

¹⁴⁸ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-miss-2021-cancer-02-02>

¹⁴⁹ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

¹⁵⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

¹⁵¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

				funded
Opening: 18 Apr 2024 Deadline(s): 18 Sep 2024				
HORIZON-MISS-2024-CANCER-01-01	RIA	30.00 ¹⁵²	Around 30.00	1
HORIZON-MISS-2024-CANCER-01-02	CSA	3.00 ¹⁵³	Around 3.00	1
HORIZON-MISS-2024-CANCER-01-03	IA	35.00 ¹⁵⁴	10.00 to 12.00	3
HORIZON-MISS-2024-CANCER-01-04	CSA	3.00 ¹⁵⁵	Around 3.00	1
HORIZON-MISS-2024-CANCER-01-05	RIA	36.00 ¹⁵⁶	4.00 to 6.00	6
HORIZON-MISS-2024-CANCER-01-06	IA	12.00 ¹⁵⁷	Around 12.00	1
Overall indicative budget		119.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.

¹⁵² Of which EUR 2.75 million from the 'Digital, Industry and Space' budget and EUR 26.50 million from the 'Health' budget and EUR 0.76 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁵³ Of which EUR 0.27 million from the 'Digital, Industry and Space' budget and EUR 2.65 million from the 'Health' budget and EUR 0.08 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁵⁴ Of which EUR 3.21 million from the 'Digital, Industry and Space' budget and EUR 30.91 million from the 'Health' budget and EUR 0.88 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁵⁵ Of which EUR 0.27 million from the 'Digital, Industry and Space' budget and EUR 2.65 million from the 'Health' budget and EUR 0.08 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁵⁶ Of which EUR 3.30 million from the 'Digital, Industry and Space' budget and EUR 31.80 million from the 'Health' budget and EUR 0.91 million from the 'Culture, Creativity and Inclusive Society' budget.

¹⁵⁷ Of which EUR 1.10 million from the 'Digital, Industry and Space' budget and EUR 10.60 million from the 'Health' budget and EUR 0.30 million from the 'Culture, Creativity and Inclusive Society' budget.

<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.
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Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CANCER-01-01: Use cases for the UNCAN.eu research data platform

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 30.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 70 pages.
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.

Expected Outcome: The aim of this topic is to operationalise the UNCAN.eu research data platform foreseen in the Cancer Mission implementation plan¹⁵⁸, through a series of use-cases. To this goal, proposals are expected to develop tools supporting researchers to access, manage and analyse cancer digital data, building among others on resources developed by EOSC4cancer¹⁵⁹.

Proposal(s) under this topic are expected to contribute to all of the following outcomes:

- The UNCAN.eu platform is developed by federating a network of cancer data nodes built on European and national computing infrastructures that link different cancer data holders across European countries.
- Use-cases focusing on the understanding of cancer initiation and progression are designed and implemented by multidisciplinary teams to develop tools and services for working with FAIR data.

¹⁵⁸ https://research-and-innovation.ec.europa.eu/system/files/2021-09/cancer_implementation_plan_for_publication_final_v2.pdf
¹⁵⁹ <https://eosc4cancer.eu/>

- Researchers and clinicians use the electronic resources provided by the UNCAN.eu platform to access, manage and analyse data of heterogeneous types and belonging to different research domains at an unprecedented scale.

Scope: The successful proposal should:

- Develop the UNCAN.eu platform by integrating and, where relevant, complementing existing or planned data nodes of European research infrastructures and/or other national infrastructures that may link various cancer data holders across Member States and Associated Countries (e.g. hospitals, research centres, comprehensive cancer centres, etc.). The number of Member States involved should be sufficient to demonstrate scalability and flexibility of the UNCAN.eu platform while allowing for stepwise onboarding of more countries.
- Provide tools, services and workflows to researchers across data nodes for dataset creation, standardisation, data discovery, secure access, management, visualization, harmonization, analysis and other functions as appropriate. This task should capitalise on EOSC4cancer's achievements, integrating and expanding as appropriate the available tools and solutions. It should also take advantage of the European Health Data Space and the European Open Science Cloud frameworks.
- Design and implement a rich and diverse portfolio of use-cases to inform, steer the development and demonstrate the validity of the UNCAN.eu platform. Use cases should focus on research questions that are in line with the Cancer Mission objectives and that may advance the understanding of mechanisms involved in cancer development and progression beyond the current state of the art. At least one use-case should target a cancer type with a 5-year overall survival of less than 50% from the time of diagnosis. A second use-case should target paediatric cancer.
- At the same time, use-cases should be functional to the design and implementation of UNCAN.eu to increase the diversity of digital tools and services available for cancer researchers. The mobilisation and integration of a large amount of research and real world data beyond current practice and a balanced participation of clinicians, disease experts and data scientists will be essential to achieve the objectives of this topic. Due attention should be paid to sex and gender, disaggregating the data as appropriate.
- The successful consortium should develop innovative approaches, to integrate and analyse heterogeneous data from multiple sources and different research domains¹⁶⁰, including the participation of the necessary interdisciplinary set of European infrastructures and national data nodes. In this regard, at least one use-case should integrate imaging, digital pathology and genomic data, using and/or contributing with

¹⁶⁰ Including – but not limiting to – genomics and other omics data, digital pathology, real world data, cancer registries, patient-derived cancer models, lifestyle, socio-economic, occupational and environmental data. In each use-case integration of clinical data from different sources is required.

new data sources to the Genomics Data Infrastructure (GDI)¹⁶¹ and Cancer Image Europe (EUCAIM)¹⁶².

- Give emphasis to data being managed and shared in line with the FAIR principles, and the concept of FAIR-by-design is applied wherever possible. The applicants must demonstrate that the necessary data sources are, or will be, effectively and timely available. During the project lifetime, new data sources that might become available at a later stage can be accommodated as well as allowing additional data holders to join the UNCAN.eu platform. Results must be open source and made available through a public repository under a permissive license. Open access data should be provided whenever possible.
- Give due consideration to, and establish appropriate links with, EU-funded initiatives such as EHDS-related governance and implementation actions¹⁶³, the European Network of Cancer Registries¹⁶⁴.
- Foresee to establish links with the successful proposal resulting from the topic HORIZON-MISS-2024-CANCER-01-02 'Support dialogue towards the development of national cancer data nodes'.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The Commission will facilitate coordination. Therefore, proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples are organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate.

Successful proposal will be asked to join the 'Understanding' cluster for the Mission on Cancer established in 2022¹⁶⁵. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2024-CANCER-01-02: Support dialogue towards the development of national cancer data nodes

Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 3.00

¹⁶¹ <https://gdi.onemilliongenomes.eu/>

¹⁶² <https://cancerimage.eu/>

¹⁶³ <https://ehds2pilot.eu/>

¹⁶⁴ <https://encr.eu/>

¹⁶⁵ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12

Expected Outcome: Data is an essential resource to improve our understanding of cancer, advance prevention and early detection strategies, facilitate the delivery of personalised care, and better address the quality of life of cancer patients and survivors.

The Cancer Mission supports the creation of the European Initiative to Understand Cancer (UNCAN.eu, a federated European cancer research data infrastructure) and the European Cancer Patient Digital Centre (ECPDC, a European network of national digital infrastructures for cancer patients)¹⁶⁶.

The proposal under this topic is expected to contribute to all of the following outcomes:

- Advance the process of establishing National cancer data nodes¹⁶⁷, by the scaling-up or improvement of existing national health data infrastructures and by fostering their links to the European Health Data Space infrastructures for primary and secondary data uses.
- Potential barriers that may prevent the effective implementation of UNCAN.eu and ECPDC digital platforms are identified and a way forward to address them proposed.

Scope: The proposal should address all of the following:

- Foster the development of national cancer data nodes through policy dialogues at national level with relevant actors in the research and innovation community, digital health and public health policy.
- Identify and build synergies between European infrastructures related to health data access and health data sharing for primary and secondary data uses (e.g. MyData@eu, HealthData@eu, ELIXIR, BBMRI, and others), and other initiatives relevant for the UNCAN.eu and ECPDC platforms.

¹⁶⁶ https://research-and-innovation.ec.europa.eu/system/files/2021-09/cancer_implementation_plan_for_publication_final_v2.pdf

¹⁶⁷ Cancer data nodes are built on European and national computing infrastructures that link different cancer data holders across European countries. Cancer data nodes can encompass medical images, digital pathology, clinical data, genomics and other omics data, cancer models, environmental and other relevant data for cancer research.

- Identify challenges and barriers to the effective future implementation of the UNCAN.eu and the ECPDC platforms at national and European levels and propose operational solutions to overcome them.
- Identify population subgroups with poor digital skills and geographical areas with limited digital resources that might prevent the use of those platforms and propose solutions to reduce the digital divide.

The involvement of cancer research centres, digital infrastructures, public health bodies, policy makers and cancer patient organisations will ensure that the UNCAN.eu and ECPDC platforms will deliver effective outcomes for researchers, clinicians, healthcare providers, cancer patients, survivors, and caregivers.

Due consideration should be given to EU-funded initiatives, infrastructures and projects such as: EOSC4cancer¹⁶⁸ canSERV¹⁶⁹, the European Cancer Information System¹⁷⁰, and the successful proposals resulting from the topics; HORIZON-MISS-2024-CANCER-01-01, HORIZON-MISS-2024-CANCER-01-06.

This topic requires the effective contribution of Social Sciences and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The Commission will facilitate coordination. Therefore, successful proposals should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples are: organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. Successful proposals will be asked to join the 'Understanding' and 'Quality of Life' clusters for the Mission on Cancer established in 2022 and 2023. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2024-CANCER-01-03: Accessible and affordable tests to advance early detection of heritable cancers in European regions

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹⁶⁸ <https://eosc4cancer.eu/>

¹⁶⁹ <https://www.canserv.eu/>

¹⁷⁰ https://ecis.jrc.ec.europa.eu/info/cancer_registries.html

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: A written commitment is required from the supportive administrative entity of the geographical area in which the action proposed will be implemented, expressed by a letter of intent annexed to the proposal and signed by that entity.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 to 7 by the end of the project – see General Annex B.
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: In order to ensure a balanced Cancer Mission project portfolio and to achieve the Mission’s goal, grants will be awarded to applications not only in order of ranking but also to one application that fully addresses cancer in children, adolescents or young adults (meaning people between birth and the age of 24), provided that the application attains all thresholds.

Expected Outcome: For an increasing number of cancers with underlying heritable genetic risk, early detection and diagnosis are possible. Moreover, cancer incidence and mortality across Europe are increasing and show substantial variation, with Central and Eastern European regions and countries particularly affected¹⁷¹. Decisive action on early detection using easy-to-use, specific and sensitive, affordable and accessible genetic multi-omics¹⁷² or other biomarker-based tests¹⁷³ will contribute to diagnosing and treating cancer with an underlying heritable genetic risk at an earlier, potentially curable stage, and with fewer side-effects.

Proposals should aim to deliver results through validating, piloting, and upscaling genetic, multi-omics, or other biomarker-based tests for early detection of cancers with underlying heritable genetic risk in routine healthcare, which are directed and tailored towards and contribute to all of the following expected outcomes:

¹⁷¹ Cancer inequalities registry: <https://cancer-inequalities.jrc.ec.europa.eu/>

¹⁷² Such as (epi)genomics, transcriptomics, proteomics, metabolomics, integrated omics.

¹⁷³ Test to detect cancer before the onset of disease. Tests to detect treatment resistance or relapse were the focus of the [EIC Accelerator Challenge: Novel biomarker-based assays to guide personalised cancer treatment](#).

- People and their families at heritable genetic risk of developing cancer, will benefit from the outcomes of evidence-based, tailored, affordable and accessible early detection, based on accessible and affordable tests;
- Civil society, foundations, and innovators will seize opportunities to respectively co-create, support or commercialise early detection programmes based on genetic, multi-omics or other biomarker-based tests.
- Regional¹⁷⁴, and national policymakers and authorities in Member States and Associated Countries will engage in piloting, scaling up or implementing suitable early detection and treatment of people and their families with underlying heritable genetic risk in European regions based on genetic, multi-omics or other biomarker-based accessible and affordable tests, including legislative policies.

Scope: There is a need to validate, pilot, and upscale easy-to-use genetic, multi-omics or other biomarker-based tests for early detection of cancers with an underlying heritable genetic risk, for uptake in regional or national healthcare systems. Proposals should address all of the following:

- Validate easy-to-use, affordable and accessible genetic, multi-omics or other biomarker-based cancer tests for early detection of cancers with an underlying heritable genetic risk for uptake in regional or national healthcare systems. Validation may include for example clinical studies, socio-economic or technological feasibility studies.
- Stratify the to-be-tested population by sex, gender, age or other determinants.
- Be compliant with GDPR and take into account socio-economic status, limited health literacy, limited awareness of disease symptoms and access for people in remote and rural areas¹⁷⁵.
- Tests can be based on, for example, polygenic cancer risk scores, algorithms, machine learning, biomarkers, cell lines, organoids, liquid biopsies, medical devices, or wearables and other digital applications.
- Co-create with end-users, including (citizens, and health professionals, such as psychologists) living in the targeted regions, aspects such as the innovation life cycle, priority definition, design, development, testing and piloting stages as well as risk assessment, counselling, health education, and acceptability.
- Extensively pilot and upscale genetic, multi-omics or other biomarker-based testing for use in early detection programmes in at least three regions across at least three different Member States or Associated Countries. One of the three targeted regions should be within the following Member States: Bulgaria, Croatia, Cyprus, Czech Republic,

¹⁷⁴ Such as Managing authorities in regions: https://ec.europa.eu/regional_policy/in-your-country/managing-authorities_en; ERRIN - <https://errin.eu/> and EUREGHA - [https://www.euregha.net/Background - Regions - Eurostat \(europa.eu\)](https://www.euregha.net/Background - Regions - Eurostat (europa.eu)).

¹⁷⁵ For example, by considering mobile or digital healthcare services or working with a patient navigator.

Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia or Slovenia.

- Preferably work together with one of the EIT-Health KIC networks¹⁷⁶ to establish appropriate contacts, and support relevant entrepreneurship, education, training, capacity building or innovation aspects for interested stakeholders in the targeted regions.

This topic requires the effective contribution of Social Sciences and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Successful results are expected to be communicated to the Knowledge Centre on Cancer (KCC)¹⁷⁷ to foster their uptake within the EU.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Prevention and Early Detection' cluster for the Mission on Cancer established in 2022¹⁷⁸ and should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples are: organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

HORIZON-MISS-2024-CANCER-01-04: Support a pragmatic clinical trial programme by cancer charities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply:

¹⁷⁶ <https://eithealth.eu/in-your-region/>

¹⁷⁷ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR)', see https://knowledge4policy.ec.europa.eu/cancer_en.

¹⁷⁸ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

	The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.
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Expected Outcome: An important aim of Missions is bringing together various disciplines, sectors and actors, such as philanthropy. Hundreds of cancer charities and foundations across Europe support patient-centred research, including clinical trials.

Pragmatic clinical trials focus on choosing between care options. Pragmatic trials evaluate effectiveness, the effect of treatment in routine (real-world) clinical practice. Some examples include treatment versus active surveillance in patient management, a combination of treatment interventions, determination of optimal dose and dose schedules, de-escalation of treatment intervention, comparative effectiveness of different treatment interventions.

The successful proposal under this topic should aim to deliver results that are directed and tailored towards and contribute to all of the following expected outcomes:

- Together, a network of registered cancer charities and foundations support multi-centre, transnational pragmatic clinical trials on cancers with a 5-year overall survival less than 50% from time of diagnosis or rare cancers using their own resources.
- Cancer patients and their caregivers have access to more effective and patient-centred, treatment and care solutions.
- Researchers, innovators, and professionals from different disciplines and sectors ensure accessibility and re-usability of relevant trial data, to support the UNCAN.eu¹⁷⁹ research data platform, which is currently in preparation.
- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the evidence to implement affordable and accessible treatment and care solutions in their healthcare systems.

Scope: The EU contribution aims to facilitate the coordination and networking between charities themselves as well as with relevant stakeholders across Member States and Associated Countries. The EU contribution will not co-fund the trials.

Proposals should address all of the following:

- Together, registered cancer charities and foundations across Europe, organise, fund and implement at least two transnational calls for proposals, resulting in grants to academic investigator-led third parties to conduct randomised multi-centre pragmatic clinical trials. The trials should deliver, affordable, accessible and evidence-based treatment or care interventions for implementation by healthcare systems at the level of local communities, European regions, Member States and Associated Countries.

¹⁷⁹ Under the Mission work programme a Europe-wide research and data platform, UNCAN.eu, will be established, utilising existing, relevant research infrastructures. Once operational, the platform should enable integration of innovative models and technologies with longitudinal patient data, data beyond research, or the health domain, samples and biomarkers for translation to patients.

- Organise annual networking activities between charities, the successful academic investigators, citizen representatives and stakeholders across Member States and Associated Countries across Europe;
- With respect to the pragmatic trials.
- The chosen intervention(s) should be adapted to the particular needs of the target population and to the specificities of the provision of care at local, regional, or national level, duly reflecting the diversity across Member States and Associated Countries.
- The chosen intervention(s) should take into account socio-economic and biological stratification. All data should be disaggregated by sex, gender, age and other relevant variables, such as by measures of socio-economic status.
- The successful grants to third parties will address interventions for patients with cancers with a 5-year overall survival of less than 50% from time of diagnosis¹⁸⁰ or rare cancers¹⁸¹, at any stage of the disease, for any cancer subtype, in any age group or part of society.
- Timely contact with regulatory authorities should be foreseen to inform the trial design and feasibility.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise in the successful proposal, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The successful proposal is expected to build on the support of the Knowledge Centre on Cancer (KCC)¹⁸² to foster EU alignment and coordination.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Diagnostics and Treatment' cluster for the Mission on Cancer established in 2022¹⁸³ and should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples: organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

¹⁸⁰ So called 'refractory cancers'

¹⁸¹ Defined as cancers with an incidence of less than 6 per 100,000 persons per year. See: <https://www.rarecarenet.eu/rarecarenet/cancerlist>.

¹⁸² Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR), see https://knowledge4policy.ec.europa.eu/cancer_en

¹⁸³ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

HORIZON-MISS-2024-CANCER-01-05: Improving the understanding and management of late-effects in adolescents and young adults (AYA) with cancer

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 36.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In order to ensure a balanced Cancer Mission project portfolio and to achieve the expected outcomes of this topic, grants will be awarded not only in order of ranking but also to ensure that:</p> <ul style="list-style-type: none"> • at least one application that fully addresses understanding of late effects in AYA cancer; • at least one application that fully addresses development of screening methods for early detection of late effects in AYA cancer • at least one application that fully addresses management of late effects in AYA cancer; <p>are funded provided that these applications attain all thresholds.</p>

Expected Outcome: Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to the following expected outcomes:

- Increased awareness and improved understanding of the incidence, severity, and impact of late effects in AYA cancer survivors among healthcare providers, patients, caregivers and the general public;

- Researchers, innovators, and professionals from different disciplines and sectors ensure accessibility and re-usability of their data, models, tools and technology to support the UNCAN.eu¹⁸⁴ platform, which is currently in preparation;
- Identification of effective interventions and best practices to support AYA patients and survivors in preventing, reducing and better managing late-effects, promoting optimal health outcomes and overcoming disparities between regions;
- Improved quality of life and long-term outcomes for AYA cancer survivors, including improved physical, emotional, and social well-being.

Scope: This topic will contribute to the achievement of the Mission's objective to improve the quality of life of cancer patients, survivors and their families. The focus should be exclusively on adolescent and young adult (AYA, age range 15-39)¹⁸⁵ cancer patients and survivors.

Each year, more than 150,000 AYA cancers are diagnosed in the EU, and over 1.2 million worldwide. About 300,000 AYA patients live with or beyond cancer in the EU; the majority experience late-effects due to their cancer treatment, including chronic pain, cardiovascular disease, organ and skin alterations, cosmetic sequelae, fertility problems, cognitive and functional impairment, and mental health issues such as depression and anxiety. Survivors may also be at increased risk of second cancers due to the long-term effects of radiation and chemotherapy. The negative impact on education and employment of AYA survivors and in general the financial burden borne by them is also commonly observed.

Late effects are particularly challenging for AYA cancer survivors, who often experience them during a critical phase of their lives. Late effects are also challenging for caregivers. The considerable progress made in treating AYA cancers has further exposed gaps in the understanding, prevention and management of late-effects, which warrant more targeted pan-European research on AYA cancer survivorship.

Proposals should focus on one or more cancer types and address only one of the following interventions:

- Building on data from existing or newly established AYA patient cohorts, ensuring comparability of data across participating countries as appropriate, obtain a thorough assessment by cancer type of the prevalence, specific effect(s), severity, time of onset, relative risk, and risk factors associated to late effects in AYA cancer patients. Attention should be paid also to social and health determinants, including sex, gender, age and other relevant variables, including socio-economic status, living in rural or remote areas and education;

¹⁸⁴ Under the Mission work programme a Europe-wide research and data platform, UNCAN.eu, will be established, utilising existing, relevant research infrastructures. Once operational, the platform should enable integration of innovative models and technologies with longitudinal patient data, data beyond research, or the health domain, samples and biomarkers for translation to patients.

¹⁸⁵ there is no internationally agreed definition of age range in AYA cancer. Given the purpose of this topic, the target age range should be 15-39 years of age at the time of primary cancer diagnosis. This is broader than the range 15-24 years of age, used in previous topics supported by the Cancer Mission.

- Develop, test and scale-up evidence-based screening methods for the early detection of late-effects in AYA cancer patients;
- Develop, test and scale up in real-life settings, innovative, holistic approaches and tools (including digital tools), optimising cancer treatment and follow-up regimens to prevent, reduce and/or effectively manage late-effects, including psycho-social aspects. Approaches could focus on education, sports, nutrition, medical follow-up and counselling, for example on mental and physical health, pain management, and wellbeing in general, as well as reproductive matters, including infertility, onco-fertility and fertility options in general and development of effective methods for fertility preservation and guidelines on related counselling.

This topic requires direct involvement of cancer patients and survivors, survivor representative organisations, caregivers, and the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant results, enhancing the impact of the related research activities.

The use of participative research models, such as oncology-centred living labs or other approaches to deliver (social) innovation should be considered.

Due consideration should be given to EU-funded initiatives such as: EU-CAYAS-NET¹⁸⁶; ERN PaedCan¹⁸⁷; PanCareFollowUp¹⁸⁸; PanCareSurPass¹⁸⁹; EUonQoL¹⁹⁰; e-Quol¹⁹¹; STRONG-AYA^{192 193}.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Quality of Life' cluster for the Mission on Cancer established in 2023¹⁹⁴ and should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples: organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

¹⁸⁶ <https://siope.eu/news/news-from-eu-cayas-net-Oct22/>

¹⁸⁷ <https://paedcan.ern-net.eu/>

¹⁸⁸ [Home - PanCareFollowUp](#)

¹⁸⁹ [PanCareSurPass – Implementing the digital Survivorship Passport to improve Person-Centered Survivorship Care](#)

¹⁹⁰ [Quality of Life in Oncology \(euonqol.eu\)](#)

¹⁹¹ Add ref Funding & Tenders Portal before adoption. Project will start Jan 2024.

¹⁹² <https://strongaya.eu/>

¹⁹³ Applicants are not expected to contact these initiatives before the submission of proposals

¹⁹⁴ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

HORIZON-MISS-2024-CANCER-01-06: An information portal for the European Cancer Patient Digital Centre

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 to 7 by the end of the project – see General Annex B.
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 3 (Implementation). The cumulative threshold will be 12.

Expected Outcome: Improving the quality of life of cancer patients, survivors and their families is one of the objectives of the Mission on Cancer and the Europe’s Beating Cancer Plan. The future European Cancer Patient Digital Centre (ECPDC)¹⁹⁵ will provide digital services to support cancer patients, survivors and caregivers to facilitate their access to quality information and data sharing. The aim of this action is to design, develop, deploy and operate a pilot information portal of the ECPDC to support the information needs of patients, survivors and caregivers and covering all the spectrum of the cancer patient journey. Specific Artificial Intelligence (AI) tools are developed and implemented to timely update the information provided and facilitate the user experience.

Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to the following expected outcomes:

- The ECPDC information portal is an entry point to quality information for cancer patients, survivors, their families and care givers, covering the cancer patient journey from diagnosis to treatment and post treatment care and life after cancer.
- The ECPDC information portal complements the Knowledge Centre on Cancer (KCC)¹⁹⁶ by integrating additional trusted information on cancers beyond what is currently available in the KCC.

¹⁹⁵ https://research-and-innovation.ec.europa.eu/system/files/2021-09/cancer_implementation_plan_for_publication_final_v2.pdf

¹⁹⁶ https://knowledge4policy.ec.europa.eu/cancer_en

- The ECPDC information portal implements human-centric AI-based solutions to manage and systematically update the information provided to the users and to facilitate the user experience.

Scope: Proposals should address all the following:

- Design, develop and deploy, a pilot ECPDC information portal to complement the existing Knowledge Centre on Cancer (KCC). The knowledge base of the information portal will cover the cancer patient journey from diagnosis to life after cancer. It will provide evidence-based information on diagnosis, treatment options (including side-effects and late-effects of treatments such as fatigue, chronic pain, fertility, psychological and other health issues), rehabilitation, management of recurrence and palliative care.
- The information to include in the knowledge base, complements information provided through the KCC, adding to it and expanding its contents. Attention should be given also onto those cancers with a 5-year overall survival less than 50% from time of diagnosis and as well as to those relevant to paediatric cancers. It relies on scientific evidence and European, international or, where relevant, national guidelines.
- The selection of the information provided to the users should be based on explicit and robust criteria and be transparent.
- Provide a validated workflow for reviewing, selecting and timely updating the knowledge base when new clinical information and scientific evidence arise. The development and implementation of human centric AI-based tools may facilitate the reviewing, selecting and updating process.
- An AI-based virtual assistant is implemented in the portal to interact with users and improve their experience by delivering information tailored to user cultural background, individual (clinical) circumstances, needs, preferences and/or expectations. This virtual assistant should be designed and tested in real-world patient populations for acceptability and value provided. Language should be non-technical and using lay terms.
- All the developed IT-solutions and workflows should be open source and made available. The involvement of AI-researchers, clinicians, epidemiologists, guideline developers, service design specialists and patient organisation representatives are envisaged.
- The pilot ECPDC information portal should also include other information that may be relevant to cancer patients and survivors and their families such as options to cross-border health care, participation to clinical research, psychosocial and legal support options, guidance and support for returning to study or to work, financial issues and survivors' rights.
- To ensure an efficient and useful digital platform for patients, the pilot ECPDC information portal should be tested and validated by an appropriate number of cancer

patients and survivors of different cancer types and age groups. Solutions to identified challenges should be provided and implemented. The action will also identify gaps in information relevant to patients and inform policy decisions.

- A feasibility assessment of linking the pilot ECPDC information portal to the Knowledge Centre on Cancer, including operational solutions and sustainability, should be provided.
- Regular monitoring, supervision and evaluation by KPIs should be conducted in order to ensure patient benefit.

Due consideration should be given to initiatives such as: EU-CAYAS-NET¹⁹⁷; ERN PaedCan and other relevant EU initiatives. Successful applicants will be asked to liaise with these and other initiatives where applicable¹⁹⁸.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Quality of Life' cluster for the Mission on Cancer established in 2023¹⁹⁹ and should include a budget for networking, attendance at meetings, and potential joint activities without the prerequisite to give details of these at this stage. Examples: organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. The details of joint activities will be defined during the grant agreement preparation phase and during the life of the project.

Other Actions not subject to calls for proposals

Procurement actions

1. Synergies with other missions

Enhancing synergies with other EU missions is an important aspect to achieve the Cancer Mission objectives, in particular regarding cancer prevention. Joint activities with the other EU missions will support implementing the health-in-all policies approach of the Mission on Cancer and strengthen the health dimension of the other EU missions.

Form of Funding: Procurement

Type of Action: Public procurement

¹⁹⁷ <https://siop.eu/news/news-from-eu-cayas-net-Oct22/>

¹⁹⁸ Applicants are not expected to contact these initiatives before the submission of proposals

¹⁹⁹ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

Indicative timetable: 3rd Quarter 2024 - 1st Quarter 2025

Indicative budget: EUR 0.50 million from the 2024 budget²⁰⁰

2. Policy dialogues on international collaboration

The Mission on Cancer has attracted increasing interest to enhance international cooperation on cancer research from third countries. Policy dialogues with interested third countries and stakeholders will help identify areas for future collaboration and serve as a platform for regular exchanges.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 3rd Quarter 2024 - 1st Quarter 2025

Indicative budget: EUR 0.50 million from the 2024 budget²⁰¹

3. Communication, citizen engagement and stakeholder consultation

The objective of this action is to ensure continuous communication and citizen engagement activities and stakeholder consultation. Actions will include:

1. Development of a series of communication and dissemination activities to inform citizens and stakeholders on the activities of the Mission on Cancer;
2. Support to engagement activities with young cancer survivors and caregivers, including set-up of a platform;
3. Organisation of interactive in person and online events to engage citizens in the development of Mission initiatives in the Member States and Associated countries, in close collaboration with ECHoS²⁰², the Network of National Cancer Mission Hubs;
4. Logistical support to meetings of expert groups in the field of cancer research and health (e.g., Cancer Mission Board, subgroup on cancer under the Public Health Expert Group) and to actions for stakeholder consultation (e.g., events on Health Policy Platform, studies and evaluations) and for Cancer Mission project clusters.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 1st Quarter 2024 - 4th Quarter 2025

²⁰⁰ Of which EUR 0.05 million from the 'Digital, Industry and Space' budget, EUR 0.44 million from the 'Health' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁰¹ Of which EUR 0.05 million from the 'Digital, Industry and Space' budget, EUR 0.44 million from the 'Health' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁰² <https://cancermissionhubs.eu/>

Indicative budget: EUR 3.47 million from the 2024 budget²⁰³

4. Monitoring

A study to further develop a framework for the monitoring of the implementation of the Mission on Cancer, in synergy with the monitoring framework of the Europe's Beating Cancer Plan.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q1 2024

Indicative budget: EUR 0.50 million from the 2024 budget²⁰⁴

²⁰³ Of which EUR 0.32 million from the 'Digital, Industry and Space' budget, EUR 3.06 million from the 'Health' budget, EUR 0.09 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁰⁴ Of which EUR 0.05 million from the 'Digital, Industry and Space' budget, EUR 0.44 million from the 'Health' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

Mission: Restore our Ocean and Waters by 2030

The Mission ‘Restore our ocean and waters by 2030’ will provide a systemic approach for the restoration, protection and preservation of our ocean, seas and waters. The objective of this Mission is to restore, protect and preserve the health of our ocean, seas and waters by 2030. The Mission is designed to deliver on the European Union’s 2030 quantified and measurable targets for protecting and restoring ecosystems and biodiversity, for zero pollution, and for decarbonisation and net greenhouse gas emissions reduction towards climate-neutrality, within the EU’s ocean, seas and waters. The Mission will support many Sustainable Development Goals (SDGs): in particular restoring our ocean and waters related actions will directly contribute to SDG 14 - Life below water and SDG 6 - Clean water and sanitation, as well as to SDG13 - Climate action.

The Mission will also contribute to the UN Decade of Ocean Science for Sustainable Development²⁰⁵ by fostering research and cooperation across European sea basins, including the EU Outermost Regions and beyond, and mobilise scientists, as well as citizens for a sustainable and healthy ocean, seas and waters.

The implementation plan specifies the goal and objectives as well as implementation details of the Mission “Restore our Ocean, seas and waters by 2030”²⁰⁶.

The Mission Work Programme, under Horizon Europe, will contribute to the recovery of our ocean and waters by 2030 and more specifically to the following objectives:

1. Protect and restore marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030²⁰⁷;
2. Prevent and eliminate pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil²⁰⁸;
3. Make the sustainable blue economy carbon-neutral and circular, in line with the proposed European Climate Law²⁰⁹ and the holistic vision enshrined in the Communication on a new approach for a Sustainable Blue Economy²¹⁰.

The Mission will be implemented in two phases:

- In the first ‘development and piloting’ phase (2022-2025), research and innovation will lay the foundations for implementing the three Mission objectives and enabling actions, paving the way to further citizens participation and engagement. Research and

²⁰⁵ <https://www.oceandecade.org/>

²⁰⁶ https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/ocean_and_waters_implementation_plan_for_publication.pdf

²⁰⁷ COM/2020/380 final

²⁰⁸ COM/2021/400 final

²⁰⁹ COM/2020/563 final

²¹⁰ COM/2021/240 final

innovation activities will support transformative and innovative solutions to be tested, piloted and validated. Enabling activities will generate new knowledge, observation and monitoring data.

- In the second ‘deployment and upscaling’ phase (2026-2030), the solutions will be further deployed, replicated and scaled up.

The Mission ocean and waters supports research and innovation in a system of European and national funding programmes sharing policy objectives. To foster synergies between R&I funding instruments (European and national), align R&I investments, ensure access to excellence and translate research results for the benefit of the society and the economy, applicants should consider and actively seek complementarities with, and where appropriate possibilities for further funding from other R&I-relevant EU, national or regional programmes for a sustainable blue economy, notably EMFF/EMFAF, LIFE, ERDF, ESF+, JTF, CEF Inland Waterways or Maritime and InvestEU, as well as private funds or financial instruments. All actions of the Mission are expected to disseminate their results according to FAIR (findable, accessible, interoperable, reusable) principles compatible with ongoing EU initiatives such as the European Marine Observation and Data Network (EMODnet) and the European Open Science Cloud (EOSC). In line with this approach, specific actions within the Mission will be devoted to widening access to data and knowledge of oceans, seas and freshwater through the Digital Twin Ocean (Mission ocean and waters digital knowledge system).

All proposals submitted to the calls listed below are required to show how their proposed activities and results will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

The 2024 work programme is structured around two groups of activities:

- The first one will complement previous topics on Blue Parks by addressing off-shore marine protection, will support activities to restore and protect migratory fish habitats in freshwaters and will enhance Blue Economy sustainability by demonstrating innovative tools and methods to mitigate the impact of fisheries on sensitive species. One topic addresses the Danube River basin lighthouse whilst a second topic targets the three Mission sea basins lighthouses, i.e.: the Atlantic and Arctic sea basin, the Baltic and North Sea basin and the Mediterranean Sea basin.
- The second group of activities will provide a comprehensive package of support for Mission communities of actors under all four Mission lighthouses in order to accelerate progress towards achieving the Mission objectives and targets. It will also support a coalition of waterfront cities, regions and islands, and a topic on future vision of a restored ocean and water system in the EU.

Activities to further enhance the development of the European Digital Twin of the Ocean and to further engage with citizens are also covered.

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The following call(s) in this work programme contribute to this Mission:

Call	Budgets (EUR million)		Deadline(s)
	2023	2024	
HORIZON-MISS-2023-OCEAN-01	87.70		20 Sep 2023
HORIZON-MISS-2024-OCEAN-01		55.70	18 Sep 2024
HORIZON-MISS-2024-OCEAN-02		54.00	18 Sep 2024
Overall indicative budget	87.70	109.70	

Call - Actions for the implementation of the Mission Restore our ocean and waters by 2030

HORIZON-MISS-2023-OCEAN-01

Conditions for the Call

Indicative budget(s)²¹¹

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²¹²	Indicative number of projects expected to be funded
		2023		
Opening: 17 Jan 2023 Deadline(s): 20 Sep 2023				
HORIZON-MISS-2023-OCEAN-01-01	IA	8.80 ²¹³	Around 8.80	1
HORIZON-MISS-2023-OCEAN-01-02	IA	17.00 ²¹⁴	Around 8.50	2
HORIZON-MISS-2023-OCEAN-01-03	IA	16.00 ²¹⁵	Around 8.00	2
HORIZON-MISS-2023-OCEAN-01-04	IA	12.00 ²¹⁶	Around 4.00	3

²¹¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

²¹² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²¹³ Of which EUR 0.39 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.75 million from the 'Digital, Industry and Space' budget and EUR 0.21 million from the 'Civil Security for Society' budget and EUR 6.24 million from the 'Climate, Energy and Mobility' budget and EUR 0.22 million from the 'Culture, Creativity and Inclusive Society' budget.

²¹⁴ Of which EUR 0.75 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.39 million from the 'Digital, Industry and Space' budget and EUR 0.40 million from the 'Civil Security for Society' budget and EUR 12.05 million from the 'Climate, Energy and Mobility' budget and EUR 0.42 million from the 'Culture, Creativity and Inclusive Society' budget.

²¹⁵ Of which EUR 0.71 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.19 million from the 'Digital, Industry and Space' budget and EUR 0.37 million from the 'Civil Security for Society' budget and EUR 11.34 million from the 'Climate, Energy and Mobility' budget and EUR 0.39 million from the 'Culture, Creativity and Inclusive Society' budget.

²¹⁶ Of which EUR 0.53 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.39 million from the 'Digital, Industry and Space' budget and EUR 0.28

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HORIZON-MISS-2023-OCEAN-01-05	IA	12.00 ²¹⁷	Around 4.00	3
HORIZON-MISS-2023-OCEAN-01-06	RIA	4.50 ²¹⁸	Around 2.25	2
HORIZON-MISS-2023-OCEAN-01-07	RIA	1.40 ²¹⁹	Around 1.40	1
HORIZON-MISS-2023-OCEAN-01-08	RIA	10.00 ²²⁰	Around 3.30	3
HORIZON-MISS-2023-OCEAN-01-09	CSA	2.00 ²²¹	Around 2.00	1
HORIZON-MISS-2023-OCEAN-01-10	CSA	2.00 ²²²	Around 2.00	1
HORIZON-MISS-2023-OCEAN-01-11	CSA	2.00 ²²³	Around 2.00	1
Overall indicative budget		87.70		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.

- million from the 'Civil Security for Society' budget and EUR 8.50 million from the 'Climate, Energy and Mobility' budget and EUR 0.29 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²¹⁷ Of which EUR 0.53 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.39 million from the 'Digital, Industry and Space' budget and EUR 0.28 million from the 'Civil Security for Society' budget and EUR 8.50 million from the 'Climate, Energy and Mobility' budget and EUR 0.29 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²¹⁸ Of which EUR 0.20 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.90 million from the 'Digital, Industry and Space' budget and EUR 0.11 million from the 'Civil Security for Society' budget and EUR 3.19 million from the 'Climate, Energy and Mobility' budget and EUR 0.11 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²¹⁹ Of which EUR 0.06 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.28 million from the 'Digital, Industry and Space' budget and EUR 0.03 million from the 'Civil Security for Society' budget and EUR 0.99 million from the 'Climate, Energy and Mobility' budget and EUR 0.03 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²²⁰ Of which EUR 0.44 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.99 million from the 'Digital, Industry and Space' budget and EUR 0.23 million from the 'Civil Security for Society' budget and EUR 7.09 million from the 'Climate, Energy and Mobility' budget and EUR 0.24 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²²¹ Of which EUR 0.09 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.40 million from the 'Digital, Industry and Space' budget and EUR 0.05 million from the 'Civil Security for Society' budget and EUR 1.42 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²²² Of which EUR 0.09 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.40 million from the 'Digital, Industry and Space' budget and EUR 0.05 million from the 'Civil Security for Society' budget and EUR 1.42 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.
- ²²³ Of which EUR 0.09 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.40 million from the 'Digital, Industry and Space' budget and EUR 0.05 million from the 'Civil Security for Society' budget and EUR 1.42 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Objective 1 - Protect and restore marine and freshwater ecosystems and biodiversity

Proposals under this heading are expected to show how their activities and results will achieve the Mission objective 1, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-OCEAN-01-01: European Blue Parks – Protection and restoration of marine habitats

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.80 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.80 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p>
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Expected Outcome: To support the implementation of the European Green Deal, the Biodiversity Strategy and the Nature Restoration Law, project results are expected to contribute to all of the following expected outcomes:

- Effectively managed marine protected areas with clear science-based conservation objectives and conservation measures that contribute to the restoration and protection of marine ecosystems and support a shift towards strictly protected areas;
- Protection and restoration of marine habitats and species through strictly protected areas, in particular of seabed habitats, including to preserve their carbon sequestration capacity, ensure spill-over of fish, provide ecosystem functionality and maintain connectivity;
- Enhanced resilience and adaptation potential of coastal and marine ecosystems and improved provision of their ecosystem services, in particular in relation to climate change mitigation/adaptation and to fisheries;
- A blueprint for the designation and management of marine protected areas and/or for shifting their status from “protected” to “strictly protected” including criteria and tools for quantifying their success/ effectiveness in terms of conservation outcomes/results; a blueprint for the identification of ecological corridors as part of a blue Trans-European Nature Network;
- Active support to the Mission’s Digital Ocean and Water Knowledge system through advances in biological, ecosystem and socio-economic knowledge applied to restoration;
- Reinforced EU leadership in international efforts to stop and reverse biodiversity loss, in line with the EU key priorities and international commitments.

Scope: Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 1 - Protect and restore marine and freshwater ecosystems and biodiversity, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals under this topic will develop and demonstrate protection and restoration solutions to address the degradation of coastal and marine ecosystems. Proposals should significantly improve the management of marine protected areas in particular through definition of clear science-based conservation objectives and implementation of the necessary conservation

measures to achieve those objectives. Amongst the conservation measures, proposals should entail implementation of passive restoration actions through e.g.: strict protection, either as a newly designated strictly protected areas or as part of the zoning in the existing marine protected areas. Proposals should address the whole marine ecosystem functioning in the designated area, including the seabed and its role in carbon storage and as fish spawning and nursery area. Nevertheless, in well justified cases, proposals may address either specific vulnerable species or habitats that are under strong pressures or that have the most potential to capture and store carbon. Proposals could consider and assess pros and cons of some active restoration activities whereby native habitat building species would be reintroduced in degraded marine and coastal habitats to facilitate the natural recovery.

Proposals should be site-specific, and the scale and range of the protected area for demonstration activities has to be ecologically relevant and impactful. At the same time, proposals should show a significant replication potential.

When identifying and restoring degraded areas, particular attention needs to be paid to ensuring that the ecosystem services these areas can provide are resilient to climate change and that the areas are adequately protected to prevent new degradation. Proposals should develop innovative, efficient and cost-effective tools and methods to measure the conservation results/outcomes in terms of improvements of biodiversity in demonstration areas.

The proposals should also address the creation and long term maintenance of adequate conditions for habitats and/or for the movement of individuals and more generally species and for increasing ecosystems' capacity to adapt to climate change. Proposals should cover a wide range of ecosystem functions and services using a coherent and systemic approach and avoid the risk of trade-offs of focusing on one or very few ecosystem services at the expense of others. In this respect, seabed protection and restoration should be integrated, including preservation of seabed carbon sequestration capacity. The approach proposed has to show the potential to be up-scaled and reproduced at European level and beyond and develop a scalability plan.

The proposed innovation actions for the Blue Parks should seek the most effective and efficient management and supporting technologies to enable strict protection as a restoration measure and will closely follow the EU Guidance to Members States on the designation of additional protected or strictly protected areas²²⁴.

Proposals are expected to contribute to the implementation of the existing legislation related to Marine Protected Areas (MPA), notably the Birds, Habitats and Marine Strategy Framework Directives. Proposals may consider marine Natura 2000 sites established under the Birds and Habitats Directives as well as explore new areas to reach the targets of protecting 30% of EU marine area by 2030, of which one third should be strictly protected.

²²⁴ [SWD_guidance_protected_areas.pdf \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022R0609&from=doctrines)

National and local authorities and coastal communities should be involved in the design and implementation of innovative solutions to ensure that these solutions are successfully implemented in the long term. Citizen engagement is a pillar concept for the Mission and a key element in relation to conservation and restoration actions. Activities should, therefore, use innovative participatory management practices, citizen-science initiatives and awareness-raising actions to promote a proactive involvement of local communities including scientists, land and sea use planners, marine protected area managers, and other stakeholders, to enable co-creation of solutions. Awareness raising actions to inspire and generate co-ownership for protection of local habitat and biodiversity should be included as well as collaboration with existing initiatives. Citizen engagement related activities should also be gender-responsive and socially inclusive.

Proposals are expected to contribute to the implementation of the existing legislation, notably in relation to Natura 2000 and Marine Protected Areas, as well as to provide recommendations addressing environmental or anthropogenic pressures and how to overcome them. Governance issues could be examined as a way to ensure effectiveness of protection and conservation measures. Activities improving the state of vulnerable ecosystem conditions are expected to be integrated into best practices or innovative monitoring within relevant monitoring governance schemes.

Proposals should build links with the Mission implementation monitoring system which will be part of the Mission Implementation Support Platform and with the Blue Parks technical support platform which enables the reporting, monitoring, and coordination of all relevant implementation activities. In this regard, projects should cooperate closely with projects funded under Mission Ocean topic HORIZON-MISS-2021-OCEAN-02-01 and topic HORIZON-MISS-2022-OCEAN-01-01.

Proposals should build upon existing knowledge systems and upon the Mission Digital and Water Knowledge system for access to data, monitoring and forecasts and knowledge dissemination. The proposals should also build on research and innovation developed by projects financed under the current and/or previous EU framework programmes (Horizon 2020, in particular the FutureMARES, MaCoBios and Rest-Coast projects, LIFE, EMFF/EMFAF), national and regional programmes (e.g. Interreg 2021-2027 / EU Macroregional Strategies), EU programmes (Copernicus, EMODnet) as well as on the activities of the Sustainable Blue Economy Partnership and the Biodiversa+ Partnership.

For improved coordination and networking, the applicants should set aside resources to engage with other actions funded under Horizon Europe, in particular projects funded under Cluster 6 topics, e. g.: HORIZON-CL6-2021-BIODIV-01-12 (Improved science based maritime spatial planning and identification of marine protected areas), HORIZON-CL6-2021-BIODIV-01-10 (Demonstration of measures and management for coastal and marine ecosystems restoration and resilience in simplified socio-ecological systems); HORIZON-CL6-2021-BIODIV-01-03 (Understanding and valuing coastal and marine biodiversity and ecosystems services); HORIZON-CL6-2021-BIODIV-01-04 (Assess and predict integrated impacts of cumulative direct and indirect stressors on coastal and marine biodiversity,

ecosystems and their services); HORIZON-CL6-2022-CLIMATE-01-02: Understanding the oceanic carbon cycle as well as with activities supported under the H2020 Green Deal call, notably LC-GD-7-1-2020 Restoring biodiversity and ecosystem services. Additionally, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing.

Proposals addressing the EU Outermost Regions are encouraged, given these regions' natural assets.

HORIZON-MISS-2023-OCEAN-01-02: Danube river basin lighthouse – Demonstration of effective and sustainable management of sediments in the Danube river-Black sea system

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>In addition to the standard eligibility conditions, the consortium must involve and include entities from at least three Member States and/or Associated Countries of the Danube river basin in which demonstration activities will be taking place.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to local and/or regional authorities from an 'associated region'. The maximum amount to be granted to each 'associated region' is EUR 100,000, to showcase the feasibility, replicability and scalability of the solutions developed within</p>

	<p>the project in the 'associated region'²²⁵. Each 'associated region' may benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p>
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Contribution to the implementation of the European Green Deal and the Water Framework Directive and related guidance documents as well as other EU instruments and policies that concern freshwater ecosystem protection, in particular to the implementation of the Updated River Basin Management Plan for Danube²²⁶ (2021) as regards sustainable sediment management in the Danube river basin;
- Demonstrated sustainable and effective solutions for sediment management at a river basin scale, including solutions for the restoration of sediment balance, quality and flow in the Danube river-Black sea system;
- Measurable improvements in the quality (including a reduction of harmful chemicals, plastics and microplastics) and quantity of sediments flows demonstrate the effectiveness of the measures and solutions implemented;
- Improved transnational and trans-sectoral cooperation between national authorities and other actors involved in sediment management at river basin scale;
- Scaling up of solutions for the sustainable management of sediments at river basin scale in other European river basins through the involvement of river basin management bodies and ‘associated regions’;
- Active support to the Mission’s Digital Ocean and Water Knowledge system through advances in knowledge related to land-sea and river-sea interactions.

Scope: Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 1 - Protect and restore marine and freshwater ecosystems and

²²⁵ ‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or regions in a different river basin) and/or less-developed regions, with the view to build capacity to implement the innovative solutions to restore freshwater ecosystems. The proposals should ensure that the 'associated regions' are located in Member States/Associated countries other than those that are part of the project consortium.

²²⁶ Updated Danube River Basin management Plan.

biodiversity, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Sediments, a key component of river ecosystems, provide habitats to many aquatic organisms, regulate the morphology and shape of river basin and provide key ecosystem services. Pollutants can accumulate in sediments and, once displacements occur, disperse with them throughout the entire river basin. Human activities that affect natural river flow and continuity, such as flood protection measures, commercial sediment excavation, hydropower and navigation, alter sediment balance and transport within the river basin. Land-based activities such as agriculture, are also major drivers of alterations in sediment regime. This interference results in decreased sediment flow in free flowing river sections and in a sediment surplus in impounded sections increasing the risk of damage to infrastructure and human dwellings, besides reducing the effectiveness and raising maintenance costs. Also, sediment quality, in particular the degree of pollution levels, plays an important role in achieving good ecological status of river waters. Effective sediment management at a river basin scale requires trans-national, cross-sectoral and multidisciplinary approach. Moreover, sediment management accounts for the different demands on sediments; it considers relevant protection aspects and multiple uses of a river and its floodplain (also diverging use interests, conflicts).

In the Danube river basin, the ICPDR²²⁷ underlines in the river management plans 2009, 2015 and 2021 the need to improve sediment management and river morphology to address an increasing discrepancy between surplus and lack of sediment, which increases flood risks, reduces navigation possibilities, impacts hydropower production and biodiversity²²⁸. The 2021 river management plan recognises the sediment balance alteration as a significant management issue that requires urgent trans-national solutions.

The sediment flows in the Danube river basin were analysed in the ICPDR Danube Sediment Interreg project²²⁹, which provided Danube Sediment management Guidance²³⁰, whereas sediment quality monitoring was covered by the ICPDR ‘SIMONA’²³¹ project. This knowledge and guidance should provide references for the design of effective management measures and their subsequent demonstration at a river basin scale.

The proposals should focus on the demonstration of sustainable and effective solutions for sediment management at river basin scale, including solutions for restoration of sediment balance and flow in the Danube river-Black sea system and measures to improve sediment quality. The demonstration activities should entail a holistic approach to sediment management, involving all relevant actors at a transnational/national scale and across relevant sectors, such as ICPDR²³², relevant national authorities, riparian communities as well as

²²⁷ [ICPDR - International Commission for the Protection of the Danube River |](#)

²²⁸ [2021 Updates to Danube River Basin & Flood Risk Management Plans Published | ICPDR - International Commission for the Protection of the Danube River](#)

²²⁹ [Danube Sediment - PA 05 \(danube-region.eu\); Interreg Danube \(interreg-danube.eu\)](#)

²³⁰ [ee566924f1764d4798dc7bb9b59537ce84d98101.pdf \(interreg-danube.eu\)](#)

²³¹ [Project SIMONA | \(bas.bg\)](#)

²³² [ICPDR - International Commission for the Protection of the Danube River |](#)

concerned economic actors. These demonstration activities should appropriately combine sediment management measures focused on sediment flow quantity such as:

- measures to restore sediment transport and sediment flows;
- measures to reduce excessive erosion (e.g. change of sediment regime, increase of bed resistance, reduction of energy slope, nature based solutions, etc.);
- measures to address excessive sedimentation (e.g. change of sediment regime, route sediments, increase energy slope, increase bed shear stress, etc.),

with measures to improve sediment quality, such as pollution prevention and reduction. The measures should be adjusted to the needs of a specific river section, reservoir or embankment area and ensure a long-term sustainability of sediment flow, also improving the good ecological status and ecosystem services provided by key river ecosystems and habitats, including wetlands and protection of biodiversity. Nature based solutions and building with nature should be prioritised. Use of satellite-based remote sensing is encouraged to complement more traditional approaches on effectiveness assessment of the chosen measures and solutions.

Proposals must:

- Carry out demonstration activities in 3 different Member States and/or Associated Countries of the Danube river basin, involving and including in the consortium entities from these three countries. These demonstration activities should be selected on the basis of their relevance and impact at the river basin scale and based on the recommendations and results of the previously mentioned projects (ICPDR Danube Sediment Interreg project and SIMONA);
- Proposals should also identify areas and locations where the proposed solutions are replicable and draw up an action plan and roadmap needed for the replication and scale up of the solutions for sustainable and effective sediment management at a river basin scale.

The projects should include impact monitoring of the activities affecting sediment flow within the Danube river basin and into the Black sea, based on and in cooperation with the ICPDR sediments monitoring system set up through previous projects such as SIMONA and in cooperation with the national water/river management authorities concerned and relevant European Research Infrastructures. In addition, the project will monitor the impacts and effectiveness of demonstration activities at a local scale.

To address the impact-driven approach of the Mission and the nature of Innovation Actions, proposals are expected to work with and engage at least 5 ‘associated regions’ to showcase the feasibility, replicability and scalability of the solutions developed within the projects in other areas. ‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or regions in a different sea basin) and/or less-developed regions, with the need to build capacity to implement the

innovative solutions to improve management of sediments in a river basin. The proposals should ensure that the 'associated regions' are located in Member States/Associated countries other than those that are part of the project consortium. The involvement of 'associated regions' that have not yet participated in Mission projects is encouraged. The partners should proactively reach out to the 'associated regions' to enable them to follow closely the project and its demonstration activities. The projects should continuously share their outcomes and knowledge with those 'associated regions' and provide them with technical assistance to build capacity and to implement sustainable, balanced and effective sediment management at a river basin scale in their territory that contribute to achieving the Mission objectives. The technical assistance to the 'associated regions' should include the provision of technical advisory services necessary to the prepare roadmaps, plans and projects to restore sustainable and balanced sediment flow at a river basin scale by addressing possible barriers, improving sediment quality, implementing effective sediment monitoring systems at a river basin scale and showing the feasibility of implementing innovative solutions. Proposals should outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness, in accordance with part G of the general annexes to this work programme. The projects should support data and knowledge sharing through and as well benefit from the Ocean and Water Knowledge System to foster cross-regions, pan-European approaches.

The maximum amount of Financial Support to Third Parties is EUR 100,000 per 'associated region' for the entire duration of the action. Proposals should outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness.

The proposals are expected to integrate actions to support the social and economic transitions towards sustainable, inclusive and long term management of the restored and protected ecosystems, including natural, social, economic and cultural elements and business models for generating revenue from the restored and protected ecosystems and involve for that purpose local business communities, in particular SMEs, investors and other business stakeholders.

Training and communication activities addressing stakeholders, including regional and local authorities from the 'associated regions' should be included in each proposal. Local actors, including where appropriate, the European Solidarity Corps and Mission Citizen Assemblies, should be involved in the demonstration activities.

The proposal should consider actions to prevent and reduce pollution from different sources (such as chemicals and organic pollutants) affecting sediments with a view to improving their quality²³³.

The proposals should also build on research and innovation developed in the current and previous EU framework programmes, such as but not limited to Horizon2020 and Horizon

²³³ Links with the activities carried out by projects retained under topic HORIZON-MISS-2023-OCEAN-SOIL-01-01: Mission Ocean and Waters and Mission A Soil Deal for Europe – Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin may be envisaged

Europe (notably with projects selected under topics HORIZON-MISS-2021-OCEAN-01-02; HORIZON-MISS-2021-OCEAN-02-02 and HORIZON-MISS-2021-OCEAN-02-04) and the Strategic Research and Innovation Agenda for the Black Sea (SRIA), LIFE, Interreg projects (such as Danube Flood Plain²³⁴), EU monitoring programmes (Copernicus land and climate change monitoring services, EMODnet) and national and regional programmes in the Danube river basin (e.g. Interreg 2021-2027 / EU Macroregional Strategies) as well as the activities of Water4All Partnership and Sustainable Blue Economy Partnership and the Common Maritime Agenda for the Black Sea, in particular in the framework of sustainable sediment management. Additionally, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing.

The projects funded under this topic should:

- build links with other Mission activities and other relevant activities within the lighthouse and its area to maximize synergies, as well as with the European Blue Parks, other Mission lighthouses and their activities;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the Danube river basin lighthouse support facility and platform, for reporting, monitoring and coordination of all relevant implementation activities in the lighthouse area as well as with the Blue Parks technical support platform;
- build links with the activities of the International Commission for the Protection of the Danube River in the area of sediment management, with the Danube sediment monitoring framework as well as with the national and regional authorities with competence in the area of river and water management;
- support the Ocean and water knowledge system, in particular by contributing to hydrological or biodiversity monitoring, modelling and knowledge creation and data.

Proposals are expected to show how their activities and results will support the European Green Deal and the European Biodiversity Strategy²³⁵, in particular its target of 25,000 km of free flowing rivers and demonstrate how they will achieve the Mission’s objectives, taking into account the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

HORIZON-MISS-2023-OCEAN-01-03: Atlantic and Arctic sea basin lighthouse – Addressing climate change and human activities threats to marine biodiversity

Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 8.00

²³⁴ [Interreg Danube \(interreg-danube.eu\)](https://interreg-danube.eu)

²³⁵ https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

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<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>In addition to the standard eligibility conditions, the consortium must carry out demonstration activities in 3 different countries of the Atlantic and Arctic basin, involving and including partners from these respective countries in the consortium.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to local and/or regional authorities from an ‘associated region’. The maximum amount to be granted to each ‘associated region’ is EUR 100,000, to showcase the feasibility, replicability and scalability of the solutions developed within the project in the ‘associated region’²³⁶. Each ‘associated region’ may benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p>

²³⁶

‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or regions in a different sea basin) and/or less-developed regions, with the view to build capacity to implement the innovative solutions to restore marine ecosystems. The proposals should ensure that the ‘associated regions’ are located in Member States/Associated countries other than those that are part of the project consortium.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhanced implementation of the Biodiversity Strategy 2030 and the EU Arctic policy;
- Technological, logistical, social and economic innovations to counteract marine biodiversity loss;
- Enhanced basin-scale cooperation in the Atlantic and Arctic, including through transition arrangements that create socially and economically sustainable propositions for local stakeholders;
- Enhanced implementation of the European Green Deal, the EU Adaptation Strategy²³⁷, Marine Strategy framework Directive, the EU Bioeconomy Strategy as well as the Galway Statement, the Belém Statement, the OSPAR Convention²³⁸ in connection with the implementation of EU marine environment, biodiversity and Arctic policies, the EU's International Ocean Governance Agenda, the Atlantic Action Plan 2.0 with the aim to work for the benefit of all communities of stakeholders around the Atlantic and the Arctic Action Plan enhancing collaborative efforts to address the challenges in the Arctic;
- Active support to the Mission's Digital Ocean and Water Knowledge system and knowledge cross-fertilization across EU sea basins;
- Better informed citizens and decision makers, for a better governance.

Scope: Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 1 - Protect and restore marine and freshwater ecosystems and biodiversity, in line with the timeframe of the Mission phases, i.e.: by 2025 for the 'development and piloting' phase and 2030 for the 'deployment and upscaling phase'.

Proposals will focus on developing and demonstrating ecosystem-based conservation measures and approaches for reducing cumulative pressure from human activities to address marine biodiversity loss at basin/regional level.

Proposals will contain a set of activities, but are not necessarily limited to, sustainable fishery management and practices, pollution reduction and sustainable shipping, prevention and control of invasive species, marine and nursery habitat preservation and protection, establishment of marine reserves, impacts of climate change. To safeguard biodiversity against climate change and build resilience, adaptive management approaches and nature-based measures are also expected to be considered as well as minimisation of cumulative impacts of other stressors. Activities for quantifying the impact of climate change (acidification, sea-level rise, deoxygenation, ocean warmings, primary production, phytoplankton and zooplankton, etc.) on ocean and coastal ecosystems and biodiversity will

²³⁷ COM/2021/82 final

²³⁸ Convention for the Protection of the Marine Environment of the North-East Atlantic

be important to understand the stressors. Proposals can include application of genomics methods for the characterization of the biodiversity status, as well as for the long-term biomonitoring of restorative interventions and ecosystem evolution.

Activities will be designed and carried out in partnership with local fishing communities and, where relevant, indigenous people as well as other relevant stakeholders (e.g.: shipping industry) to ensure that the tested solutions grant due consideration to their knowledge, expectations and needs.

Activities will also support evidence-based data and awareness raising on biodiversity conservation in relation to local/regional development and capacity building and will establish good practices for nature-friendly local/regional initiatives and inspire specific transnational cooperation with EU Macro-regional regions.

Citizen engagement is a pillar concept for the Mission. Proposals may involve coastal communities with important biodiversity hotspots, including islands and the EU Outermost Regions in the co-creation of measures that meet the Mission's aims while granting due consideration to local communities' needs and values. Proposals are expected to involve where appropriate European Solidarity Corps and citizens science activities in the restoration efforts.

Proposals must

- Carry out demonstration activities in 3 different countries of the Atlantic and Arctic sea basin, involving and including in the consortium partners from these respective countries;
- Proposals should also identify areas and locations where the solutions are replicable and draw up an action plan and roadmap to replicate and scale up the ecosystem and biodiversity restoration solutions and actions.

To address the impact-driven approach of the Mission and the nature of Innovation Actions, proposals are expected to work with and engage at least 5 'associated regions' to showcase the feasibility, replicability and scalability of the solutions developed within the projects in other areas. 'Associated regions' are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or regions in a different sea basin) and/or less-developed regions, with the need to build capacity to implement the innovative solutions to restore marine ecosystems and biodiversity. The proposals should ensure that the associated regions are located in Member States/Associated countries other than those that are part of the project consortium. The partners will proactively reach out to the associated regions to enable them to follow closely the project and its demonstration activities. The projects should continuously share their outcomes and knowledge with those 'associated regions' and provide them with technical assistance to build capacity and solutions to address biodiversity loss and restore ecosystems in their territory, which will contribute to achieve the Mission objectives. The technical assistance to the 'associated regions' should include advice to prepare roadmaps, plans and projects to restore marine

ecosystems and biodiversity in the associated regions, to address possible barriers and show the feasibility of implementing innovative solutions for socio-economic transition processes in an ecosystem based and circular economy perspective.

Proposals should outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness, in accordance with part G of the general annexes to this work programme.

The proposals should build on research and innovation developed in the frame of related projects in the current and previous EU framework programmes, such as Horizon 2020 (e.g. the ongoing projects and activities which are part of the All-Atlantic Ocean Research Alliance ²³⁹ and projects selected under topics HORIZON-MISS-2021-OCEAN-01-02; HORIZON-MISS-2021-OCEAN-02-03 and HORIZON-MISS-2021-OCEAN-02-05), EU programmes (Copernicus, EMODnet), LIFE and national and regional programmes in the Atlantic/Arctic basins as well as the activities of the Sustainable Blue Economy Partnership and the Atlantic Action Plan 2.0. Additionally, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing. Projects may benefit from the expertise and knowledge of the Joint Research Centre, especially in the areas of large scale monitoring and assessment set-up, technical input on harmonised methodologies and making links with relevant policy frameworks.

The projects funded under this topic should address all following issues:

- build links with other Mission activities and other relevant activities within the lighthouse and its area to maximize synergies, as well as with the European Blue Parks, other Mission lighthouses;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the Atlantic and Arctic sea basin lighthouse support facility and platform, for reporting, monitoring and coordination of all relevant implementation activities in the lighthouse area as well as with the Blue Parks technical support platform;
- support the Ocean and water knowledge system, in particular by contributing to biodiversity monitoring, modelling and knowledge creation and data.

Projects funded under this topic are strongly encouraged to participate in networking and joint activities with other projects funded under other topics in the Mission Ocean, seas and waters as well as in other relevant Missions, as appropriate. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities.

Proposals addressing the EU Outermost Regions are encouraged, given these regions' natural assets.

²³⁹ <https://allatlanticocean.org/howeare>

Proposals are expected to show how their activities and results will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

HORIZON-MISS-2023-OCEAN-01-04: European natural lakes: demonstration of integrated approaches for protection and restoration of natural lake ecosystems and their biodiversity

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>In addition to the standard eligibility conditions, the consortium must carry out demonstration activities in at least 3 different countries, involving and including partners from these three countries in the consortium.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to local and/or regional authorities from an ‘associated region’. The maximum amount to be granted to each ‘associated region’ is EUR 100,000, to showcase the feasibility, replicability and scalability of the solutions developed within the project in the ‘associated region’²⁴⁰. Each ‘associated region’ may</p>

²⁴⁰ ‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or different regions) and/or less-developed regions, with the view to build capacity to implement the innovative solutions to restore freshwater ecosystems. The

	<p>benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p>
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhance the implementation of the European Green Deal, the EU Biodiversity Strategy, the EU Zero Pollution Action Plan, the EU Bioeconomy Strategy and the Water Framework Directive as well as other EU instruments and policies that concern freshwater ecosystems;
- Improved ecological and chemical status of European natural lakes;
- Demonstrated integrated and replicable approaches to protection and restoration of natural lake ecosystems, their biodiversity and healthy functioning, integrating all aspects of good ecological and chemical status of lakes under the Water Framework Directive;
- Demonstrated effective and replicable nature based solutions for restoration and protection of European lakes;
- Demonstrate improved solutions and systems for effective collaboration between, municipalities, regions and, if relevant, countries within a lake catchment area;
- Create opportunities for scaling up of solutions for protection and restoration of European lakes through involvement of ‘associated regions’.

Scope: Natural lakes are understood for the purposes of this Work Programme as natural inland bodies of standing surface freshwater or brackish water. There are more than 500 000 natural lakes larger than 1ha in Europe²⁴¹. There were over 2 800 lakes in the EU with bad or poor ecological status and over 8 000 lakes with moderate ecological status in 2018²⁴². The main pressures affecting the ecological status of European lakes are hydro-morphological pressures, pollution, in particular from chemicals and nutrient enrichment, water abstraction and climate change impacts. Nutrient enrichment results in algal blooms influencing the ecological status of these waters as well as their use for drinking and recreation.

proposals should ensure that the 'associated regions' are located in Member States/Associated countries other than those that are part of the project consortium.

²⁴¹ EEA: [Lakes — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/press/news/2023/04/2023-04-11-lakes)

²⁴² (EEA, 2018 data) [Ecological status of surface water bodies — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/press/news/2018/04/2018-04-11-lakes)

Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 1 - Protect and restore marine and freshwater ecosystems and biodiversity, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

The proposals should design and demonstrate integrated and replicable approaches to protect and restore natural lake ecosystems and their biodiversity that result in a significantly improved ecological and chemical status and maintain it in the long-term. The integrated approaches should cover physical and biochemical elements and address in an integrated way all main pressures on the lake ecosystem, (e.g.: water level regulation, water extraction, agriculture, soil pollution, aquaculture and navigation, main source of pollution, barriers to connectivity, pressures on biodiversity, including invasive alien species). Proposals should also consider threats and risks associated to climate change and pressures on biodiversity.

The demonstration activities should combine measures and solutions to reduce pressures and stressors, to restore and protect the lake ecosystem and its biodiversity, in particular using effective nature-based and circular-biobased solutions in the lakes, along shorelines and across their catchments to reduce use of chemicals and retain nutrients. The demonstration sites should be located on natural lakes with a surface area exceeding 1 km².

Proposals must:

- Carry out demonstration activities in at least 3 different countries, involving and including in the consortium partners from these three countries;
- Proposals should also identify areas and locations where the solutions are replicable and draw up an action plan and roadmap to replicate and scale up the solutions and actions for the protection and restoration of natural lakes.

To address the impact-driven approach of the Mission and the nature of Innovation Actions, proposals are expected to work with and engage at least 3 ‘associated regions’ to showcase the feasibility, replicability and scalability of the solutions developed within the projects in other areas. ‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. in the context of this topic, regions with another natural lake located in EU Member States and/or Associated countries) and/or less-developed regions, with the need to build capacity to implement the innovative solutions to restore freshwater ecosystems. The proposals should ensure that the ‘associated regions’ are located in Member States/Associated countries other than those that are part of the project consortium. The involvement of ‘associated regions’ that have not yet participated in Mission projects is encouraged. The partners will proactively reach out to the ‘associated regions’ to enable them to follow closely the project and its demonstration activities. The projects should continuously share their outcomes and knowledge with those ‘associated regions’ and provide them with technical assistance to build capacity and to implement natural lake restoration and protection solutions in their territory to contribute to achieve the Mission objectives. The technical assistance to the ‘associated regions’ should include advice to the prepare roadmaps, plans

and projects to restore and protect natural lakes, to address possible barriers and show the feasibility of implementing innovative solutions.

Proposals should outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness, in accordance with part G of the general annexes to this work programme.

The projects should support data and knowledge sharing through and as well benefit from the Ocean and Water Knowledge System to foster cross-regions, pan-European approaches. An European Digital Innovation Hub (EDIH) on Natural lakes – at interregional/transnational level – could be envisaged.

The proposals are expected to integrate actions within basins and across lake catchments that support social and economic transitions towards sustainable, inclusive and long-term management of the restored and protected ecosystems. These should include natural, social, economic and cultural elements and business models for generating revenue from the restored and protected ecosystems. For that purpose, demonstrations should involve local business communities, in particular SMEs, investors and other business stakeholders.

Training, upskilling and communication activities towards stakeholders, including regional and local authorities from the ‘associated regions’ should be included in each proposal. Local actors, including where appropriate, the European Solidarity Corps and Mission Citizen Assemblies, should be involved in ecosystem restoration and protection activities and any actions for social and economic transitions towards sustainable inclusive and long-term management of the restored ecosystems, using activities like citizen science to encourage involvement and stewardship of lakes and their catchments.

The projects funded under this topic should:

- build links with other Mission activities and other relevant activities within the Mission lighthouses to maximize synergies, as well as with the European Blue Parks, and other Mission activities;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the lighthouse support facilities, for reporting in different basins, monitoring and coordination of all relevant implementation activities in the lighthouse area as well as with the Blue Parks technical support platform;
- support the Ocean and water knowledge system, in particular by contributing to biodiversity monitoring, modelling and knowledge creation and data.

Applicants should consider to link with other actions funded under Horizon Europe and set aside resources to engage in cooperation and networking with projects funded under the EU Framework Programme, e. g: the MERCES project²⁴³ that developed ecological tools and

²⁴³ <http://www.merces-project.eu/>

protocols for cost-effective marine habitat restoration; the EULAKES project²⁴⁴; the Espon project²⁴⁵, Horizon Europe Nord-Balt-Ecosafe, H2020 MERLIN²⁴⁶ as well as ECOSTAT²⁴⁷ and EuropaBON²⁴⁸ activities. Applicants should benefit from EU space programmes (e.g. Copernicus land and climate change monitoring services addressing hydrology). Additionally, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing.

Proposals are expected to show how their activities and results will support the European Green Deal and how they will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Objective 3 – Sustainable, carbon-neutral and circular Blue economy

Proposals are expected to show how their activities and results will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-OCEAN-01-05: Lighthouse in the Baltic and the North Sea basins - Lighthouse in the Baltic and the North Sea basins - Green and energy-efficient small-scale fishing fleets

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>In addition to the standard eligibility conditions, the consortium must</p>

²⁴⁴ <https://keep.eu/projects/5508/European-Lakes-Under-Environ-EN/>

²⁴⁵ <https://www.espon.eu/large-lake-regions-hotspots-innovative-governance-europe>

²⁴⁶ <https://project-merlin.eu/>

²⁴⁷ <https://cordis.europa.eu/project/id/IST-2000-26189>

²⁴⁸ <https://europabon.org/>

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	carry out demonstration activities in 3 different countries of the Baltic and North Sea basin, involving and including partners from these respective countries in the consortium.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-6 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhanced implementation of the European Green deal objectives and the EU Biodiversity Strategy for 2030;
- Improved understanding of technical, social, legal, regulatory and policy barriers to small-scale fisheries decarbonisation;
- Reduced fuel consumption and emissions from small-scale fishing vessels and improved energy efficiency in their range of activities, including acoustic noise reduction;
- Accelerated transition to fleets of small-scale fisheries equipped with greener and energy-efficient technologies to reduce emissions and fuel consumption;
- Increased users’ choices and responsible user behaviours;
- Improved monitoring and understanding on the impact of greener and more efficient small-scale fishing fleets on the marine environment and marine biodiversity.

Scope: Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 3 – Sustainable, carbon-neutral and circular blue economy, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals will address the complex dynamic of energy consumption and energy efficiency of small-scale fishing vessel fleets and in their range of activities. Under this topic, small-scale fisheries is defined as “fishing carried out by fishing vessels of an overall length of less than 12 m and not using towed fishing gear”.

Proposals under this topic are expected to identify a set of suitable innovative and sustainable solutions, technologies, practices and processes to be tested, validated and demonstrated in real conditions to reduce emissions and fuel consumption of small-scale fishing vessels (length of less than 12 m), to increase energy efficiency in their range of activities and comply with EU regulatory frameworks. Solutions should consider multi-disciplinary approaches and guarantee full integration in the vessels. The integrated solutions need to be tested at sea to ensure fitness for purpose in harsh marine environment and for all range of fishing-related activities. Innovative solutions such as battery/hybrid systems, wind-propulsion vessels as well as use of sensors, predictive analytics, data, etc. can be considered.

Impact assessment on the marine environment and its biodiversity should also be carried out as well as an analysis of the obstacles, opportunities and recommendations about good practices for reducing fuel consumption and emissions from small-scale fishing vessels and improving energy efficiency in their range of activities.

Close cooperation between the fishing community, researchers and other stakeholders as well as with environmental organisations, NGOs, national and international authorities is a crucial requirement to ensure that solutions and technologies are suitable for and acceptable by the end-users, economically viable for (often) very small fishing enterprises.

Where appropriate activities may take into account synergies with other actions aimed to reduce waterborne transport emissions, for example projects arising from Horizon Europe calls; HORIZON-CL5-2021-D5-01, HORIZON-CL5-2022-D5-01, HORIZON-CL5-2023-D5-3, HORIZON-CL5-2024-D5-3 as well as with the activities carried out under the Zero Emission Waterborne Transport Partnership (ZEWT) and the Sustainable Blue Economy Partnership (SBEP). If projects collect in-situ data and marine observations, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing and benefit as well from EU programmes (Copernicus, EMODnet) in terms of marine observation and ocean forecasting capacities.

The projects funded under this topic should:

- build links with other Mission activities and other relevant activities within the Mission lighthouses to maximize synergies, and with other Mission activities;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the lighthouse support facilities, for reporting in different basins, monitoring and coordination of all relevant implementation activities in the lighthouse area;
- support the Ocean and water knowledge system, in particular by contributing to ocean monitoring, modelling and knowledge creation and data.

SMEs, early-stage business and scale-ups involved in Mission projects entailing innovative, scalable and sustainable business ventures from traditional and emerging blue economy sectors are invited to join the BlueInvest community and benefit from the BlueInvest Fund²⁴⁹.

HORIZON-MISS-2023-OCEAN-01-06: Cross-basin topic - Innovative nature-inclusive concepts to reconcile offshore renewables with ocean protection

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3-4 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Enhanced implementation of the EU Sustainable Blue Economy Strategy and the achievement of EU Green Deal objectives and the Paris Agreement targets;
- Development of standards for nature-inclusive design in the offshore renewables sector;
- New approaches for the design of environmental-friendly offshore platforms;
- Solutions to meet renewable energy targets and the protection/restoration targets of the EU biodiversity strategy.

Scope: The EU offshore renewable energy strategy sets ambitious objectives for renewable energy production at sea, namely in relation to the REPowerEU Communication²⁵⁰. These

²⁴⁹ BlueInvest provides equity from the European Maritime, Aquaculture and Fisheries Fund, matching guarantees from InvestEU, capital from the European Invest Fund and its parent the European Investment Bank to venture capital or impact funds who will crowd in other investments. See: <https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1451>

objectives are particularly relevant to quickly move away from our dependency on fossil fuels. Deployment of renewable energy solutions needs to be fast and coherent with the EU biodiversity protection and restoration targets. Offshore renewable infrastructures need to be built in such a way that they do not significantly harm the marine environment (e.g.: facilitating the expansion of invasive species) and even, where possible, contribute to restore marine ecosystems. Offshore infrastructures can already have positive impacts on the surrounding biodiversity and act as reefs and refuges for certain species. Nature-inclusive designs might further decrease the negative impacts and enhance desired effects. So far, efforts on design have focused mostly on scour and cable protection in the offshore wind sector. They are limited to few small scale pilot projects and a few species (cod, flat oysters, etc.), that have shown positive impacts on marine ecosystems and concentrate on the seabed close to offshore wind turbines.

Considering the expected expansion of offshore renewables, there is room for the development of innovative concepts to reduce impact of offshore activities and protect the ocean.

Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 3 – Sustainable, carbon-neutral and circular blue economy, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals should focus on truly multidisciplinary approaches for the development of nature-inclusive concept design of offshore renewable energy devices. Proposals should address novel concepts, technologies and solutions beyond the state-of-the-art, taking a life-cycle perspective, thus addressing aspects relating to planning, installation, maintenance and end-of-life issues. Proposals should identify and assess already existing approaches and concepts and highlight the benefits and feasibility of novel solutions.

Nature-inclusive concepts will address the design and choice of materials for the mooring foundations and for the offshore devices, either fixed or floating, noise issues, and laying cables, and show potential positive effects for biodiversity and the marine ecosystems. Multiple-use concepts could also be considered if relevant. Other ocean energy technologies beyond wind energy relying on wave, marine floating photovoltaics and tidal stream, for example, may also be considered.

Recommendations relating to long-term monitoring regimes of the impacts are also expected. Proposals should include biodiversity and ecosystem impact and risk assessments, (also in relation to risks of propagating invasive species).

The activities are also expected to contribute to the development of environmental standards in the field and of good practices for decision-making, planning processes and future

²⁵⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN&qid=1653033742483>

investments. Main industry actors, such as those involved in the European Strategic Energy Technology Plan (SET Plan)²⁵¹ should be involved.

The projects funded under this topic should:

- build links with other Mission activities and other relevant activities within the Mission lighthouses to maximize synergies, as well as with relevant EU Partnerships like Clean Energy Transition (CET), Sustainable Blue Economy Partnership (SBEP) or the European Institute of Innovation and Technology (EIT) and its Knowledge and Innovation Communities (KICs), with regard to EIT InnoEnergy activities;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the lighthouse support facilities, for reporting in different basins, monitoring and coordination of all relevant implementation activities in the lighthouse area;
- support the Ocean and water knowledge system, in particular by contributing to ocean monitoring, modelling and knowledge creation and data.

HORIZON-MISS-2023-OCEAN-01-07: Cross-basin topic - Analysis of the obstacles and opportunities for repurposing aged/unused offshore infrastructures

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.40 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

²⁵¹ https://energy.ec.europa.eu/strategic-energy-technology-plan-0_en

- Solutions to support marine restoration;
- Insights in view of sustainable business models;
- Options for repurposing aged/unused offshore platforms and enhance the circular economy transition.

Scope: The increasing number of offshore infrastructures to be decommissioned in the near future in the European seas requires a sound assessment of environmental, social and technical impacts that decommissioning processes carry. Alternatives to decommissioning can be viewed as an opportunity to preserve the marine habitats around these platforms and to convert these infrastructures to other potentially valuable uses with environmental, economic and/or scientific benefits.

Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 3 – Sustainable, carbon-neutral and circular blue economy, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Decisions taken in the coming years will determine whether offshore infrastructures become an environmental liability or an opportunity for preserving marine ecosystems, minimising risks and promoting innovation.

There are several options available to dispose of offshore infrastructures, including complete removal and re-processing of the materials, partial removal or dismantling the structure and placing the materials on the seabed, reuse and re-purposing of the infrastructure for e.g. scientific and ocean monitoring purposes, economic, or recreational activities.

Proposals under this topic should focus on analysing options to decommissioning offshore platforms, in light of marine conservation and ecosystem protection, identifying possible business models and assessing related implications for policy/decision making and for public acceptance. This analysis should complement the outcomes of the Study on “Decommissioning of offshore oil and gas installations: a technical, legal and political analysis²⁵²” and will address all following issues:

Proposals should address all following issues:

1. Carry out a review of existing experiences, strategies and programmes for alternatives to offshore platforms decommissioning;
2. Design a framework for cost-benefit analysis of potential options to decommissioning of offshore platforms, including a risk/benefit analysis of these potential options on marine ecosystems and biodiversity;
3. Examine related legal, regulatory and policy issues;

²⁵² <https://op.europa.eu/en/publication-detail/-/publication/7d7d51a5-8d44-11ec-8c40-01aa75ed71a1/language-en>

4. Carry out informed discussions among major stakeholders, environmental organisations and NGOs, owners and operators, national and regional public authorities (including Regional Sea Conventions) and agencies for defining actions to address obstacles and opportunities for repurposing aged/unused offshore platforms and identify at least 3 promising sites for future demonstration activities;
5. Assess the socio-economic benefits including job creation of decommissioning versus repurposing.

Mission Enabling activities: Digital Ocean and Water Knowledge System, public mobilisation and engagement, dynamic investment ecosystem

Proposals are expected to show how their activities and results will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-OCEAN-01-08: Integration of socio-ecological models into the Digital Twin Ocean

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.30 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3-5 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-OCEAN-05-01: Underlying models for the

	European Digital Twin Ocean HORIZON-MISS-2021-OCEAN-IBA-01 EU Public Infrastructure for the European Digital Twin Ocean HORIZON-MISS-2022-OCEAN-01-07: Integration of biodiversity monitoring data into the Digital Twin.
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Expected Outcome: Expected outcomes should complement the capacities and uses of the European Digital Twin Ocean (EU DTO) by:

- Solutions to the challenges of marine social-ecological modelling that will allow for their seamless incorporation in the framework of the Digital Twin Ocean, taking into consideration their complex nature. Marine social-ecological models aim to integrate modelling approaches originating from different disciplines, focusing on different levels of analysis and implementing different methodological frameworks in a meaningful way. The challenges include interoperability of transdisciplinary data (ecological, social, economic, legal, etc.); integration of models with different spatial and temporal resolutions, calculation of uncertainties and more.
- Social-ecological models, developed with a multi-actor approach, that would help assess the impacts of environmental changes, human pressures and/or policy implementation on the overall ocean health, blue economy and societal prosperity;
- Improved understanding of complex social-ecological systems, aiming at better management of human activities, policy implementation, responding to societal needs (local communities, economic activities, growing resources needs,...) and avoiding negative outcomes of policies such as the loss of jobs, overfishing, hypoxia, or stock collapse.

Scope: The vision for the European Digital Twin Ocean is to make ocean knowledge readily available to citizens, entrepreneurs, scientists and policy-makers and to provide them with an innovative set of user-driven and interactive tools, fostered by digital transition, empowering them to collectively share the responsibility of marine and coastal habitats and act on their restoration, to support a sustainable blue economy and to mitigate and adapt to climate change. It aims to provide consistent high-resolution, multi-dimensional description of the ocean: its physical, chemical, biological and social-ecological and economical dimensions, with forecasting periods from season to multi-decades, transforming data into knowledge. This call aims to support the necessary actions and tool developments to appropriately include the social-ecological component of the European Digital Twin Ocean, including the links and interactions with other parts of the system (data, underlying models, ecosystem models, local twins, etc.), the necessary social-economic data considerations and the development of models and other applications to simulate and predict the social and economic part of marine and coastal systems linked to the environmental/ecological components, enabling the development of normative (what-if scenarios) and decision-support tools.

Proposals should address all activities and tasks as described below, in cooperation and complementarity with the linked actions and other relevant actions:

- Address the long-term and reliable accessibility and availability of spatially explicit social and economic data, fit-for-purpose for the development of social-ecological models and other relevant approaches as described below. The social and economic data should be integrated with the available marine data sources and models of the DTO in an interoperable and standardised manner. This should include considerations related to spatial and temporal scale of analysis and data collection, development of methodological protocols to connect socio-economic data with environmental data, etc.
- Development of a wide range of social-ecological models, tools and applications, from simple impact assessment models, to agent-based models, to integrated social-ecological models, with capacity to run and assess a variety of normative (what-if) scenarios, evaluating the impact and long-term effect of environmental change, policy alternatives and management decisions to coastal and marine systems, both environmentally and societally.
- Assessment of existing or development of new parallel frameworks of analysis, other than models (e.g. statistical approaches, AI) to be integrated into the framework of the DTO. As not all aspects of socio-economic systems and behaviours can be assessed through numerical models, other methodologies should be investigated and developed, to ensure inclusion of these parts of the system into the DTO and link them appropriately with the social-ecological models.
- Development of integrated ecological and socio-economic indicators that can be used in the assessment of the impacts of environmental, policy or management change in coastal and marine social-ecological systems.
- Development of new processes and tools for decision-support, participatory management and policy scenarios assessment, including the methodological approaches to effective stakeholders' engagement.

Proposals should address considerations of social-ecological modelling in the overall framework of the European Digital Twin Ocean, but also develop applications appropriate for use in local Twins (thematic or regional/local scale approaches to twinning).

Proposals should support the Mission's Blue Parks and Mission lighthouses and efficient ocean stewardship. Projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing and benefit from existing EU programmes (e.g. Copernicus, EMODnet, EUROSTAT).

HORIZON-MISS-2023-OCEAN-01-09: Roadmap towards the integration of inland waters into the Digital Twin Ocean

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-OCEAN-05-01: Underlying models for the European Digital Twin Ocean</p> <p>HORIZON-MISS-2021-OCEAN-IBA-01 EU Public Infrastructure for the European Digital Twin Ocean</p> <p>HORIZON-INFRA-2022-EOSC-01-03: FAIR and open data sharing in support of healthy oceans, seas, coastal and inland waters</p> <p>HORIZON-MISS-2022-OCEAN-01-07: Integration of biodiversity monitoring data into the Digital Twin</p> <p>HORIZON-CL6-2023-GOVERNANCE-01-11: Reducing observation gaps in the land-sea interface area</p>

Expected Outcome: The Digital Twin Ocean is the first digital component developed to propose a Mission knowledge system supporting the objectives of the Mission “protect our oceans and waters” and supporting the implementation of Mission lighthouses.

The Digital Twin ocean will host a digital infrastructure with data services to facilitate data analytics, advanced modelling and high performance computing, development of what if scenarios to assess policies development in a context of resilience to climate change and sustainable development, supporting as well the implementation of local twins addressing specifics requested by stakeholders at all relevant scales from global to local.

The DTO architecture is meant to become scalable and flexible to offer the opportunity to develop an integrative approach to all-waters management from inland waters to oceans and vice versa, considering the whole as the hydrosphere.

Projects results are expected to contribute to all the following expected outcomes:

- Inventory and prioritization of EU/cross-boundary or international policies (WFD but not only) and topics to be addressed by the knowledge system to increase and share knowledge on inland waters (lakes, rivers, reservoirs, wetlands, snow, ice etc. excluding coastal and seas)
- Inventory of what is relevant from the national meteorological services duties including for climatology, and principles of interfacing with them
- Inventory of current actions, projects and programmes (including research projects, Research infrastructures, European Research Infrastructure Consortia – ERICs, cross-boundary programmes, Interreg) ongoing to get access to, to further develop a digital integrated inland water monitoring (from observations to forecasting or projections) that goes beyond the duties of the national meteorological services
- Inventory of current European digital systems of interest to build a digital twin for inland waters:
 - Actions and systems related to inland water observations and inland water data spaces (on land and including the land/sea interface at the shore) including environmental sensing as well as socio-economic data or data crowd-sourced
 - Modelling and data analytics capacities (including environmental representation, human activities, socio-economic dimension, from river catchment monitoring and management to flood and drought monitoring and forecasting) which are complementary to meteorological services and the Digital Twin on Extreme events
- Digital service portfolio relevant for a digital twin on inland waters in terms of content (data, models, data analytics tools) and in terms of digital environment based on existing assets mature enough and state-of-the-art for a leading edge digital twin of inland waters
- Roadmap for the integration of relevant existing assets and development of necessary digital functionalities for a digital twin for inland waters, interoperable with the Digital Twin Ocean to ensure the consistency and continuity of water management, interoperable and avoiding duplication of inland water functionalities already available in existing twins of Destination Earth and EU data spaces initiatives
- Architectural concept, interfaces, and standards to make data, models and technologies interoperable and integrable with the Digital Twin Ocean to propose a single digital environment for the Mission knowledge system and lighthouses.

Scope: The objective of the CSA is to prepare the development of the inland waters part (rivers, lakes, reservoirs, wetlands, snow and ice etc.) of the Mission Knowledge system, and address activities to be developed to make it integrated or interoperable with the Digital Twin Ocean for a unified Digital twin of Ocean and waters (addressing the hydrosphere as a whole) for the Mission and the lighthouses.

This should address the various facets of freshwater systems from static knowledge to dynamic monitoring of runoffs, hydrology, hydrodynamics, biogeochemistry to biology, interactions with soils and seas, for climate purposes, water management or natural disasters (e.g. flood, drought) etc.

Different scales shall be addressed from catchment to global perspective of the water cycle.

The targeted inland water digital twin shall support the implementation of the Mission through its different lighthouses and specially supporting the one dedicated to Danube.

The project should address the following:

Inventory

1. Make the inventory of EU and international policies relevant to inland waters that call for monitoring, forecast, projection or simulation of the inland water cycle in all its components: physical state, chemistry, geology, biology, both static and dynamic
2. Liaise with relevant stakeholders: researchers, industry (specially water industry operators), users (like river basin agencies, water agencies) etc. to inventory their requirements for better policy implementation and planning in a context of climate change, considering specially the relevant lighthouses
3. Make the inventory of data sources and sensing capacities (environmental but as well socio-economic or citizen) available or required to support the twinning
4. Make the inventory of past or ongoing research projects, information systems and technical or operational programs (e.g. Copernicus, Wise) dealing with inland water monitoring and management and able to provide the basis for future digital services in terms of content, product, software (models, data analytics), tools or infrastructures (digital or sensors)
5. Liaise with the national meteorological services and with the digital twins in place in DestinationEarth to scope precisely the contribution of a twin on inland waters, avoiding duplication and preparing interfaces with these external systems to be able to propose an integrative approach to inland water monitoring and management

Critical analysis and preliminary design

Based on the outcomes of the above tasks:

1. Define a set of reference uses cases for a future digital twin development and set of requirements
2. Conduct a critical analysis of current technical achievements to propose a state-of-the-art content for an inland water digital twin (products, digital services, data analytics and digital tools including models), liaising with lighthouses, stakeholders to eventually define priorities of implementation

3. Define recommendations for a functional and system digital architecture (which data space, digital tools, digital backbone for computing and data management, APIs with external infrastructures, which reference R&D and infrastructures to consider integrating) that:
 - can be integrated or at least interoperable with the Digital Twin Ocean (linked action with HORIZON-MISS-2021-OCEAN-IBA-01 EU Public Infrastructure for the European Digital Twin Ocean)
 - is compatible and interoperable with the DestinationEarth initiative, especially with the two first twins that can include a hydrological component for climate and for extreme events) and with the digital platform
 - enable the development of a mature, high-quality, scientifically state-of-art and pre-operation digital twin component for inland waters

Roadmap

1. Based on the recommendations defined above and the inventory made, develop a roadmap for the implementation of the Digital Twin for Inland waters including:
 - A preliminary breakdown of the work, with priorities of implementation, into a stepped approach, in view of the complexity of the content, which will include physical, chemical and biological data
 - A list of reference technical developments, data sources and existing programs/projects on which to build
 - A list of reference use cases on which to build first with identified stakeholders, contributing preferably to the Danube lighthouse
 - A tentative schedule, cost estimate and risk analysis
 - Interfaces to be considered and set up to ensure the effective interoperability with external and ongoing developments like DTO, DestinE, ERICs
 - A tentative technical governance to liaise with EU programs and with National meteorological services to foster an inclusive and integrative approach to the management of inland waters in a context of climate change and sustainable development

Projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing and with EU relevant programmes (Copernicus land and climate change monitoring services, EMODnet, WISE).

HORIZON-MISS-2023-OCEAN-01-10: Choose your fish: a campaign for responsible consumption of products from the sea

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Accessible and engaging media product to offer information on seafood and aquaculture consumption choices; to ensure a higher outreach, such product must be offered in all EU official languages, and take into account fisheries and aquaculture specificities of all EU sea basins and inland waters;
- More informed seafood and aquaculture products purchase choices by European citizens;
- Encourage sustainability of consumption patterns, including on reducing food waste and carbon footprint, and in consideration of future viability of stocks;
- Support knowledge and consumption of local and seasonal seafood and aquaculture products;
- Create an awareness campaign, including communication products for e.g. Social Media, to promote the media product and support the objectives as from the above mentioned expected outcomes.

Scope: Consumers can play a key role in realising the vision of “living well within the limits of our planet”, and can drive sustainable and responsible patterns, including the responsible consumption of seafood and aquaculture products.

The selected proposal should help citizens to make responsible choices in relation to the seasonality of fishes and to fish population decline and, when relevant, to the sustainability of fishing techniques. The campaign should be performed by using the most effective and creative media, tools and types of initiatives to ensure a broad outreach targeting different segments of consumers, including children.

Activities under this topic should also increase awareness and encourage consumption and purchase of seasonal and local seafood and aquaculture products, as well as awareness on health benefits and nutritional value of aquatic food. These activities should also increase awareness on the benefits to the planet from consuming sustainable seafood products

(including under organic farming) as well as in relation to the lower relative carbon footprint of aquatic food.

Activities should have a broad geographical coverage in all Member States and Associated Countries. To take in due account local/regional specificities, activities should be co-designed and co-implemented with seafood retailers, consumer associations, producers and SMEs to motivate them to support informed choices of consumers.

Links with the “Taste the Ocean” initiative as well as with other international, national or local initiatives are encouraged in order to maximise the impact on more sustainable seafood and aquaculture products choices.

HORIZON-MISS-2023-OCEAN-01-11: Ocean & water and arts: the contribution of creative sectors to Mission Ocean and waters

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to entities implementing the arts and creative sector projects. The maximum amount to be granted to each entity is EUR 50,000. Each entity shall benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.

Expected Outcome: Projects results are expected to contribute to all of the following expected outcomes:

- Stimulate the citizens’ interest in and fascination by ocean and waters;
- Boost interest in working in the blue economies, engaging in ocean and water management and protection and blue research and innovation;
- An increase of citizen and stakeholder awareness about the challenges and pressures faced by the ocean and inland waters - such as habitat and biodiversity loss, pollution (litter and plastic, chemicals, excess nutrients, light and underwater noise), invasive

species, excessive human exploitation as well as climate change impacts, and mobilisation of citizens and stakeholders for the protection and restoration of ocean, seas, coastal areas as well as inland waters;

- Mobilisation of artistic communities (e.g. visual arts, literary arts, performing arts, architects) and creative sectors (e.g., entities and associations operating in cultural, artistic, educational fields) for the protection and restoration of ocean, seas and inland waters and their biodiversity and for and empowerment of these communities and citizens to act against pollution and destruction of marine and freshwater ecosystems;
- Connect coastal and maritime communities with their habitats and their ecological, aesthetic and cultural heritage;

Scope: Art and creative sectors can play an important role in the mobilisation of citizens, stakeholders and civil society actors, such as NGOs and the philanthropic community, for the protection and restoration of the ocean and inland waters, their biodiversity, aesthetic and cultural heritage. Creative activities can also play an important role in addressing the challenges of coastal areas, thus contributing to the New Bauhaus initiative²⁵³. In this context, this action should bring together citizens, museums, aquaria, research institutions, engineers, architects, the civil society and citizens with artists and other creative sectors to foster interdisciplinary experimentation and entrepreneurship. Such undertakings should benefit from close cooperation with the scientific community and the philanthropists.

Mobilisation, cooperation and coordination should be envisaged at interregional/transnational level. Proposals are encouraged to build synergies with relevant activities supported under the Creative Europe programme²⁵⁴ and with other New European Bauhaus projects, notably those based in coastal and maritime regions.

Proposals should include at least three calls for the selection of art and creative sectors projects, which will be supported through Financial Support to Third Parties under this topic. The entities implementing the arts and creative sector projects, shall be the recipient of the financial support, which should be used exclusively for the implementation of the project.

The selection process for these projects will be based on principles of transparency, fairness and objectivity, in accordance with part G of the general annexes to this work programme.

Proposals should ensure:

- among the assessment criteria, a high degree of circularity, carbon neutrality and positive environmental impact of the project;
- high visibility of the projects selected for funding, among others by publicising their results at the dedicated Mission website at europa.eu;

²⁵³ https://europa.eu/new-european-bauhaus/about/about-initiative_en
²⁵⁴ [Creative Europe | Culture and Creativity \(europa.eu\)](#)

- promotional actions to highlight the contribution of artists and creative sectors' projects to achieving the Mission objectives through dissemination campaigns.

The artistic and creative sector projects that will benefit from the financial support to third parties under this topic should cover all the following elements:

- Creative and novel artistic expressions that unlock and strengthen the connection of the wider public with ocean, seas, inland waters and their biodiversity;
- Synergies with scientific domains and involve scientific and research actors, as well as engage with civil society actors;
- Expected impact of the projects, expected number of people involved (directly in the project, and of potential reach out), and themes directly related to Mission objectives;
- Strong and innovative ocean and water literacy activities aimed at the general public designed with the participation of the relevant scientific and research communities, as well as civil society actors;
- Full sustainability and circularity of the entire project, including the use of sustainable materials and circular solutions and renewable energy;
- Commitment to a Climate Pact Pledge²⁵⁵ leading to full decarbonisation or at least carbon neutrality of the project and of all the proposed activities;
- Commitment to the Make Europe Blue Campaign²⁵⁶.

Proposals submitted under this topic should:

- build links with other Mission activities and other relevant activities within the Mission lighthouses' areas and Blue Parks to maximize synergies;
- contribute to the aims and work pursued under the EU4Ocean Coalition and the new Bauhaus initiative;
- build links with the Mission implementation monitoring system that will be part of the Mission Implementation Support Platform and with the basin lighthouse support facilities and platforms, for reporting, monitoring and coordination of all relevant implementation activities in the lighthouses' areas.

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²⁵⁵ See [Pledges \(europa.eu\)](https://pledges.europa.eu)

²⁵⁶ <https://webgate.ec.europa.eu/maritimeforum/en/node/5914>

Conditions for the Call

Indicative budget(s)²⁵⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁵⁸	Indicative number of projects expected to be funded
		2024		
Opening: 23 Apr 2024 Deadline(s): 18 Sep 2024				
HORIZON-MISS-2024-OCEAN-01-01	IA	11.10 ²⁵⁹	Around 11.10	1
HORIZON-MISS-2024-OCEAN-01-02	IA	15.60 ²⁶⁰	Around 7.80	2
HORIZON-MISS-2024-OCEAN-01-03	IA	24.00 ²⁶¹	Around 8.00	3
HORIZON-MISS-2024-OCEAN-01-04	CSA	2.00 ²⁶²	Around 2.00	1
HORIZON-MISS-2024-OCEAN-01-05	IA	3.00 ²⁶³	Around 3.00	1

²⁵⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

²⁵⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²⁵⁹ Of which EUR 1.89 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.79 million from the 'Digital, Industry and Space' budget and EUR 0.23 million from the 'Civil Security for Society' budget and EUR 6.91 million from the 'Climate, Energy and Mobility' budget and EUR 0.27 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁶⁰ Of which EUR 2.65 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.52 million from the 'Digital, Industry and Space' budget and EUR 0.33 million from the 'Civil Security for Society' budget and EUR 9.72 million from the 'Climate, Energy and Mobility' budget and EUR 0.38 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁶¹ Of which EUR 4.08 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.88 million from the 'Digital, Industry and Space' budget and EUR 0.50 million from the 'Civil Security for Society' budget and EUR 14.95 million from the 'Climate, Energy and Mobility' budget and EUR 0.59 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁶² Of which EUR 0.34 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.32 million from the 'Digital, Industry and Space' budget and EUR 0.04 million from the 'Civil Security for Society' budget and EUR 1.25 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁶³ Of which EUR 0.51 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.48 million from the 'Digital, Industry and Space' budget and EUR 0.06 million from the 'Civil Security for Society' budget and EUR 1.87 million from the 'Climate, Energy and Mobility' budget and EUR 0.07 million from the 'Culture, Creativity and Inclusive Society' budget.

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Overall indicative budget		55.70		
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General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-OCEAN-01-01: European Blue Parks – Offshore marine protected areas

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.10 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.10 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

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<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Definition of clear science-based conservation objectives and conservation measures that contribute to the restoration and protection of marine ecosystems and to effective management of protected areas;
- Evidence for effective decision-making process at Member States and Associated Countries level to ensure sustainable management of offshore marine protected areas;
- Contribution to policy development and implementation linked to protecting and restoring marine biodiversity and ecosystems;
- New offshore marine protected areas proposed and/or established;
- Improved knowledge about offshore marine ecosystems (including deep sea ecosystems) and biodiversity in view of protection and conservation demo activities;
- Enhancement of the provision of ecosystem services compatible with the protection and restoration of the offshore ecosystems, leading to sustainable and scalable business models;
- Active support to the Mission’s Digital Ocean and Water Knowledge system through advances in biological, ecosystem and socio-economic knowledge applied to restoration and conservation;
- Active support to the Kunming-Montreal Biodiversity Framework;
- Reinforced EU leadership in international efforts for marine protection, in line with the EU key priorities and international commitments.

Scope:

Only 8% of offshore marine waters in the EU are covered by marine protected areas (MPAs), compared to 48% of nearshore (0-1 nautical mile) and 27% of territorial (1-12 miles) zone

(EEA, 2020). This means that large areas of important habitats offshore remain unprotected (such as soft sediment bottoms or habitats of highly mobile species such as marine mammals), which hinders the achievement of EU and global marine conservation targets to achieve a coherent MPA network. One of the main challenges for the establishment of offshore MPAs is the lack of knowledge about the distribution and condition of marine habitats, as well as pressures affecting them, due to high cost and effort needed for their surveillance and research. This has also been raised by Member States as one of the main issues with the implementation of the Marine Strategy Framework Directive and of the future Nature Restoration Law.

Proposals under this topic are expected to show how their activities and results will contribute to achieving the Mission objective 1 – Protect and restore marine and freshwater ecosystems and biodiversity.

Proposals are expected to contribute to the EU Biodiversity Strategy for 2030, including the Marine Action Plan, the Birds, Habitats and Marine Strategy Framework directives and the future Nature Restoration Law as well as relevant international agreements (e.g.: the Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction - BBNJ).

The proposed activities should cover all following objectives:

- mapping the distribution and condition of marine (benthic and pelagic) habitats in offshore²⁶⁴ areas (beyond 12 nautical miles from the coast);
- providing the scientific basis for establishing new marine protected areas (or enlarging existing ones) in offshore areas, including strictly protected ones;
- assessing pressures (including cumulative ones) in offshore areas and establishing the necessary conservation measures for MPAs, including through elaboration of their management plans and monitoring schemes.

Projects are encouraged to actively involve Member States/Associated Countries' authorities and concerned stakeholders.

Proposals should be site-specific, and the number of sites, their size, objectives and management measures of the protected area(s) for demonstration activities have to be ecologically relevant and impactful and contribute to enhance ecosystem services.

Projects should build and capitalise on the knowledge base developed and lessons learnt from other projects, initiatives and programmes linked to the field of biodiversity, marine environment and conservation, as well as on the work carried out in relation to Vulnerable Marine Ecosystems, as required under the REGULATION (EU) 2016/2336 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2016 establishing

²⁶⁴ *offshore* means the area beyond 12 nautical miles from the coast where a Member State has or exercises jurisdiction, including exclusive economic zone or similar zones and the continental shelf.

specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002.

Projects funded under this topic are expected to show a significant replication potential by identifying areas and locations where the proposed measures could be replicable. An action plan and roadmap needed for the replication and scale up of the proposed measures for offshore marine protected areas are expected to be drawn up by the end of the project, taking into account Marine Spatial Planning plans.

For improved coordination and networking, the applicants should set aside resources for activities to engage with other relevant actions funded under Horizon Europe, in particular projects funded under Horizon Europe Cluster 6 topics, Mission Ocean and Waters topics, EMFAF/EMFF and LIFE activities. Additionally, projects should collaborate with projects funded under the topic HORIZON-INFRA-2022-EOSC-01-03 to adopt best practices regarding FAIR and open data sharing as well as with other relevant activities under the Research Infrastructures programme²⁶⁵.

Proposals addressing the EU Outermost Regions²⁶⁶ are encouraged, given these regions' natural assets.

HORIZON-MISS-2024-OCEAN-01-02: Danube river basin lighthouse – Protection and restoration of migratory fish habitats

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.80 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.60 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: in addition to the standard eligibility conditions, the consortium must include as beneficiaries legal entities established in at least three Member States and/or Associated Countries of the Danube River basin (including its delta) in which demonstration activities will be taking place.</p> <p>If projects use satellite-based earth observation, positioning, navigation</p>

²⁶⁵ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/european-research-infrastructures_en

²⁶⁶ https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

	and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: if projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p> <p>Beneficiaries may provide financial support to third parties. The concept of ‘Associated regions’ is implemented through Financial Support to Third Parties, according to the following conditions. The support to Third Parties can only be provided in the form of grants. The Financial Support to Third Parties may only be awarded to local and/or regional authorities located in Member States/Associated Countries. The maximum amount to be granted to each Third Party is EUR 100,000, to showcase the feasibility, replicability and scalability of the solutions developed within the project in the ‘associated region’. The Financial Support to a Third Party is provided only once for the entire duration of the project. Only one grant to a Third Party is awarded per ‘Associated Region’.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

The implementation of the European Green Deal, the Biodiversity Strategy, the Water Framework and Habitat Directives, the Marine Strategy Framework Directive and policies that concern freshwater ecosystem protection, in particular to the implementation of the Updated River Basin Management Plan for Danube 2021²⁶⁷;

- Demonstrated sustainable and effective solutions ;
- Improved protection and management of migratory fish species in the Danube River Basin and its delta, with a focus on endangered species of high significance for the ecosystem or for local communities;
- Measurable improvements in protecting and restoring critical fish habitats, their availability, accessibility and connectivity within the Danube River basin and its delta;

²⁶⁷ <https://www.icpdr.org/main/publications/danube-river-basin-management-plan-drbmp-update-2021>

- Improved transnational and trans-sectoral cooperation between national/local authorities and other actors involved in fish habitat protection and restoration;
- Evidence to support the implementation of River Basin Management Plans addressing the needs of migratory fishes;
- Active support to the Mission's Digital Ocean and Water Knowledge system through advances in knowledge related to freshwater dimension.

Scope: Migratory fish species represent an economic and natural heritage of the Danube River Basin and are indicators of the ecological status of aquatic ecosystems, especially of the functionality of ecological corridors. The need for their conservation is recognised by the scientific community as well as at a high political and management level (EUSDR Action Plan²⁶⁸ - Priority Area 04 and 06).

This topic will support the European Green Deal and the European Biodiversity Strategy, in particular its target of 25,000 km of free-flowing rivers, the Water Framework Directive, the Habitats Directive, the EU Strategy for the Danube Region (EUSDR) and contribute to the Mission's objectives.

Proposals should build on and enhance the outcomes of the Interreg project MEASURES²⁶⁹ and the WE PASS²⁷⁰ Initiative set up by the International Commission for the Protection of the Danube River (ICPDR)²⁷¹, which provide knowledge and guidance for the design of effective measures and their subsequent demonstration at a river basin scale. Activities should contribute to river and habitat continuity, as well as the effect on water quality as addressed within the framework of the Danube River Basin Management Plan.

The proposals should also build on research and innovation developed in the current and previous EU framework programmes, such as but not limited to Horizon 2020 and Horizon Europe - Work Programme 2023-2024 Missions (notably with projects selected under topics HORIZON-MISS-2021-OCEAN-02-02 and HORIZON-MISS-2021-OCEAN-02-04; HORIZON-MISS-2022-OCEAN-01-02; HORIZON-MISS-2023-OCEAN-01-02) and relevant LIFE projects, EMFAF/EMFF, EU monitoring programmes and national and regional programmes in the Danube river basin and its delta (e.g. Interreg, ERDF, EU Macroregional Strategies).

Proposals under this topic are expected to show how their activities and results will achieve the Mission objective 1 - Protect and restore marine and freshwater ecosystems and biodiversity. Proposals should focus on the demonstration of sustainable and effective solutions for the enhancement of a protected network of critical habitats, involving relevant actors at a transnational/national scale and across relevant sectors, relevant national and

²⁶⁸ <https://danube-region.eu/>

²⁶⁹ [MEASURES - Interreg Danube \(interreg-danube.eu\)](https://interreg-danube.eu/)

²⁷⁰ [WE PASS - Facilitating Fish Migration and Conservation at the Iron Gates | ICPDR - International Commission for the Protection of the Danube River](https://www.icpdr.org/en/activities/we-pass)

²⁷¹ [ICPDR - International Commission for the Protection of the Danube River](https://www.icpdr.org/en/)

regional authorities, riparian communities, landscape planners, ecologists as well as concerned economic actors, including fishers.

These demonstration activities should appropriately combine measures focused on habitat availability, accessibility and connectivity with measures for the protection and restoration of critical habitats, such as spawning, nursery, feeding and wintering grounds. Activities could also aim at removing pressures to enable natural recovery of fish habitats. The scale and range of the area for demonstration activities should be ecologically relevant and impactful and based on the recommendations and results of the previously mentioned projects.

The measures should be tailored to the specific river section(s) and related habitats and should contribute to improving the good ecological status and ecosystem services provided by key river ecosystems and habitats. Nature-based solutions and building with nature should be prioritised.

Training and communication activities addressing stakeholders, including regional and local authorities, as well as the ‘associated regions’, should be described in each proposal. Local actors, including where appropriate, the European Solidarity Corps and Mission Citizen Assemblies, should be involved in the demonstration activities.

Projects funded under this topic should:

- Show a significant replication potential by identifying areas and locations where the proposed solutions could be replicable. An action plan and roadmap needed for the replication and scale up of the solutions for fish habitat protection and restoration are expected to be drawn up by the end of the project;
- Include impact monitoring of the activities addressing fish habitats in the Danube River basin, including its delta, in cooperation with the Information System²⁷² set up through previous projects such as MEASURES and relevant European Research Infrastructures. In addition, the project is expected to monitor the impacts and effectiveness of demonstration activities at a local scale. The project should link with the activities carried out under the Digital Twin Ocean, in particular those addressing freshwaters, and support data and knowledge sharing through the Ocean and Water Knowledge System, as well as benefiting from it to foster cross-region, pan-European approaches;
- Provide recommendations and guidance to align protection of migratory fish with regard to new policy measures and infrastructure projects and to strengthen cooperation across relevant sectors (water, navigation, fisheries, hydropower and energy, etc.).

Projects are also expected to integrate actions to support the social and economic transitions towards sustainable, inclusive and long-term management of the restored and protected ecosystems, including natural, social, economic and cultural elements and business models for generating revenue from the restored and protected ecosystems and involve for that purpose local business communities, in particular SMEs, investors and other business stakeholders.

²⁷² <https://www.interreg-danube.eu/approved-projects/measures/section/measures-information-system-mis>

The project funded under this topic should build links with:

- other Mission activities and other relevant activities within the lighthouse and its area to maximize synergies as well as with other Mission lighthouses and their activities;
- the Mission implementation monitoring system that will be part of the Mission Implementation Platform and with the Danube River basin lighthouse support facility and platform, for reporting, monitoring and coordination of all relevant implementation activities in the lighthouse area as well as with the Blue Parks technical support platform;
- the activities of the ICPDR as well as with the national and regional authorities with competence in the area of fish habitat conservation and protection.

To address the impact-driven approach of the Mission and the nature of Innovation Actions, projects are expected to work with and engage at least 5 ‘associated regions’ to showcase the feasibility, replicability and scalability of the solutions developed within the projects in other areas. The concept of ‘associated regions’ is implemented through Financial Support to Third Parties (see the Specific Conditions table for this topic). ‘Associated regions’ are understood as regions with ecosystems that can benefit from the demonstration activities and/or less-developed regions, with the need to build capacity to implement the innovative solutions to improve fish habitats. The projects should ensure that the ‘associated regions’ are not already involved in the demonstration sites covered by the projects. The partners should proactively reach out to the ‘associated regions’ to enable them to follow closely the project and its demonstration activities. The projects should continuously share their outcomes and knowledge with those ‘associated regions’ and provide them with technical assistance to build capacity and to implement sustainable, balanced and effective fish habitat protection and connectivity at a river basin scale in their territory that contribute to achieving the Mission objectives. Proposals must outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness, in accordance with part B of the general annexes to this work programme.

HORIZON-MISS-2024-OCEAN-01-03: Atlantic and Arctic sea basin lighthouse, Mediterranean Sea basin lighthouse, Baltic and North Sea basin lighthouse - Reducing the environmental impacts of fisheries on marine species and habitats

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

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<i>conditions</i>	<p>exceptions apply:</p> <p>The following additional eligibility criteria apply: in addition to the standard eligibility conditions, the consortium must carry out demonstration activities in 3 different countries of the basin addressed by the proposal (i.e.: 1. Atlantic and Arctic basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin), and include, as beneficiaries, legal entities established in these respective countries.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the 3 different sea basins (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin), grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each sea basin, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Reduced, and where possible elimination of incidental catches of sensitive species and juvenile fish as well as reduced discard and damage to catch, for an accelerated transition towards more sustainable and economically viable fishing practices;
- Improved effective mitigation measures to protect either or both sensitive species and juvenile fish as well as their habitats;
- Enhanced knowledge related to incidental catches of both sensitive species, juvenile fish, including spawning grounds, locations of nursery areas as well as recruitment processes;

- Increased value of seafood-products from sustainable fisheries, e.g. through ecolabelling schemes sustainable certification schemes, etc.

Scope: One of the main goals of the Common Fisheries Policy (CFP) is to ensure that EU fishing activities are environmentally sustainable in the long term. Along the same lines, the Technical Measures Regulation includes the objective of contributing to ensure that incidental catches of sensitive marine species are minimised and where possible eliminated so that they do not represent a threat to the conservation status of these species and to provide protection for juvenile and spawning aggregations of fish species.

In this context, the Marine Action Plan: 'Protecting and restoring marine ecosystems for sustainable and resilient fisheries' stemming from the EU Biodiversity Strategy seeks to accelerate the transition to more sustainable professional and recreational fishing practices. It puts forward several actions to protect vulnerable and sensitive species and juvenile fish, notably through improving gear selectivity and practices to reduce their by-catch, using technological innovations and practices to prevent incidental catches and reducing the impact of fisheries on marine biodiversity and habitats, including sensitive marine ecosystems.

This topic will support the Common Fisheries Policy, the Technical Measures Regulation, the EU Biodiversity Strategy, including the future Nature Restoration Law and the Marine Action Plan, the Habitats, Birds and MSFD directives as well as the EU sea basin strategies.

Proposals under this topic are expected to show how their activities and results will contribute to achieve the Mission objectives 'Protect and restore marine and freshwater ecosystems and biodiversity' and 'Make the blue economy carbon- neutral and circular'. Projects should build and capitalise on the knowledge base developed and lessons learnt from other projects, initiatives and programmes linked to the field of biodiversity, marine environment and conservation, including projects and studies funded under Horizon 2020, Horizon Europe; EMFF, EMFAF and LIFE programmes, as well as relevant work done by the International Council for the Exploration of the Sea (ICES)²⁷³, by the General Fisheries Commission for the Mediterranean (GFCM)²⁷⁴ and the Scientific, Technical and Economic Committee for Fisheries (STECF)²⁷⁵ as well as relevant work done at basin level²⁷⁶, in the Member States and Associated Countries.

In particular, the projects funded under this topic could benefit from cooperation and sharing of information and data through collaboration with Horizon Europe projects selected under the topic on 'Understanding and reducing bycatch of protected species' (HORIZON-CL6-2023-BIODIV-01-5).

Proposals under this topic are expected to identify, test, validate and demonstrate in real conditions, a set of suitable innovative and economically viable solutions, technologies,

²⁷³ <https://www.ices.dk/Pages/default.aspx>

²⁷⁴ <https://www.fao.org/gfcm/en/>

²⁷⁵ <https://stecf.jrc.ec.europa.eu/>

²⁷⁶ such as by the Regional Fisheries Management Organizations like the General Fisheries Commission for the Mediterranean (GFCM), the Northeast Atlantic Fisheries Commission and other relevant international bodies

practices and processes to minimise the impact of fisheries on marine ecosystems, specifically aiming at protecting sensitive species and juvenile fish as identified in the Marine Action Plan²⁷⁷ as well as respecting animal health and welfare.

Each proposal should address one sea basin (i.e.: 1. Atlantic and Arctic basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin), where identified solutions will be demonstrated in several relevant fisheries. Proposals should take a holistic approach aiming at protecting marine biodiversity while also avoiding potential negative environmental impacts, including on the seabed.

Proposals should also consider the energy efficiency and climate neutrality of the proposed solutions, thus contributing to the energy transition of the EU fisheries sector.

Projects should actively involve end-users and fisheries communities in their activities. Activities should be tailored to address regional/sea basin specificities and when relevant, local/regional authorities should be engaged, e.g.: Fisheries Management authorities.

Project activities should cover all following issues:

- demonstrating mitigation measures and sustainable fishing tools, e.g.: innovative gears and techniques improving selectivity and addressing incidental bycatch, such as exclusion devices, use of frangible gear, acoustic deterrent devices, escape panels, and other solutions;
- demonstrating mitigation measures and sustainable fishing operations, such as restricting fishing activities in targeted areas, temporal and/or spatial closures, safe handling of bycaught species and reducing mortality of discarded species, experimental restocking programmes and other solutions;
- carrying out specific activities to assess operational feasibility in commercial fishery situations and to support fishers in taking-up the solutions as well as to promote sea-food products from sustainable fisheries.

In addition, projects are expected to show a significant replication potential by identifying a range of relevant stakeholders who could replicate the proposed solutions. Action plans and roadmaps needed for the replication and scale up of the solutions for sustainable fishing operation and tools should be drawn up by the end of the project.

Proposals addressing the EU Outermost Regions²⁷⁸ are encouraged, given these regions' natural assets.

²⁷⁷ Harbour porpoise in the Baltic Proper and the Black Sea, the Iberian Atlantic and the common dolphin in the Bay of Biscay; angel sharks, common skate, guitarfish, Maltese skate, great white shark, sand tiger shark, smalltooth sand tiger shark, spiny butterfly ray, sturgeons, marine turtles, Balearic shearwater and Mediterranean monk seal, European eel, and sensitive marine species at risk of incidental catch and in “unfavourable conservation status” or threatened by extinction.

²⁷⁸ https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

HORIZON-MISS-2024-OCEAN-01-04: Science for Community – Building the marine Citizen Science data network of the future to valorise data coming from the ocean and increase engagement

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p> <p>Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-OCEAN-05-03 Piloting citizen science in marine and freshwater domains - Grant Agreement n. N° 101006482</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Establishment of a pan-European Marine Citizen Science data network, bringing together actors of marine citizen science around Europe and in neighbouring countries.
- Adaptation of data and metadata standards and methodological approaches appropriate for use in marine citizen science based on the existing European frameworks, as developed by SeaDataNet, EMODnet and other marine data infrastructures;
- Increased visibility and impact of Marine Citizen Science activities in Europe.

- Sharing of good practices on marine citizen science information and data consumption

Scope: Marine Citizen Science activities, the public's participation and collaboration in marine research in order to increase the available scientific knowledge, is gaining more and more momentum in the European Union. Among the various marine citizen science activities, very prominent are the ones that engage actors from different parts of society to contribute to the observation of the coastal zone and the ocean and produce relevant data, related to physical, chemical, geological properties of the marine environment, marine biodiversity and/or human impact (e.g.: marine litter). It is important to capitalise on this interest, both by sustaining and increasing the sense of community and motivation of these actors and by providing them with validated methodological protocols and processes, to ensure that the information and data they collect becomes available and useful for wider use.

The objective of this topic is to establish a Marine Citizen Science data network, which will aim to bring together the very important, but scattered and un-coordinated actors of marine citizen science, active in data collection. Such a network will provide a sense of community to these different in nature parties, will increase visibility of marine citizen science data collection activities in Europe and will invest in coordinating these activities by providing a harmonisation framework, which will increase the added value coming from marine citizen science. Such an activity will ensure dual effects towards the Mission's Ocean cross-cutting enabling actions: it will support targeted engagement of different categories of social actors in the production of credible Marine Knowledge and it will thus directly support the development of the Digital Ocean and Water Knowledge System.

Proposals are expected to address all following activities:

- **Establishment of a Marine Citizen Science network**

The pan-European Marine Citizen Science data network is expected to bring together actors in marine citizen science data collection domains in the European Union and in neighbouring countries and to build a sense of community between these actors, engaging and coordinating different type of organisations. The core aim of the network will be to support its participants to contact the various marine citizen science data collection communities efficiently and in a manner that will increase the added value of their contribution towards Marine Knowledge. The network should aim to include actors from all different data fields on marine citizen science.

A key activity for the establishment of the network consists in the identification, mapping and involvement of the different actors that provide observation and data input to marine citizen science, extending from volunteer or scientific groups (schools, NGOs or universities, tourists) to more structured community contributions that can come from professionals (for instance fishermen) or companies (sailing companies, port authorities, etc.) that are willing to contribute in these initiatives.

The network should act as a multiplier of work contacted on marine citizen science data collection from different organisations around Europe and operate as a connection hub for

their activities. Through the described actions the network will ensure the higher visibility of marine citizen science data collection activities in Europe and will contribute both to motivate the already engaged actors and to bring in the network more interested parties, by connecting them with the appropriate organisations, providing them with community advice on how to set up their own activities, in line with common standards and sharing the collective knowledge created through the network.

The long-term sustainability of the proposed network should be considered.

- **Citizen science activities: information and data collection**

To increase the added value of the marine citizen science activities, the proposals should ensure that information and data collected are widely usable and integrated in existing knowledge management platforms (e.g.: EMODnet, Blue Economy Observatory, etc.) and in the end be available for use in the European Digital Twin of the Ocean (EU DTO).

Specific activities are expected to adapt and make available data and metadata standards appropriate for use in marine citizen science, building on the work developed by SeaDataNet, EMODnet and other marine data infrastructures. These standards should be tailored to the needs of citizen science and ensure that the data collected can be harmonised and used in an effective manner.

The proposals should also consider the development of easy-to-use tutorials and easy-to-understand training modules, targeted to different categories of marine citizens science actors collecting data. This material should focus on methodologies to ensure that the data collected is FAIR (findable, accessible, interoperable, reusable), will explain how data is made available and will provide recommendations and guidelines for effective citizen science observing activities. The training materials should also ensure that citizen science activities do not conflict with nature protection objectives.

Finally, the proposals are expected to address the development of good practices regarding data and information consumption coming from marine citizen science activities and make these good practices visible at local, national and European level, as well as at the international level, particularly through the UN Decade of Ocean Science for Sustainable Development.

- **Deployment of cost-efficient, citizen science appropriate observing equipment**

The proposals should ensure the link between marine citizen science actors and the developers of cost-efficient ocean observing sensors and to facilitate the procurement of appropriate and easy to use citizen science devices and equipment that will enhance and harmonise the outputs of marine citizen science in Europe.

Proposals are expected to define and implement two use-cases to demonstrate in real conditions the use of affordable, durable, high-efficiency and low-carbon footprint marine observing devices/equipment, relevant and applicable to marine citizen science. Observing

devices/sensors that are easy to use, automated, standardised and with direct uploading of data in verified databases should be prioritised.

These use-cases will act as pilots, to show, on one side the benefits of using standardised, simple to deploy and use equipment for wide citizen science campaigns and on the other, the benefits and the economies of scale of large procurements of observing devices/equipment for citizen science.

These use-cases should also provide insights for the mobilisation of public and private funding to maximise future deployment and use of observation devices/sensors, thus supporting the scaling up of marine citizen science activities in Europe.

HORIZON-MISS-2024-OCEAN-01-05: Our Blue Future – Co-designing a future vision of a restored ocean and water system in the EU by 2030 and 2050

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: To support the implementation of the European Green Deal, the Mission Restore our Ocean and Waters and the related EU climate, biodiversity and pollution targets, project results are expected to contribute to all of the following expected outcomes:

- Increased confidence in and support for the transitions required by the European Green Deal, by co-designing possible science-based transition scenarios for reaching the Mission Restore our Ocean and Waters objectives and related EU climate, biodiversity and pollution targets, including environmental, social, economic and political considerations.
- Support progress in restoring our ocean and waters, in adapting to climate change, reversing biodiversity loss and pollution, by co-designing inspiring narratives that stimulate effective action by policy-makers, citizens and stakeholders, and by identifying the pathways that are necessary to realise them.
- Increased awareness of decision-makers, stakeholders and citizens, including students, through structured science-policy interfaces, in relation to the urgency of the climate,

biodiversity and pollution crises and the central role of restoring the entire water system to address these crises.

- National, regional and local decision-makers in planning decisions are taking measures to protect and restore their ocean, coastal and water spaces and ecosystems.

Scope: This action will develop and co-design transitional alternative futures of the EU, in which the Ocean, seas and waters are conserved or restored to good health. The action will support the co-creation of narratives, and innovative visualisation tools such as maps, related to different scenarios of what the EU and its ocean, seas and water spaces could look like by 2030 and 2050 if innovative solutions to restore our ocean and waters would be applied, so that the targets of the Mission Ocean and Waters and consequently those of the European Green Deal are fully reached. These narratives must be supported by the co-design of different science-based transition pathways together with citizens including students and key stakeholders such as scientists, experts and decision-makers responsible for planning ocean and water spaces. The co-design process should be inclusive, participatory following transdisciplinary and structured science-policy-society interface methodologies and taking into consideration environmental, social, economic and political considerations.

Following on from a pan-European vision, proposals should also develop specific regional visions, scenarios and narratives for each of the four Mission lighthouse areas in the Atlantic-Arctic, Danube, Mediterranean Sea, Baltic and North Sea, supported by innovative visualisation tools and co-created by multi-actors such as local stakeholders and citizens. By choosing a minimum of four large scale case-studies, the action should enable the participatory co-design of alternative futures where the Mission objectives have been achieved in the lighthouse area, and develop together with the relevant stakeholders the action pathways and necessary narratives to achieve these alternative futures.

Proposals should develop and visualise different scenarios for each of the case-studies, with both 2030- and 2050-time horizons in line with the Mission Restore our Ocean and Waters and EU Green Deal targets. They should at least encompass a business-as-usual scenario, in which current trends are extrapolated, as well as a scenario where European Green Deal and relevant environmental legislation (e.g. Marine Strategy Framework Directive²⁷⁹, Birds²⁸⁰ and Habitats²⁸¹ Directives, Water Framework Directive²⁸²) targets for climate, biodiversity and pollution are fully reached through the large-scale deployment of innovative solutions. The

²⁷⁹ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy

²⁸⁰ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds

²⁸¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

²⁸² Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

change scenario(s) should build on deliverables of relevant Mission related projects²⁸³, best practices on citizen participation and deliberative democracy, national initiatives as well as state-of-the-art models and draw on data and projections from the IPCC, IPBES, European Environment Agency and JRC. Finally, they should rely on and be compatible with the EU Digital Twin Ocean developments and eventually become one of its use-cases.

Scenarios of the future should in particular include the deployment at scale of innovative solutions with a special emphasis on nature-based solutions²⁸⁴, which are proven to be environmentally, economically and socially effective and which address in particular the climate change, biodiversity and pollution driven challenges to the ocean and water system²⁸⁵, including biodiversity loss and its impacts on marine ecosystems and sectors relying on it, sea level rise, extreme weather, as well as pollution of the seas, coasts and rivers. The scenarios should take the objectives of current EU policies and legislation into consideration for their design.

Proposals are expected to develop a map and visualisations as an interactive, dynamic and digital tool and application to be co-created and used by citizens, including schools and planners at EU, national, regional and where applicable local level, using whenever possible the Digital Twin of the Ocean core public infrastructure and its services. This could take the form of an interactive 2D and 3D visual experience of the future envisioned EU and regional landscapes (NUTS 2 and NUTS 3) and ocean and water space incl. the seabed.

Proposals are expected to work closely with other Horizon Europe projects, particularly Prep4Blue, the 4 Mission lighthouse CSA projects (EcoDaLLi²⁸⁶, BlueMissionAA²⁸⁷, BlueMissionMed²⁸⁸, BlueMissionBANOS²⁸⁹

) and other relevant projects, as well as the Mission Ocean and Waters Implementation Support Platform to connect to citizens and stakeholders in the region (incl. the lighthouse citizen assemblies), build on existing activities and strategies at basin-level and to take into account innovative solutions that have already been developed and deployed.

This topic should take into consideration contributions of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

²⁸³ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/new-report-analysing-contribution-over-800-eu-funded-projects-mission-restore-our-ocean-and-waters-2023-06-01_en

²⁸⁴ Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions

²⁸⁵ https://environment.ec.europa.eu/strategy/zero-pollution-action-plan/zero-pollution-targets_en

²⁸⁶ <https://ecodalli.eu/>

²⁸⁷ <http://bluemissionaa.eu/>

²⁸⁸ <https://bluemissionmed.eu/>

²⁸⁹ <https://bluemissionbanos.eu/>

Proposals may draw on experiences of past projects such as ‘A nature-based vision for The Netherlands in 2120’.

Call - Support to communities of actors for the Mission Restore our ocean and waters by 2030

HORIZON-MISS-2024-OCEAN-02

Conditions for the Call

Indicative budget(s)²⁹⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁹¹	Indicative number of projects expected to be funded
		2024		
Opening: 23 Apr 2024 Deadline(s): 18 Sep 2024				
HORIZON-MISS-2024-OCEAN-02-01	RIA	50.00 ²⁹²	Around 12.50	4
HORIZON-MISS-2024-OCEAN-02-02	CSA	4.00 ²⁹³	Around 4.00	1
Overall indicative budget		54.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
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²⁹⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

²⁹¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²⁹² Of which EUR 8.50 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 8.08 million from the 'Digital, Industry and Space' budget and EUR 1.05 million from the 'Civil Security for Society' budget and EUR 31.14 million from the 'Climate, Energy and Mobility' budget and EUR 1.23 million from the 'Culture, Creativity and Inclusive Society' budget.

²⁹³ Of which EUR 0.68 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.65 million from the 'Digital, Industry and Space' budget and EUR 0.08 million from the 'Civil Security for Society' budget and EUR 2.49 million from the 'Climate, Energy and Mobility' budget and EUR 0.10 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: In addition to the standard eligibility conditions, the consortium must include beneficiaries from at least two regions ²⁹⁴ or associations thereof from the respective lighthouse area (also referred to as basin) covered by the proposal.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: Evaluation carried out by EU staff To ensure a balanced portfolio covering all four basins covered by the

²⁹⁴ Represented by the relevant public authorities.

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Missions and Cross-cutting Activities*

	<p>Mission 'Restore our ocean and waters by 2030' (1. Danube river basin, 2. Atlantic and Arctic sea basin, 3. Mediterranean Sea basin, 4. Baltic and North Sea basin), grants will be awarded to applications not only in order of ranking but also to at least one proposal that is the highest ranked within each basin, provided that the applications attain all necessary thresholds.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to Mission community²⁹⁵ actors, located in Member States and Associated Countries, for:</p> <ol style="list-style-type: none"> 1. community-led²⁹⁶ actions. 2. transition agendas²⁹⁷. <p>Due to the nature of the work to be supported under the calls for community-led actions piloting innovative solutions, and transition agendas requiring high quality expertise, and because the financial support to third parties is one of the primary activities of this action enabling it to achieve its objectives, the contribution to a third party may go beyond EUR 60 000. The maximum amount to be granted to each third party is EUR 500,000²⁹⁸ but may be higher if duly justified in the proposal.</p> <p>A recipient may only benefit from the financial support to third parties once within the duration of the project.</p>

²⁹⁵ For this call, a Mission community refers to a group of individuals, public or private sector entities or other actors who are actively involved in activities relevant for the achievement of Mission objectives. Examples of such communities include waterfront cities or regions, islands, ports, fishing communities, etc. and other groups that are engaged in addressing Mission objectives. We consider that such communities can consist of various types of actors specific to each particular type of community. Some examples of such actors include, among others, public authorities, NGOs, associations, companies, research organisations, etc.

²⁹⁶ For this call, community-led actions refer to initiatives, projects, or activities that are defined by meaningful engagement, contribution and shared decision-making by individuals, groups, or organisations within a specific community or geographical area. To foster a sustainable Blue Economy, applicants can also take inspiration from the European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027, where coastal areas have the opportunity to support Community-Led Local Development (CLLD, https://oceans-and-fisheries.ec.europa.eu/funding/local-partnerships_en) through Local Action Groups (LAGs) in fisheries and aquaculture areas (European Commission, Directorate-General for Maritime Affairs and Fisheries, Community-led local development and the blue economy, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2771/392>).

²⁹⁷ For this call, we define a transition agenda as a strategic roadmap towards reaching all objectives and targets of the Mission 'Restore our ocean and waters by 2030'.

²⁹⁸ In the case of a community-led action resulting from a cascading grant call, this applies to each beneficiary in the consortium of the community-led action, rather than the consortium as a whole.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Demonstration of measurable, verifiable and ambitious progress towards reaching one or several interlinked objectives and targets of the Mission “Restore our Ocean and Waters by 2030”, as set out in the Mission Implementation Plan²⁹⁹ through implementation of effective and well-managed community-led pilot actions and other types of support to Mission communities of actors.
- A concrete contribution to support Member States/Associated countries, their national, regional and/or local authorities, as well as all concerned stakeholders, to implement EU legislation related to marine and freshwater ecosystems³⁰⁰ and reach the biodiversity, pollution and climate targets of the European Green Deal.
- Mobilised and engaged Mission communities of actors (regions, ports, cities, islands, etc.) through effective support designed to accelerate the progress to achieve the Mission objectives and targets;
- Leveraging of resources and investments from communities of actors to restore our ocean, seas and waters.
- Increased readiness at local level to deploy at scale innovative solutions to restore the ocean, seas and waters.

Scope: As stated in the Mission Ocean and Waters Implementation Plan, the deployment and upscaling phase (phase 2 of the Mission starting in 2026) aims to “enable broad participation in the Mission across the EU” with “a strong citizen, stakeholder and community governance element”. In the second phase of the Mission implementation, the solutions developed and piloted in the first phase (development and piloting phase) to deliver on the Mission and Green Deal objectives will be further deployed, replicated, and scaled up. Therefore, in the last years of phase 1, a transition to the deployment and upscaling phase needs to be well prepared.

Reaching the ambitious Mission objectives and targets is dependent on mobilising a broad set of actors to take meaningful action to restore our ocean, seas and waters. Practical, easily accessible support is needed for established or emerging communities of actors to facilitate the deployment at scale of innovative actions, measures and initiatives contributing to the EU Mission’s objectives, and the transformations required at national, regional, and local level.

Each proposed action under this topic should address one of the four basins covered by the Mission 'Restore our ocean and waters by 2030'³⁰¹ and should foresee all of the following

²⁹⁹ See pages 12-13 of the Mission Ocean and Waters Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/ocean_and_waters_implementation_plan_for_publication.pdf

³⁰⁰ The Birds, Habitats, Marine Strategy Framework and Water Framework Directives

³⁰¹ The four basins covered by the Mission 'Restore our ocean and waters by 2030': 1. Danube river basin, 2. Atlantic and Arctic sea basin, 3. Mediterranean Sea basin, 4. Baltic and North Sea basin

types of support to Mission communities of actors of the respective basin: financial support to third parties (also referred to as cascading grants) to community-led pilot actions; cascading grants for transition agendas; and technical assistance, to be provided by the consortium.

Cascading grants to community-led pilot actions

Each proposal under this topic should foresee awarding at least 5 cascading grants of EUR 200 000 - EUR 2 million³⁰² per grant to community-led pilot actions that are implementing innovative solutions towards achieving one or several interlinked Mission objectives in the respective basin addressed by the proposal. The Commission estimates that the total budget for the cascading call to support community-led actions could be in the order of EUR 7 million. These third-party community-led actions may be implemented by a consortium of several participants. The size of the consortium and the budget requested should reflect the specific local needs addressed by the third-party action.

The proposals must ensure that the selection process of the third parties to which financial support would be granted is based on principles of transparency, objectivity and fairness, in accordance with Annex B of the general annexes to this work programme.

The proposals are expected to provide a detailed plan for the cascading grant call for the community-led pilot actions, in particular planning the launch of the call no later than the end of month 3 of the project. The proposals should describe appropriate means to promote the cascading grant call at lighthouse, national and regional levels that would allow them to reach as many of the potential applicants as possible.

The third-party actions supported through the cascading call should demonstrate measurable, verifiable, and ambitious progress towards reaching at least one or, whenever possible and applicable, several interlinked objectives and targets set out in the Mission Ocean and Waters Implementation Plan. The chosen focus of the third-party actions should depend on which objective(s) are most urgent for the communities dealing with specific conditions and realities in a particular area. However, addressing several objectives, in the case that this is feasible, may provide an added value and should thus be seen as advantage for the applications in the cascading calls.

The third-party actions should focus on implementing innovative solutions that go beyond the state of the art and that combine, as appropriate, technological, nature-based, social, cultural, regulatory, and financial innovation, and new governance models. The actions should foster a participatory approach that empowers local stakeholders, builds on their local know-how and application of sustainable practices, and encourages their long-term commitment to the protection, restoration and de-pollution of our ocean, seas and waters and to making the sustainable blue economy carbon-neutral and circular. With the help from the project

³⁰² This range of funding refers to the amount awarded as a cascading grant to a community-led action (third-party action) which we envision to be implemented by a consortium of several participants (third parties). Please note that this is different from the specific condition concerning *Legal and financial set-up of the Grant Agreements*, where the stipulated maximum amount applies to each individual third party (please see the relevant footnote under the specific conditions).

consortia selected under this topic, the community-led third-party actions should promote the deployment and upscaling of innovative solutions to restore the ocean and waters, including through the preparation of deployment plans.

The community-led third-party actions should be encouraged to cooperate with scientific institutions to stimulate transdisciplinary innovation activities, which are based on best available science practices. Transdisciplinary activities denote cooperation of diverse societal stakeholder groups (administration, civil society, business & industry, finance, etc.), not only across academic disciplines ('interdisciplinary').

These community-led actions should also consider an effective contribution of SSH (Social Sciences and Humanities) disciplines as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related innovation activities. Social innovation should also be considered in order to match innovative ideas with social needs.

The proposals should encourage the third-party actions to build on research and innovation developed by projects financed under the current and/or previous EU framework programmes and other relevant EU and national programmes, linking also to the Mission Implementation Platform³⁰³, and where applicable, make use of Copernicus/Galileo/EGNOS and Emodnet.

Attracting additional financing from Structural Funds or any national, regional, local programmes or private funding at any stage of the community-led pilot actions is strongly encouraged.

The types of Mission communities relevant to the cascading grants may include at least the following:

- ports (including inland ports);
- islands;
- fishing communities, aquaculture producers and other representatives of blue economy;
- operators of various vessels;
- Local Action Groups described by the Community-Led Local Development strategies³⁰⁴
- waterfront cities or regions / communities (avoiding overlaps with Cities' Mission);
- conservation communities;
- representatives of the tourism sector;
- maritime infrastructure operators (incl. offshore platforms and their operators).

³⁰³ [Mission Ocean and Waters service portal | Research and Innovation \(europa.eu\)](#)

³⁰⁴ [The ESF and community-led local development: Lessons for the future | European Social Fund Plus \(europa.eu\)](#)

Various types of actors in the communities listed above could apply for the support. These could include for example:

- regional and local authorities;
- NGOs, foundations, professional associations, and other entities engaged in local development and nature conservation activities;
- educational establishments;
- locally based companies (provided this is not in conflict with the State Aid rules);
- research performing organisations, etc.

Cascading grants for transition agendas

Each proposed action should also foresee awarding at least 20 cascading grants for transition agendas of up to EUR 100 000 each, addressing the types of Mission communities described above. The proposed actions should ensure that the selection process of the third parties to which financial support for transition agendas would be granted is based on principles of transparency, objectivity, and fairness, in accordance with Annex B of the general annexes to this work programme.

A transition agenda for this call is understood as a strategic roadmap towards reaching all objectives and targets of the Mission 'Restore our ocean and waters by 2030' in the applicant communities, with a particular focus on the objectives that are most relevant to the specific community. The roadmaps could cover processes needed to ensure the protection and restoration of marine/coastal/inland waters, biodiversity and ecosystems, the reduction/elimination of pollution and the achievement of decarbonisation and circularity targets, as well as include a plan for a defined number of years concerning the objectives set, covering, for example, expected outcomes, results, impact, ways to achieve them and ways to bring in financing to support the achievement of these objectives.

The transition agenda should indicate how specific results and ideally also their impacts are expected to materialise in order to ensure the actual achievements of the objectives. These agendas would serve as a basis for further planning of follow-up activities by the actors involved, particularly actions to meet the Mission Ocean and Waters objectives/targets, to be subsequently implemented with the financial support of various funds (e.g., EU structural funds/national/regional funds).

All entities establishing transition agendas should commit to report to the project that had issued the third-party financing within 6 months after finalisation of the agendas on the progress of implementing its results in practice.

Technical assistance to Mission Communities of actors

The proposals should also foresee technical assistance to Mission Communities of actors in the basin addressed by the respective action. Such assistance should address the needs of the

Mission communities of actors in the particular basin and may include support and advice needed for the preparation of business plans, feasibility studies, impact assessments, and needs assessment, as well as long-term sustainability planning to help the communities of actors develop sustainable financing strategies to ensure longevity of the efforts to achieve healthy oceans, seas and waters; capacity building to empower communities of actors with the knowledge and skills needed to undertake effective pollution prevention and elimination, conservation and restoration initiatives, as well as making the sustainable blue economy carbon-neutral and circular; and other Mission-related actions that would require direct counselling, written guidance, online materials, webinars, in-depths sessions, deep dives, peer-to-peer support, twinning etc.).

It is essential to tailor the support provided to the specific needs and context of each community of actors, including through the use of local languages, as well as fostering a participatory approach that empowers local stakeholders and encourages their long-term commitment to the protection and restoration of our ocean, seas and waters.

The proposals under this topic should also work on clustering of and support to the third-party community-led actions. The proposals should help create a network of these community-led actions to enhance communication, collaboration and sharing of knowledge and best practices to maximise their combined impact, and create links to the networks similarly created by the other three projects selected under this topic in other Mission lighthouse areas.

Furthermore, the proposals should assist each community-led action in using its experiences and solutions to establish new networks and collaborations in their respective areas. The proposals should provide guidance and support to the third-party actions in forming partnerships with local communities, NGOs, government agencies, or relevant stakeholders to expand the impact of the actions and create a collaborative ecosystem for knowledge sharing, resource optimisation, and wider adoption of successful solutions.

The proposals should provide help and guidance to the selected community-led actions regarding access to additional funding. The proposals should also identify, evaluate, and showcase feasible and scalable solutions demonstrated by the community-led actions, and provide guidance on deployment of these solutions.

Furthermore, the proposals should set aside funds for clustering and collaboration among four projects selected under this topic, including for a joint monitoring and evaluation framework to track the progress of each third-party community-led action project and assess their collective impact.

In order to ensure complementarities and avoid overlaps concerning the provision of all three types of support described above, the proposals should work closely with other Horizon Europe projects, particularly Prep4Blue, the relevant Mission lighthouse CSA projects (EcoDaLLi³⁰⁵, BlueMissionAA³⁰⁶, BlueMissionMed³⁰⁷, BlueMissionBANOS³⁰⁸), the project

³⁰⁵ <https://ecodalli.eu/>

³⁰⁶ <http://bluemotionaa.eu/>

³⁰⁷ <https://bluemotionmed.eu/>

selected under HORIZON-MISS-2024-OCEAN-02-02, the public procurement prepared under Other Actions of WP 2022 “Studies to support communities of actors to achieve the EU Mission: Restore our Ocean and Waters objectives”, and the Mission Implementation Platform (MIP), notably with the work MIP does on deployment and upscaling of solutions. The proposals may also collaborate with and build on the experience of relevant existing networks, partnerships and initiatives³⁰⁹, as well as take into account relevant strategic research and innovation agendas and regional strategies.

The projects resulting from this call should be implemented in close collaboration with the relevant EC service(s) and the Mission Ocean and Waters Secretariat³¹⁰ to ensure a coherent and timely implementation of the Mission.

Proposals should be flexible enough to accommodate for some adjustments that may be requested by the Commission before the grant agreement signature to ensure complementarity of activities between the lighthouse CSA projects, Prep4Blue, the Mission Implementation Platform, and the project selected under topic HORIZON-MISS-2024-OCEAN-02-02.

HORIZON-MISS-2024-OCEAN-02-02: Support for the Coalition of waterfront cities, regions and islands for Mission Ocean and Waters

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: In addition to the standard eligibility conditions, the consortium must include beneficiaries from at least one region ³¹¹ , one waterfront city ³¹² and one island ³¹³ , or associations thereof.
<i>Procedure</i>	The procedure is described in General Annex F. The following

³⁰⁸ <https://bluemissionbanos.eu/>

³⁰⁹ These could include networks and initiatives such as BIOEAST (<https://bioeast.eu/>), AAORIA (<https://allatlanticocean.org/>), BlueMed Initiative (<http://www.blued-med-initiative.eu/>), etc

³¹⁰ Mission secretariat consisting of European Commission staff, is located within the European Commission services and is managed by the Mission Manager, for details on Mission governance see Commission Decision C(2021) 4472 final of 24.06.2021.

³¹¹ Represented by the relevant public authority

³¹² Represented by the relevant public authority representing a coastal or other waterfront (rivers, lakes, etc) municipality

³¹³ Represented by the relevant public authority

- establish and strengthen a Coalition of coastal and inland waterfront cities (including their maritime or inland water ports), regions and islands across the EU and Associated countries;
- support the governance, implementation and reporting of the Coalition;
- co-ordinating, networking, twinning, and mentoring of the Coalition members, as well as sharing best practices and deploying solutions together with the projects resulting from the topic HORIZON-MISS-2024-OCEAN-02-01 and in collaboration with the Mission Ocean and Waters Implementation Platform;
- develop participatory processes for cities, regions and islands to be able to better plan and implement actions aiming to reach the Missions objectives; establish robust mechanisms for regional and local dialogues and facilitate coordination and collaboration between the Coalition and relevant national, regional and local authorities, communities, as well as relevant networks and initiatives in order to engage a large number of stakeholders, including private actors and citizens, in the protection and restoration of the ocean, seas and waters.
- enhance the visibility of the Coalition activities through targeted communication actions and educational campaigns engaging local communities, schools, and the general public;
- leverage funds to support the actions of the Coalition, in interaction with managing authorities and the private sector, where relevant.

The proposals should support the public authorities that become members of the Coalition by enabling them to engage with various other local stakeholders, including the private sector, NGOs, citizens, investors, other local and regional authorities, in co-design, co-development and co-implementation strategies and actions for the health of oceans, seas, and inland waters. The proposals should help to ensure that the Coalition has a balanced representation of diverse communities across Member States and Associated Countries, including participation of smaller cities and municipalities.

The proposals should help the Coalition to forge links and coordinate with other important EU initiatives and key players (while at the same time avoiding overlaps), such as the EU Cities Mission, the Horizon Europe Partnership for a Sustainable Blue Economy, the European Environment Agency and organisations in charge of protection of the marine and coastal environment in Europe; as well as relevant international activities. The proposals may also collaborate with and build on the experience of other relevant existing networks, partnerships and initiatives³¹⁶ as well as take into account relevant strategic research and innovation agendas and regional strategies.

The proposals should enable the Coalition to leverage funds for implementing the actions to achieve the Mission objectives, including through facilitated synergies and access to EU, national, regional and private funds and strategies, in interaction with managing authorities if

³¹⁶ Examples of such networks include BIOEAST, the Atlantic Cities Network, BlueMed Initiative, etc

applicable (e.g. ERDF, EMFAF, LIFE, Interreg, RRF, RIS3/RIS4 etc), the financial sector (e.g. EIB), investors and philanthropies.

The proposals should also support the Commission in developing, launching and implementing a Mission Ocean and Waters Label, under guidance of and in a close collaboration with the EC Mission Ocean and Waters Secretariat³¹⁷. The Label should be awarded to entities that have already adhered to the Charter or are planning to do so, and whose activities or transition plans are being assessed as stand-out in terms of excellence and impact towards reaching Mission objectives. The Label will recognise the commitment to achieving the Mission objectives and facilitate access to possible funding and investment. In particular, the proposals should work with the EC Mission Ocean and Waters Secretariat to define detailed objectives and criteria for awarding the Label, taking into account and building on existing certification or label³¹⁸; develop measurable certification standards in line with the Mission's targets and a transparent verification process, as well as help conduct a pilot exercise awarding the Label to the first group of actors that qualify for it. In order to accelerate and facilitate broad adoption of the Label, the proposals should develop a strategy for the promotion of the Label, including defining the benefits for the entities that would undergo the labelling, and choosing the most appropriate tools and methods for raising awareness of the Label, including the design of a compelling brand identity for the Label in line with the visual identity of the Mission and establishing partnerships with key stakeholders. The proposals should also foresee provision of guidance and support to the communities of actors wishing to apply for the Label. The labelled entities will also be integrated in the existing Mission community networks, and receive support from the Mission Implementation Platform and other initiatives and projects linked to the Mission Restore our Ocean and Waters. The proposals should put in place a system to monitor and evaluate the labelled entities, as well as promote collaboration among them. The proposals should also establish necessary support structures to ensure longevity of the Label. The labelling process will be designed and implemented in close collaboration with the EC Mission Ocean and Waters Secretariat³¹⁹

The proposals should work closely with other Horizon Europe projects, particularly Prep4Blue, the 4 Mission lighthouse CSA projects (EcoDaLLi³²⁰, BlueMissionAA³²¹, BlueMissionMed³²², BlueMissionBANOS³²³), the projects selected under HORIZON-MISS-2024-OCEAN-02-01 and the Mission Ocean and Waters Implementation Platform³²⁴ in order

³¹⁷ Mission secretariat consisting of European Commission staff, is located within the European Commission services and is managed by the Mission Manager, for details on Mission governance see Commission Decision C(2021) 4472 final of 24.06.2021.

³¹⁸ Such as the sustainable islands label (<https://smilo-program.org/sustainable-island-label/>) and the European Clean Harbours certification (<https://www.ports-propres.org/en/5-phases-process/>)

³¹⁹ Mission secretariat consisting of European Commission staff, is located within the European Commission services and is managed by the Mission Manager, for details on Mission governance see Commission Decision C(2021) 4472 final of 24.06.2021.

³²⁰ <https://ecodalli.eu/>

³²¹ <http://bluemissionaa.eu/>

³²² <https://bluemissionmed.eu/>

³²³ <https://bluemissionbanos.eu/>

³²⁴ [Mission Ocean and Waters service portal | Research and Innovation \(europa.eu\)](#)

to ensure complementarities and avoid overlaps. The project resulting from this topic will be implemented in close collaboration with the relevant EC service(s) and Mission Ocean and Waters Secretariat³²⁵ to ensure a coherent and timely implementation of the Mission.

Applicants should be flexible enough to accommodate for some adjustments that may be requested by the Commission before the grant agreement signature to ensure complementarity of activities between the projects CSA projects selected in past Mission calls (Prep4Blue, EcoDaLLi, BlueMissionAA, BlueMissionMed, BlueMissionBANOS), the Mission Ocean and Waters Implementation Platform, and the projects selected under topic HORIZON-MISS-2024-OCEAN-02-01.

Other Actions not subject to calls for proposals

1. EU Public Infrastructure for the European Digital Twin Ocean, phase 2

This grant will be awarded without a call for proposals according to Article 195(f) of the Financial Regulation and Article 20 of the Horizon Europe Framework Programme and Rules for Participation. The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

The two legal entities, namely Mercator Ocean International (MOI), implementing the Copernicus Marine Service and the Flanders Marine Institute (VLIZ), representing the implementing entities of EMODnet have been identified for the first phase of the EU-DTO because of the high level of technical expertise needed and because they are implementing the two infrastructures expected to be integrated for the Digital Twin development. The same consideration applies for the second phase, which is the continuation of the EDITO-Infra action.

The EU Digital Twin of the Ocean (EU DTO), conceived as a public good and service, is a main deliverable of the Mission 'Restore our Ocean and Seas by 2030', and of its Digital Ocean Knowledge System in particular. It has as an objective to make ocean knowledge readily available, and actionable, to be used by public authorities, the private sector, citizens, to support their decision-making with fit-for-purpose and user-specific tools based on 'what-if scenarios'. The EU DTO will enable all the ocean actors to become partners in knowledge generation and its use for the pursuit of a healthy and productive ocean.

The EU DTO will provide public access and use to the widest possible range of open ocean observation and related data (including by hosting new data sources), data products, models, cloud and HPC computing capacities, and a co-working environment with services, applications, and interfaces for users to integrate and connect their own data and models and to develop their own applications.

³²⁵ Mission secretariat consisting of European Commission staff, is located within the European Commission services and is managed by the Mission Manager, for details on Mission governance see Commission Decision C(2021) 4472 final of 24.06.2021.

The initial development of the EU DTO core Infrastructure ('EDITO-Infra'), under the Mission Ocean work programme 2021-2022, has been entrusted, through a grant to identified beneficiaries to two main operators of the EU programmes on which the DTO is to be initially built upon, namely Mercator Ocean International for the Copernicus Marine Service and the Flanders Marine Institute representing the EMODnet partners.

In addition, complementary competitive actions have been launched to provide the next generation of underlying models for the EU DTO (EDITO-Model-Lab)³²⁶, to activate access to 'sleeping' marine biodiversity data and enable sustainable and automated data flows integration into the EU DTO³²⁷, to develop socio-ecological approaches and models³²⁸, and to develop a roadmap for the integration of inland waters into the EU DTO³²⁹.

By the end of 2024, EDITO-Infra will deliver a prototype of the core infrastructure, together with a few demonstrators of applications (local or sectoral digital twins of the ocean), provided through cooperation with other R&D projects, and pursued interoperability with Destination Earth. This prototype will utilise and integrate key service components, and their future evolutions (to which it will also contribute), of the Copernicus Marine Service (CMEMS), of the European Marine Observation and Data Network (EMODnet), and of several other EU assets, into a single digital infrastructure that will consist of: (1) a data lake, (2) sets of models, (3) an Engine to configure and orchestrate data, models and processes, and (4) a collaborative virtual environment with visualization tools, access to valorisation tools and APIs.

A second phase is now necessary to consolidate and scale up the EU DTO into an overarching knowledge system:

- To further develop the EU DTO core infrastructure, scaling it up with additional, unavailable to date, data sources, models and services provided through the virtual co-working environment,
- To facilitate the integration of applications (local or sectoral digital twins of the ocean) developed by third-parties, with a focus on enabling the Mission Ocean's objectives and supporting its Lighthouses and supporting the implementation of EU legislation and international commitments,
- To support the development of new user-driven applications by third-parties, built-in in the EU DTO infrastructure (local or sectoral digital twins of the ocean), and with a focus on enabling the Mission Ocean's objectives and supporting its Lighthouses and supporting the implementation of EU legislation and international commitments,

³²⁶ <https://cordis.europa.eu/project/id/101093293>

³²⁷ HORIZON-MISS-2022-OCEAN-01-07: Integration of biodiversity monitoring data into the Digital Twin Ocean

³²⁸ HORIZON-MISS-2023-OCEAN-01-08: Integration of socio-ecological models into the Digital Twin Ocean

³²⁹ HORIZON-MISS-2023-OCEAN-01-09: Roadmap towards the integration of inland waters into the Digital Twin Ocean

- To work towards interoperability with similar digital initiatives in Europe and on the international stage, such as e.g. Destination Earth or through the UN Decade of Ocean Science for Sustainable Development.

In more detail, the following tasks (from 1 to 4) must be addressed:

1. Further develop the EU DTO core infrastructure, which comprises:

- Data lake: enlarging access to institutional, private and citizen data (historical to real-time, Internet of Things) beyond those covered by EMODnet and CMEMS, in particular through the integration of outcomes of projects such as ILIAD, Blue-Cloud and AquaInfra, Lighthouse projects and the projects selected under HORIZON-MISS-2023-OCEAN-01-08 and HORIZON-MISS-2023-OCEAN-01-09; further develop standards and methodologies for data producers; foster new data ingestion in EMODnet, e.g. through advanced automated data ingestion processes (including curation and validation); pursue interoperability with other relevant initiatives, in particular under EOSC;
- Models: enhancing the DTO with innovative modelling and simulation environments; integrating ecosystems models suites developed by EU projects, such as Ecoscope or Neccton, or identified by the study on marine biodiversity modelling³³⁰; adding coastal models of use to monitor European waters supporting the development of national/local coastal ocean forecasting (potentially following methodologies established by COASTPREDICT); piloting interoperability with Copernicus services and existing or developing digital twins (biodiversity, DestinE climate adaptation and extreme events Digital Twins);
- DTO Engine and related computing infrastructure: consolidating and further developing the DTO Engine orchestrating runs of scenarios on Cloud and High-Performance Computing technologies, to accommodate the new sources of data and types of models, more complex connectivity/coupling between models, incorporating training and scheduling of Artificial Intelligence applications, big data analytics, and pursuing interoperability with other EU initiatives and programmes.
- Virtual co-working environment and digital Services: user-friendly EU DTO web portal with entry points and functionalities adapted to the different categories of expertise and users; catalogues of data, models, processing or AI algorithms, services and applications ('DTO App store' or 'DTO digital toolbox'); audit trails system allowing for the traceability of use of data and recognition of intellectual property; application programming interfaces allowing efficient access through Machine-to-Machine communication; toolkits for developers to integrate their own data or models and to develop and validate their own customised applications; all necessary documentation for developers and users, IT security and performances (confidentiality, integrity, availability and resilience of the DTO, ...), data protections, etc.

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[Marine biodiversity modelling study - Publications Office of the EU -europa.eu](https://publications.ec.europa.eu/marine-biodiversity-modelling-study)

2. Integrating digital applications ('local twins' or 'sectoral twins') developed by third-parties, through cooperation agreements, tendering, or open calls. Targets should in particular be policy, public authorities' and stakeholders' needs for the implementation of EU and national legislation linked, e.g. to the EU Marine Strategy Framework Directive, maritime spatial planning, Common Fisheries Policy, marine protected areas, marine renewable energy, fisheries or aquaculture and related impact assessments (impact of environmental changes on human activities, impact of policies implementation on the marine environment and on human activities). The applications and their specifications should be appropriately co-designed, co-developed and tested with the relevant technical agencies, institutional users, and information providers. The JRC Blue³³¹ modelling framework should be taken into consideration.

3. Support to third parties willing to develop built-in applications in the EU-DTO: to organise a support office and dedicated resources for third parties willing to develop and demonstrate end to end what-if scenarios applications and locally or thematic specific twins, relying on the DTO core infrastructure, enabling the Mission Ocean's objectives and supporting its Lighthouses, but also the other EU Missions such as the Mission Adaptation to Climate Change or supporting the EU Green Deal and answering public and private user needs and policies related to all marine and maritime sectors: maritime safety, coastal environment monitoring, trade, shipping, fishery, aquaculture, marine renewable energy, marine conservation and biodiversity, ocean health, climate and climate adaptation, recreation, education, ocean science and innovation, etc. This support should be organised through transparent and competitive calls and include financial support to the selected third parties for the integration on their work in the EU DTO.

4. Ensuring interoperability with relevant initiatives in Europe and on the international stage. On the European stage, the action must ensure interoperability with Destination Earth and EOSC (data and computing resources), alignment with SIMPL³³², possible access to EuroHPC Joint Undertaking computing resources and other high performance computing resources. On the international stage, the action must contribute in particular to the activities of key relevant initiatives from the UN Ocean Decade of Ocean Science for Sustainable Development such as DittO, the Decade Coordination Office on Data Sharing, and the Collaborative Centres on Ocean Prediction and Coastal Resilience.

To be successful, the action must have strong stakeholder engagement:

- Engagement with stakeholders to promote the EU DTO core infrastructure and the dissemination and uptake of its services: dedicated interaction with other R&D projects potential providers of additional data, models and AI resources, communication events, capacity and skills building events, user feedback collection and definition and implementation of additional operational services; ensuring the societal, ethical and security dimensions are appropriately addressed; support to the organisation of the annual Digital Ocean Forum.

³³¹ [The BLUE2 project - europa.eu](https://europea.eu)

³³² [Simpl: cloud-to-edge federations and data spaces made simple | Shaping Europe's digital future - europa.eu](https://europea.eu)

- Build on the portfolio analysis of the projects relevant to the EU DTO and actively pursue and establish synergies with existing and new projects, supported by Horizon Europe, by the Sustainable Blue Economy Partnership and by any other national or regional programmes, initiatives, infrastructures, etc., aiming to create lasting integrations, provide legacy and ensure co-design and co-development of the EU DTO with contribution from all relevant actors. Although this task is embedded partially in all the aforementioned tasks, it should be addressed also separately to ensure thorough analysis of the landscape and a consistent methodological approach in developing synergies, thus creating an inclusive and visible EU DTO community where different actors are being represented. Appropriate KPIs to evaluate the success of this task are expected.

The action should provide qualitative and quantitative targets, and key performance indicators, to ensure appropriate levels of ambition and for progress monitoring.

Legal and financial set-up of the grant agreement: The rules are described in General Annex G. The following exceptions apply: subcontracting is not restricted to a limited part of the action. Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. As financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives, the 60 000 EUR threshold provided for in Article 204 (a) of the Financial Regulation No 2018/1046 does not apply. The maximum amount to be granted to each third party is EUR 500 000. This maximum amount is justified by the high level of technical expertise and efforts required for the development and/or integration of DTO use-cases applications in the EU DTO public core infrastructure.

Legal entities:

Vlaams Instituut voor de Zee, Wandelaarkaai 7, 8400 Oostende, Belgium

MERCATOR OCEAN, 2 Avenue de l' Aérodrôme de Montaudran, 31 400 Toulouse, France

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 195 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Q4 2024

Indicative budget: EUR 14.00 million from the 2024 budget³³³

2. Monitoring the Mission policy objectives - Service Level Agreement with the European Environmental Agency – EEA

The action should be implemented through a Service Level Agreement with the European Environment Agency (EEA), as foreseen under Article 59.2 of the Financial Regulation

The monitoring of the EU Mission ‘Restore our Oceans and Waters by 2030’ is critical to its successful implementation and impact. Dynamic and real-time monitoring of the progress will be essential to keep a sense of urgency, achievement, and motivation within the Mission but also to allow for informed and flexible adjustments to the Mission, when and if necessary. The monitoring framework will support delivering on the European Green Deal quantified and measurable targets and objectives for protecting and restoring ecosystems and biodiversity, for zero pollution, and for the decarbonisation and reduction of net greenhouse gas emissions towards climate neutrality, within the EU’s ocean, seas and waters.

The objective is to develop a monitoring framework that would support the EU Mission to annually track the progress of its implementation and contribution to the 3 key objectives, in close coordination with the Mission Implementation Platform and based on consultation with the JRC:

- Protecting and restoring marine and freshwater ecosystems and biodiversity,
- Reducing pollution,
- Making the sustainable blue economy carbon-neutral and circular.

The European Environment Agency (EEA) support to the monitoring framework would be tailored to the specific needs of the EU Mission ‘Restore our Oceans and Waters by 2030’ to cover water and sea basins. Specifically, the following tasks are envisaged for the EEA:

- Monitoring the contribution of the EU Mission to policy objectives, based upon a set of indicators and qualitative information related to the activities being implemented and the expected results and impact of the EU mission.
- Design a science-policy interface on WISE-Marine, delivering an overview of progress towards policy objectives.

The EEA will build upon its European Environment Information and Observation Network (Eionet) and cooperate with the Mission Knowledge System under implementation.

Type of Action: Service Level Agreement

³³³ Of which EUR 2.38 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 2.26 million from the 'Digital, Industry and Space' budget, EUR 8.72 million from the 'Climate, Energy and Mobility' budget, EUR 0.29 million from the 'Civil Security for Society' budget, EUR 0.34 million from the 'Culture, Creativity and Inclusive Society' budget.

Indicative timetable: Q1 2024

Indicative budget: EUR 2.50 million from the 2024 budget³³⁴

3. Mission Ocean and Waters events

The objective is to organise Mission Ocean and Waters events that will bring together key stakeholders and Mission partners, including Member States, regions, research bodies and academia, civil society and organisations and promote the Mission activities and projects among key Mission partners, stakeholders and citizens.

The action's results are expected to lead to:

- Increased knowledge and awareness of the Mission and its activities among Member States, regions and communities and key Mission partners and general public;
- Increased support and acceleration of the implementation of Mission activities, such as Mission lighthouses;
- Provide cooperation and networking opportunities among key Mission partners, Member States authorities, regions and communities for the implementation of the Mission;
- Support ocean and water literacy, citizen science and public and stakeholder mobilisation and engagement with regard to Mission activities.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3-Q4/2024

Indicative budget: EUR 0.21 million from the 2024 budget³³⁵

4. Study on the seabed's natural carbon sequestration capacity and related impacts from seabed-disturbing activities

To contribute to the achievements of the Mission ocean and waters objectives, a study will be launched to review existing knowledge on the natural capacity of different types of seabed habitats to sequester carbon and to assess the impact of human activities on the long-term provision of the ecosystem service, notably through the physical disturbance caused by anthropogenic activities that affect the seabed either directly or indirectly. This study will strive to cover all the benthic broad habitat types and marine regions and subregions defined

³³⁴ Of which EUR 0.43 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.40 million from the 'Digital, Industry and Space' budget, EUR 0.05 million from the 'Civil Security for Society' budget, EUR 1.56 million from the 'Climate, Energy and Mobility' budget, EUR 0.06 million from the 'Culture, Creativity and Inclusive Society' budget.

³³⁵ Of which EUR 0.04 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.03 million from the 'Digital, Industry and Space' budget, EUR 0.13 million from the 'Climate, Energy and Mobility' budget, EUR 0.00 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

under the Marine Strategy Framework Directive. It will examine the duration/permanence of natural sequestration by different habitat types and the duration/permanence of sequestration of different habitat types under different disturbance activities.

The study will include: (i) an up-to-date review of existing knowledge on the natural carbon sequestration capacity of the different seabed habitat types in EU waters, (ii) an assessment of the impacts on this capacity from different human activities, and (iii) policy-relevant recommendations regarding suitable measures to address these impacts and ensure the continued delivery, protection and enhancement of the seabed's capacity to sequester carbon and avoidance of the already sequestered carbon to be released back into the water column and the atmosphere.

This study also responds to a specific call for action launched in the EU Marine Action Plan (Protecting and restoring marine ecosystems for sustainable and resilient fisheries, COM(2023) 102 final) and will support the implementation of the Marine Strategy Framework Directive and the upcoming Nature Restoration Law.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 1st/2nd Quarter 2024 for the launch and 18 months for the study

Indicative budget: EUR 0.40 million from the 2024 budget³³⁶

Other budget implementation instruments

1. Individual experts assisting the Commission for evaluation of Mission 'Restore our ocean and waters by 2030'

This action will support the use of appointed independent experts for the analysis, monitoring and evaluation of actions implemented as a part of the Mission 'Restore our ocean and waters by 2030', contributing to and complementing the Horizon Europe programme level monitoring framework and evaluation efforts, in particular the key impact pathways and joint evaluation studies. Their work could also contribute to prospective analyses for the implementation of this Mission.

A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work.

Form of Funding: Other budget implementation instruments

³³⁶ Of which EUR 0.07 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.06 million from the 'Digital, Industry and Space' budget, EUR 0.25 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

Type of Action: Expert contract action

Indicative budget: EUR 0.21 million from the 2024 budget³³⁷

³³⁷ Of which EUR 0.04 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.03 million from the 'Digital, Industry and Space' budget, EUR 0.13 million from the 'Climate, Energy and Mobility' budget, EUR 0.00 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

Mission: 100 Climate-Neutral and Smart Cities by 2030

The Work Programme 2023-2024 of the Climate-Neutral and Smart Cities Mission, in line with the provisions under the [Implementation Plan](#) of the Cities Mission, fosters the implementation of the Mission through actions that will continue to provide a strong and direct support to cities that will commit to climate neutrality and enable them to roll out their climate action plans and achieve climate neutrality by 2030, in synergy with significant progress towards zero pollution. In turn, the cities benefitting from these actions will act as experimentation and innovation hubs for other cities to become climate-neutral by 2050.

After the successful Call for Expression of Interest³³⁸ and selection of Cities to join the Cities Mission, the first Climate City Contracts were submitted in the first semester of 2023. It is therefore now important for reasons of transparency to provide a summary overview of the main elements of the review process below. The review process and award of the Mission Label is without prejudice to the eligibility of cities and other entities to apply for calls under the Cities Mission Work Programme.

Climate City Contracts review process and award of Mission Label

Climate City Contracts (CCC) are an innovative governance tool central to the EU Mission “100 Climate-Neutral and Smart Cities by 2030”. All cities that participate in the Cities Mission are to develop and implement a CCC with the help of the Mission Platform. CCCs are not legally binding but constitute a visible public commitment of those who sign it – the Mayor as a minimum, but ideally also all relevant local stakeholders as well as regional and national authorities and stakeholders. The European Commission will witness the signing of CCCs.

As stated in the Implementation Plan, the Commission intends to award a **Mission Label** “to the selected cities having signed a CCC, recognising the quality and feasibility of their commitments under the CCC”. The Mission Label is an acknowledgement of the successful completion of a process that was followed by the cities to develop their CCC. It should help facilitate access to EU, national and regional funding as well as to private investment but it does not guarantee automatic funding and financing from these investment programs.

A procedure is being established for reviewing³³⁹ the CCCs to allow the Mission Manager to endorse the CCC and award the Cities Mission Label. The review will cover the three parts of the Climate City Contracts, i.e.: **the Main Commitment Part** which describes the overall strategy and policy of the city to achieve climate neutrality in 2030; **the Climate Neutral Action Plan** which includes the setting of a baseline, 2030 gap analysis, impact pathways, agreed systemic solutions, portfolio of actions, timeline, KPIs and attribution of responsibilities for the implementation of the Action Plan and the **Climate Neutrality**

³³⁸ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/climate-neutral-and-smart-cities_en#what-is-next

³³⁹ Details of the review procedure will be published at [Climate-neutral and smart cities \(europa.eu\)](#)

Investment Plan which includes economic and financial capacity/capability needs, investment strategy, private and public capital required and key policy needs related to mobilising and deploying the required funding and financing for the implementation of the CCC.

The Mission Platform will undertake a **completeness check** where a CCC will be considered complete and mature enough for submission to the Commission when the Mission Platform can confirm the completeness of the **co-creation process** in which all relevant stakeholders have been involved and agreed to the vision and related activities set out in the main commitments part of the CCC and the completeness of the **Climate Neutrality Action Plan** and the **Climate Neutrality Investment Plan**.

After submission, the Mission Secretariat will review the Main Commitment part, experts from the Joint Research Centre will review the Climate Neutrality Action Plan and independent financial experts will review the Climate Neutrality Investment Plan.

The reviews will then be transmitted to the Mission Board and to the Commission-internal Mission Owners Group. Following the **consultation of the Mission Board** and **recommendation from the Mission Owners Group**, the Mission Manager will decide whether to **endorse** the CCC and award the Mission Label. The Mission Platform will carry on working with cities to update their CCCs and will monitor their implementation.

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Climate neutrality for cities is associated with important co-benefits and urban qualities such as reduced air and noise pollution, improved health and well-being, reduced urban environmental footprints, enhanced urban greening, reduced soil sealing and improved water management. It is also associated with policy coherence across sectors and with participatory and inclusive decision-making. Therefore, in addition to a significant contribution to the objective of the [European Green Deal](#) to make Europe climate-neutral by 2050, the actions funded will also contribute to the [UN Agenda 2030](#), the [EU Zero Pollution Action Plan](#), the [Fit for 55 strategy](#), the [Biodiversity Strategy for 2030](#), the [EU Strategy on adaptation to climate change](#), the [EU Industrial Strategy](#), the [EU Bioeconomy Strategy](#) and the [New European Bauhaus initiative](#). In the process, they will support cities in their twin green and digital transformation.

Topics under the 2023-2024 calls will continue to work on developing and scaling up R&I activities and solutions while fostering synergies and joint actions with Horizon Europe Partnerships as well as other EU Missions. The envisaged actions will aim at:

- accelerating the transition of European cities to climate neutrality by exploiting the potential of electric, automated and connected as well as shared people mobility and freight transport through a joint action with the Horizon Europe Partnerships dedicated to Zero-emission Road Transport (2Zero) and Connected, Cooperative and Automated Mobility (CCAM);

- engaging cities in decisive climate mitigation and adaptation efforts to reduce emissions, based on innovative use of urban greening and nature-based solutions through a joint action with the Adaptation to Climate Change Mission;
- developing and testing a digital twin of a Positive clean Energy District (PED) covering modelling, management, citizen interaction, self-optimization, decision support/scenario analysis.
- rethinking urban spaces towards climate neutrality by developing and applying methods and tools for a smart urban public space design and physical infrastructure management;
- delivering better and innovative local measures against pollution through increased knowledge about the exposure of citizens to pollution and health impact assessments and strategies to reduce health impacts related to air, water, soil and noise pollution;
- exploring, analysing and evaluating the effectiveness of mobility management schemes, influencing behavioural change, travel demand and travel supply, in achieving a decarbonised and energy-efficient urban mobility system;
- fostering the integration of green and smart mobility, energy, industry and governance solutions and measures within peri-urban development and planning practices to reduce GHG emissions and to improve liveability.

The operational capacity of the Mission Platform established through a Framework Partnership Agreement (HORIZON-MISS-2021-CIT-02-03) will be strengthened in order to: 1) ensure support to all the cities selected through the Call for Expression of Interest to be part of the Mission³⁴⁰, as well as to 2) provide support and basic services to all those cities that participated in the call and showed ambition and commitment to achieve climate-neutrality by 2030 but were not included in the final list of selected cities as well as cities responding to the second objective of the Mission.

Enhanced support will be provided to national networks in Member States and Associated Countries to support cities in pursuing their climate neutrality ambition, by strengthening existing ones as well as encouraging and supporting the creation of such structures in countries where this has not yet taken place.

Support for financial advisory services to be provided to help cities develop and eventually implement their investment strategy for becoming climate-neutral will also be addressed under this Work Programme.

Proposals should demonstrate, as appropriate to their scope and size, how they internalise the principles of the Cities Mission, notably: (1) the contribution of the action to an overarching strategy aiming at climate neutrality for cities, (2) the place of the action within a holistic and cross-sectoral approach to climate neutrality, and (3) diversity in terms of geographical location and size of cities.

³⁴⁰ https://ec.europa.eu/info/files/eu-cities-mission-meet-cities_en

Applicants are encouraged to show how their proposals take into account and build upon existing programmes and/or the results of previous R&I projects. While addressing the particular challenge of a topic and ensuring the doing no harm principles, proposals should also contribute as relevant to the following cross-cutting priorities: (1) zero pollution, (2) sustainable digitisation and green ICT, (3) interoperability and shared standards, and (4) affordability, social inclusiveness and accessibility.

Strong synergies contributing to the implementation of the objectives of the Cities Mission is expected also from other relevant Horizon Europe partnerships such as e.g. the European Partnership for People-centric Sustainable Built Environment (Built4People) and on Driving Urban Transitions to a Sustainable Future (DUT). Topics under the Cities Mission Work Programme are also relevant for the Cancer Mission, in particular when addressing co-benefits generated by achieving climate-neutrality such as reduced pollution, improved health and wellbeing, increased active mobility contributing then to cancer prevention. Similarly, actions funded under the Cancer Mission focusing on behavioural change can contribute to the objectives of the Cities Mission especially when targeting actions at urban level.

The European Institute of Innovation and Technology (EIT) and its Knowledge and Innovation Communities (KICs), with their experience in delivering holistic, transformative, citizen-driven and systemic solutions and innovations to specific global challenges, will also contribute to the Cities Mission in particular EIT Climate-KIC, EIT InnoEnergy and EIT Urban Mobility.

In line with the General Conditions set out in the General Annexes to the Horizon Europe Work Programme 2023-2024 concerning eligibility under Innovation Actions, legal entities established in China are not eligible to participate in Horizon Europe Innovation Actions in any capacity.

Proposals should set out a credible pathway to contributing to the main objectives of the Cities Mission, and more specifically, according to their specific focus to the following impacts:

- Enhanced innovation capacity of local/regional administrations and accelerated uptake of shared, smart and sustainable zero emission solutions;
- Increased use of transferrable solutions for sustainable mobility of people and goods exploiting the combined potential of zero-emission mobility systems, automation and connectivity;
- Increased deployment of solutions involving in particular urban greening, renaturing, reducing soil sealing, green/blue infrastructures, nature-based solutions and ecosystem-based approaches tackling both climate mitigation and adaptation aspects;
- Development and testing a digital twin of a Positive clean Energy District and improved knowledge on the necessary (replicable) elements and processes needed to make first a district and subsequently a whole city climate-neutral;

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- Improved urban public space connectivity and accessibility of different urban districts and neighbourhoods by integrating multimodality and new (shared) services within the urban public space layout and infrastructure;
- Improved methods for assessing exposure to air, water, soil & noise pollution, particularly of vulnerable groups, informing health impact assessment focusing on the (co-)benefits and socio-economic impacts of zero pollution measures combined with climate neutrality policies;
- Better understanding and enhanced societal acceptance of sustainable mobility management schemes, including guidance and recommendations for national, regional and local authorities, EU institutions, public and private organisations;
- Improved sustainable development of peri-urban areas through the integration of green and smart mobility, energy, industry and governance solutions and measures to achieve climate-neutrality;
- Increased preparedness and capacity of national, regional and local authorities in EU Member States and countries associated to Horizon Europe to engage in cities' transition towards climate neutrality;
- Increased capacity among European cities, with particular attention to those selected under the Cities Mission, to design and roll out their Climate City Contracts, including related investment plans and to achieve climate-neutrality by 2030.

The following call(s) in this work programme contribute to this Mission:

Call	Budgets (EUR million)		Deadline(s)
	2023	2024	
HORIZON-MISS-2023-CIT-01	70.00		27 Apr 2023
HORIZON-MISS-2023-CIT-02	5.00		06 Sep 2023
HORIZON-MISS-2024-CIT-01		98.00	16 Jan 2025
HORIZON-MISS-2024-CIT-02		3.00	05 Sep 2024
Overall indicative budget	75.00	101.00	

Call - Research and Innovation actions to support the implementation of the Climate-neutral and Smart Cities Mission

HORIZON-MISS-2023-CIT-01

Conditions for the Call

Indicative budget(s)³⁴¹

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁴²	Indicative number of projects expected to be funded
		2023		
Opening: 10 Jan 2023 Deadline(s): 27 Apr 2023				
HORIZON-MISS-2023-CIT-01-01	IA	50.00 ³⁴³	Around 25.00	2
HORIZON-MISS-2023-CIT-01-02	IA	20.00 ³⁴⁴	6.00 to 7.00	3
Overall indicative budget		70.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General

³⁴¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

³⁴² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

³⁴³ Of which EUR 1.69 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.82 million from the 'Digital, Industry and Space' budget and EUR 0.45 million from the 'Civil Security for Society' budget and EUR 43.58 million from the 'Climate, Energy and Mobility' budget and EUR 0.47 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁴⁴ Of which EUR 1.69 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.82 million from the 'Digital, Industry and Space' budget and EUR 0.45 million from the 'Civil Security for Society' budget and EUR 13.58 million from the 'Climate, Energy and Mobility' budget and EUR 0.47 million from the 'Culture, Creativity and Inclusive Society' budget.

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	Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CIT-01-01: Co-designed smart systems and services for user-centred shared zero-emission mobility of people and freight in urban areas (2Zero, CCAM and Cities' Mission)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following

<i>Agreements</i>	<p>action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration between the consortia awarded as well as with the 2Zero and CCAM Partnerships and the Cities Mission Platform³⁴⁵ is essential and consortia must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration between the consortia awarded as well as with the Mission Platform must be formalised through a Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.</p>
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Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Mobility solutions that respond to people's and cities' needs, co-designed with local authorities, citizens and stakeholders, tested and implemented in cities to achieve climate neutrality by 2030.
- Transferrable solutions for mobility of people and goods exploiting the combined potential of electrification, automation and connectivity to significantly and measurably contribute to:
 - o The Cities Mission's objective of climate neutrality by 2030;
 - o Reduction of CO2 emissions supporting the 55% reduction goal for 2030;
 - o Lower energy demand;
 - o Improved air quality, less noise;
 - o Reduced congestion, more reliable, predictive travel times and more efficient transport operations;
 - o More effective use of urban space also considering the other transport modes and multimodal hubs;
 - o Improved safety particularly for vulnerable road users;
 - o Improved inclusiveness, especially by facilitating equitable and affordable access to mobility for all users, in particular for people with reduced mobility.
- Economically viable, modular and adaptable solutions that are transferrable among cities committed to achieving climate neutrality by 2030.

³⁴⁵ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, to be scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

- Capacity built among local authorities, users and mobility systems providers to accelerate the take-up of shared, smart and zero emission solutions and to implement their monitoring and evaluation.
- Implementation plans for local and regional transport authorities to replicate the roll-out of innovative smart mobility solutions and related infrastructure (in particular for charging and/or connectivity) in cities beyond those involved in the project.
- Contribution to updates of urban and transport policies as well as relevant strategic research and innovation agendas (SRIA), particularly of the 2Zero and CCAM partnerships³⁴⁶.
- Contribution to no net land take as promoted under the EU Soil Strategy³⁴⁷.

Scope: Urban mobility is a key sector that cities need to address for accelerating their transition to climate neutrality: citizens, logistics and delivery stakeholders, urban planners, transport operators as well as technology providers should jointly exploit the combined potentials of electric, automated and connected vehicles as well as integrated and shared people mobility and freight transport in their planning and actions. This requires a mutual understanding and alignment of the opportunities of technical solutions from the CCAM and 2Zero partnerships and of needs identified by users and cities striving for the Mission target of climate neutrality.

Proposals should include co-designed innovative passenger mobility and freight transport concepts which are agreed between technology providers and cities, in cooperation with end users, citizens and other stakeholders (for example visitors) to optimise the performance, ease of use and to maximise uptake. They should then be tested and demonstrated in real environments and use cases before being replicated. They should complement current public transport and freight transport services as well as active mobility and micromobility, also with modular and interoperable last mile choices, while being scalable for the roll out, adaptability and co-implementation for different types of cities. At the same time, they should help to identify new challenges, e.g. regarding flexibility, privacy and resilience, in order to set requirements for the further improvement of technologies.

Proposals are expected to develop, test and demonstrate innovative solutions for mobility of people and freight exploiting the combined potential of electrification, automation and connectivity. Proposals must consider and explore the opportunities for technology transfer and synergy potentials with the respective other domain to fully cover passenger and goods mobility, although a primary focus on either people or goods mobility is possible. Solutions should be based on existing technologies and should satisfy cities' and users' needs, targeting implementation of pilot cases at city level to ensure feasibility, buy-in, acceptance and thus a seamless integration of mobility solutions and infrastructure in a citywide transport system.

³⁴⁶ The budget of this topic consists of EUR 20 million coming from contributions to Missions from various Horizon Europe Clusters and an additional EUR 30 million from Cluster 5, to be considered outside the missions' budget, representing the contribution of the partnerships involved in this topic.

³⁴⁷ https://ec.europa.eu/environment/strategy/soil-strategy_en

All the following aspects should be addressed by the proposals:

- Establish a co-design process between local public authorities, city planners, end users (for example inhabitants, visitors, commuters) and automated and zero-emission mobility systems providers to ensure a user-centric and seamless integration of solutions in existing ecosystems.
- Build upon the results of recent collaborative research on, for example, power grid integration, charging infrastructure, vehicle connectivity, automation or smart fleet, road traffic and energy management, safety of vulnerable road users, and also build upon relevant experience of cities and partnerships.
- Demonstrate integrated and shared, automated and zero-emission solutions and services for people mobility and freight transport. Where needed and duly justified, design of vehicles and functions and the development of specific infrastructures for energy and joint and harmonized data management³⁴⁸ to extend and optimise their use can be included.
- Develop open while resilient systems and replicable solutions that can be scaled-up within a city environment and flexibly adapted to current and evolving needs and use cases in the context of Sustainable Urban Mobility Plans (SUMP). Mobility services to and from sub-urban areas should be included in proposed solutions, so as to widen the pool of possible users of these solutions, services and systems.
- Co-design implementation plans for local and regional transport authorities to roll-out innovative smart mobility solutions and related infrastructure (in particular for charging and connectivity) and to lower energy demand.
- Evaluate cost and benefits of the systems and services tested along with real-world challenges and opportunities, based on user and city needs, and provide feedback on viability and limitations as well as new requirements to the 2Zero and CCAM partnerships.
- Support the development of skills on the planning and implementation of smart, shared and zero-emission urban mobility systems within the local authorities and co-creation with private stakeholders along SUMP and SULP (Sustainable Urban Logistics Planning) guidelines, e.g. the practitioner briefing on Road Vehicle Automation of the Sustainable Urban Mobility Plans.
- Disseminate results via the 2Zero and CCAM partnerships and the Mission Platform and via relevant events, such as CIVITAS, Transport Research Arena (TRA) conference and other European events.

³⁴⁸ Compliant with FAIR data principles
(https://ec.europa.eu/info/sites/info/files/turning_fair_into_reality_0.pdf.)

Proposals should fully exploit technologies developed/under development in the 2Zero and CCAM partnerships when designing, testing and demonstrating solutions and services, such as, e.g., automated and connected functions or digital twins optimising the charging, parking, safe (remote) control, operational design domain of vehicles or the fleet, traffic management and last-mile operations.

To allow for a thorough evaluation of the projects' ambition, progress and effect compared to the state of the art in the European Union and internationally, proposals are expected to provide measurable or predictable indicators of contributions of the tested solutions to the applicable outcomes and impacts expected from the 2Zero and CCAM partnerships as well as the Cities Mission. These should be supported by clear baselines, quantified targets and appropriate review processes for each participating city and include a detailed analysis of present and future potential user groups. The 'CIVITAS Process and Impact Evaluation Framework' and 'Sustainable Urban Mobility Indicators', where appropriate in combination with other sector-specific impact evaluation methodologies, should be used to evaluate the impact of the solutions.

Selected projects may consider including activities to investigate and foster societal readiness, for example by measuring the acceptability of new mobility solutions as well as behavioural change. This could include inter alia methods of co-assessment as well as actions to increase public awareness in order to anticipate and mitigate potential negative rebound effects.

This should be accompanied by mechanisms for common lesson drawing and learning, within the project, between the projects funded under this topic and through the Cities Mission Platform and 2Zero/CCAM partnerships.

Each proposal should envisage pilot demonstrations in at least two cities (lead cities) situated each in a different Member State or Associated Country. Proposals should provide the necessary evidence of the cities' commitment to test and implement the co-designed solutions. To foster replicability and up-taking of the outcomes, each proposal should also engage at least four replication/follower cities.

The consortia awarded under this topic must establish a collaboration agreement, to identify clear links among themselves and ensure complementarity, coordination and exchange on relevant linked activities. The consortia awarded should also foresee active collaboration with relevant and related projects funded under this call in order to address synergies and complementarities between the projects of the Cities Mission portfolio. In particular collaboration with the Mission Platform is essential. The collaboration between consortia awarded as well as with the Mission Platform must be formalised through a Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.

In addition, given the important role of territories in which the participating cities are located, lead cities are encouraged to seek cooperation with and support from their territories, where relevant (metropolis, functional urban area, grouping of interacting municipalities with the cities, region, etc.). Support could take the form of, for example, an integration or link in an

existing or future programme of the territory, financial support, or the involvement of representatives of these territories as partners in the project.

This topic requires the effective contribution of SSH (Social Sciences and Humanities) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. Social innovation should also be considered to support the actions under this topic in order to match innovative ideas with social needs. Inclusiveness of vulnerable populations (older people, children) as well as gender perspectives in mobility should be considered.

If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries are expected to clearly describe if and how the use of Copernicus and/or Galileo/EGNOS are incorporated in the proposed solutions. In addition, if the activities proposed involve the use and/or development of AI-based systems and/or techniques, the technical and social robustness of the proposed systems has to be described in the proposal.

HORIZON-MISS-2023-CIT-01-02: Positive clean energy district (PED) digital twins – from modelling to creating climate neutral Cities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s):

	<p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform³⁴⁹ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.</p>
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Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Increased number of (tangible) city planning actions for positive clean energy districts using the (proto-)PED design, development and management digital twin tools (based on pre-market research learnings) using open-standards based components which can be reused elsewhere.
- Enhanced data gathering approaches with identification relevant (standardised) multi-dimensional data set (e.g. meteorological, load profile, social, geo-spatial, etc.) high-resolution real-time data streams (e.g. renewable energy production, energy consumption), and relevant forecasting data, drawing also on the work of common European data spaces, including the smart communities data space and Destination Earth.
- Consolidated city sensor network specifications (based on optimal density necessary), complemented by appropriate data gathering approaches for soft data.
- Increased integration of existing smaller scale management systems (e.g. Building management systems) with open-standards based operational city platforms using sectorial data (e.g. Building data, mobility, Urban Planning, etc.).
- Increased number of city planning departments / approaches using common data and (replicable) elements and processes.
- Improved performance of AI based self-learning systems for optimization of positive clean energy districts and bottom-up complex models.

Scope: Effective support for the Cities Mission should follow a systematic approach appropriate to the highly complex task of delivering climate neutral and smart cities. In order to be manageable, this task should be approached starting from the smallest representative scale, i.e. the District level.

³⁴⁹ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, to be scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

Measuring, analysing and modelling the characteristics and behaviour of a potential Positive clean Energy District (PED) is necessary to get the best possible picture of the status quo and the extent of the challenge. Creating a digital twin can support identification of the most effective set of integrated solutions and the management of the system in real time in order to adapt/optimize it over time and space.

Proposed projects are expected to go beyond the creation of a digital twin and the integration of (technical) PED solutions. The proposed projects will serve as the scientific base for a reflection on the necessary, replicable elements and processes that are needed to make first a district, and later on the whole city, climate neutral.

Proposals are expected to develop a digital twin that goes beyond the virtual representation of the built environment, by integrating a comprehensive modelling layer of the local energy systems³⁵⁰ as well as mobility and transport solutions in the project defined district boundaries. The digital twin should support scenario analysis with different boundary conditions to help define the optimal solution matrix. It should draw on existing components and use open standards, technical specifications and open source software where possible.

Projects are expected to address all of the following:

- Develop and test a digital twin of a (project defined) potential Positive clean Energy District (PED) in a European city.
- Prepare an economic impact study for this digital PED twin, a risk analysis and a data security strategy.
- Use the digital twin to improve evidence-based decision-making and to create district development pathways with a clear timeline for associated transformation actions.
- Involve/train necessary public and private actors at district/city level in building and using digital twins for co-creation, communication, public consultation/dialogues and good practice sharing.
- Make use of gamification and/or co-creation approaches³⁵¹ to change citizens' awareness of and behaviour towards energy efficient/energy conservation and to make results of the digital twin analysis easily understandable to non-technical audiences.
- Recommend a set of actions that foster a cost effective and secure digitalization of the local energy system.
- Publish practical guidelines, reusable models, algorithms, data models, components and training material that will help other cities to successfully replicate digital twins in their district/cities.

³⁵⁰ Including Energy Communities if possible.

³⁵¹ e.g. in support of New European Bauhaus objectives.

Projects should establish links to the data space for smart communities and sectoral data spaces³⁵² as relevant (energy, mobility) as well as working with the Data Space Support Centre³⁵³. Projects should collaborate with Living-in.EU to support efforts on developing the Minimal Interoperability Mechanisms (MIMs) approach to improving interoperability of data, systems and services, and to contribute to standardisation efforts in the area of local digital twins at European and international levels. Participation of partners and potential Positive Energy Districts is encouraged, in particular from Mission Innovation (MI) member countries³⁵⁴ and linking to the objectives of the MI Urban Transitions Mission³⁵⁵³⁵⁶.

Collaboration with the Cities Mission Platform is essential and projects should ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Cities Mission Platform should be formalised through a Memorandum of Understanding to be concluded as soon as possible after the projects starting date.

Call - Associating Ukrainian cities to the Climate-neutral and smart cities Mission

HORIZON-MISS-2023-CIT-02

Conditions for the Call

Indicative budget(s)³⁵⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁵⁸	Indicative number of projects expected to be
		2023		

³⁵² https://ec.europa.eu/newsroom/repository/document/2021-46/C_2021_7914_1_EN_annexe_acte_autonome_cp_part1_v3_x3qnsqH6g4B4JabSGBy9UatCRc8_81_099.pdf i.e. section 2.2

³⁵³ https://ec.europa.eu/newsroom/repository/document/2021-46/C_2021_7914_1_EN_annexe_acte_autonome_cp_part1_v3_x3qnsqH6g4B4JabSGBy9UatCRc8_81_099.pdf i.e. section 2.2

³⁵⁴ <http://mission-innovation.net/our-members/>

³⁵⁵ <http://mission-innovation.net/missions/urban-transitions-mission/>. The global Urban Transitions Mission is co-led by the European Commission, the Global Covenant of Mayors and the Joint Partnership Initiative (JPI) Urban Europe.

³⁵⁶ In line with the General Conditions set out in the General Annexes to the Horizon Europe Work Programme 2023-2024 concerning eligibility under Innovation Actions, legal entities established in China are not eligible to participate in Horizon Europe Innovation Actions in any capacity

³⁵⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

³⁵⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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				funded
Opening: 04 Apr 2023 Deadline(s): 06 Sep 2023				
HORIZON-MISS-2023-CIT-02-01	CSA	5.00 ³⁵⁹	Around 5.00	1
Overall indicative budget		5.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CIT-02-01: Associating Ukrainian cities to the Climate-neutral and smart cities Mission

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

³⁵⁹ Of which EUR 0.42 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.95 million from the 'Digital, Industry and Space' budget and EUR 0.11 million from the 'Civil Security for Society' budget and EUR 3.39 million from the 'Climate, Energy and Mobility' budget and EUR 0.12 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform³⁶⁰ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p>

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Contribute to the implementation of EU policy and international commitments (European Green Deal³⁶¹, Global Approach to Research and Innovation³⁶²).
- Identify a core group of Ukrainian cities that would commit to a climate neutrality target, including in reconstruction efforts;
- Accelerate the systemic transition to climate-neutrality of Ukrainian cities by preparing local authorities to meet the overarching objectives of the European Green Deal;
- Increase the visibility of the EU and its cities as leaders and engage cities participating in the Cities Mission in twinning and teaming activities with collaboration-minded Ukrainian city partners.

Scope: President von der Leyen's statement on 27 April 2022³⁶³ and the subsequent Commission Communication on Ukraine Relief and Reconstruction³⁶⁴ of 18 May 2022 propose to involve, through partnerships, the cities of the European Union in the reconstruction of the Ukrainian cities. This effort provides a unique opportunity for Ukraine and its cities to combine reconstruction considerations with long-term climate neutrality and

³⁶⁰ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, to be scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

³⁶¹ The European Green Deal COM(2019) 640 final

³⁶² Global Approach to Research and Innovation Europe's strategy for international cooperation in a changing world COM(2021) 252 final

³⁶³ Additional information available at https://ec.europa.eu/neighbourhood-enlargement/news/statement-president-von-der-leyen-local-and-regional-cooperation-between-ukraine-and-eu-ukraines-2022-04-27_en

³⁶⁴ Document available at https://ec.europa.eu/info/sites/default/files/ukraine-relief-reconstruction_en.pdf

sustainability objectives in line with the EU Green Deal, relevant international policy frameworks and the New European Bauhaus initiative. This will require systemic approaches and the deployment of innovative solutions to reduce in particular Green House Gas emissions in all sectors of activities so as to comply with the objective of climate neutrality. The purpose of this action is to associate more closely Ukrainian cities in the process of transition towards climate neutrality that is being promoted by the Horizon Europe Climate-neutral and smart cities Mission . Proposals are expected to address all the following activities:

- Map, on the basis of existing EU and international initiatives³⁶⁵, the cities in Ukraine that could commit to the target of climate neutrality. The analysis that will be performed will be based on the methodological approach and guidelines published in the call for Expression of Interest of 25 November 2021³⁶⁶;
- Following this analysis, identify and support a number of Ukrainian cities in developing their strategy for climate neutrality. Support should be provided to increase the awareness and the capacity of the local authorities on the issues related to climate neutrality. When developing their strategy for climate neutrality, cities should pay special attention to the need to reduce energy dependency from fossil fuels, to integrate climate neutrality considerations in their reconstruction plans and, when applicable, a citizen-driven systemic approach;
- Support the twinning and teaming between these Ukrainian cities and like-minded cities involved in the EU Cities Mission³⁶⁷;
- Facilitate the exchange of good practices within the target group of Ukrainian cities and between them and the other cities in Ukraine.

The proposals will take into account the work already done by global city networks such as the Global Covenant of Mayors, C40 Cities and the EU's International Urban and Regional Cooperation Programme, by international and multilateral organisations such as the UN-Habitat, the World Economic Forum and the World Business Council for Sustainable Development, by international associations such as ICLEI and by global initiatives such as the Urban Transition Mission of Mission Innovation. Linkages should also be ensured with international networks that promote piloting activities such as the European Network of Living Labs (ENoLL) and with the initiatives for urban climate neutrality under the EU's Neighborhood, Development and International Cooperation Instrument.

Close collaboration with the Mission Platform presently managed by the NetZeroCities project³⁶⁸ is essential and projects should ensure that appropriate provisions for activities and

³⁶⁵ Proposals should in particular take into account the work done by the U-LEAD with Europe project, more information available at <https://donors.decentralization.gov.ua/en/project/u-lead>

³⁶⁶ Additional information available at https://ec.europa.eu/info/news/mission-climate-neutral-and-smart-cities-info-kit-cities-now-available-2021-oct-29_en

³⁶⁷ Additional information available at <https://op.europa.eu/en/publication-detail/-/publication/822ee360-c9bf-11ec-b6f4-01aa75ed71a1/language-en/format-PDF/source-256649647>

³⁶⁸ Additional information available at <https://netzerocities.eu/>

resources aimed at enforcing this collaboration are included in the workplan. Detailed description of the specific activities and common actions that will be undertaken is not required at proposal stage and can be further defined at a second stage during the lifetime of the projects. The collaboration with the Mission Platform should be formalised through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.

Collaboration with programmes and initiatives managed by the World Bank and the European Bank for Reconstruction and Development (EBRD) should also be considered when helping cities identify sources of funding for the implementation of their climate-neutral strategy.

Cooperation with the Global Covenant of Mayors³⁶⁹ as well as with the European Alliance of Cities and Regions for Ukraine, which is being proposed by the European Committee of the Regions³⁷⁰ for the reconstruction of Ukraine should also be taken into account in order to facilitate the peer to peer cooperation between cities and regions in the European Union and those in Ukraine.

Other Actions not subject to calls for proposals

1. Specific Grant Agreement to the FPA to reinforce the operations of the Mission Platform

Scope:

The consortium of the selected HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform with identified beneficiary and specific grants awarded to identified beneficiary for Research and Innovation Action under the Framework Partnership Agreement, is invited to submit a proposal for a Specific Grant Agreement (SGA) to reinforce the operational capacity of the platform. The expected outcomes of the SGA should be in line with the scope of the FPA. The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts C and E of the General Annexes.

One single proposal for SGA should be submitted. This action aims at bringing the Mission Platform to full operational capacity addressing and developing the actions needed to implement the relevant building blocks of the Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform and broadly outlined in the draft action plan submitted in this context.

The Mission Platform will assist the cities that were selected³⁷¹ as a result of the open Call for Expression of Interest which was launched in November 2021 and resulted in 377 expressions of interest from cities in all 27 EU Member States and from 9 associated countries. These cities respond to the first objective of the Mission to deliver at least 100 climate-neutral and

³⁶⁹ <https://www.globalcovenantofmayors.org/>

³⁷⁰ Additional information at <https://cor.europa.eu/en/news/Pages/Ukraine-response.aspx>

³⁷¹ https://ec.europa.eu/info/files/eu-cities-mission-meet-cities_en

smart European cities by 2030. Cities that are not yet able to commit to the Mission's timeline but are willing to commit to accelerate their transition towards climate neutrality within a longer timeframe following the Cities Mission basic principles, will also receive basic support from the Mission Platform. These cities respond to the second objective of the Mission to ensure that the cities responding to the first objective act as experimentation and innovation hubs to put all European cities in a position to become climate-neutral by 2050.

Under the proposed SGA, activities should particularly focus on:

- reinforcing services aimed at supporting the preparation of tailor-made investment plans, project preparation and finance for the cities selected to participate in the Mission through the Call for Expression of Interest;
- developing activities and the related provision of basic services targeted at cities falling under the second objective of the Mission as well as cities that applied to the Call for Expression of Interest, committed to the climate-neutrality target by 2030 but were not eventually selected in the final list.

Regarding financial advisory services, activities should focus in particular on:

- Providing information, consulting services and further support cities to develop a tailor-made investment plan, including with financial and technical advisory services, to support access to public and private funding and financing as part of their Climate City Contract (CCC) and their implementation;
- Taking into account and building on the good practices developed by global, European and national initiatives and programmes and ensuring complementarity with services offered for instance by the EIB and the InvestEU Advisory hub, support cities in the preparation of specific investment projects for the transition to climate neutrality and provide tailored advice and coaching on how to best mobilise sustainable investments by the private sector.

Regarding activities and services for cities falling under the second objective of the Mission as well as cities which were not eventually selected to be part of the Mission, special attention should be paid to:

- Expand and regularly update the open-source services of the online platform, accessible to all cities, such as a city dashboard with relevant data for a given city, including its Climate City Contract (CCC); progress on metrics; an innovation readiness self-assessment tool; contributing to a smart repository of relevant knowledge (data, reports, good practices); annual barometer synthesizing the progress achieved by all cities participating in the Mission; a collaborative space for cities participating in pilot projects; a peer-based “community social network” to facilitate peer-learning between cities;
- Carry out a capacity building and mutual learning programme, supporting cities' move towards climate neutrality;

- Provide needs-based, but not individualised training, in the form of seminars, workshops and/or webinars addressing the main elements of urban climate neutrality. Topics should respond to the cities' needs and should include: climate neutrality planning; governance and stakeholder engagement; GHG emission accounting and monitoring; key sectors and strategies for reducing emissions (energy, transport, waste); local energy production and renewable energy sources; the role of smart and digital solutions; investment (funding and financing); citizen engagement and social innovation;
- Help cities to access the best available research, expertise, tools and technologies that can enable them to quickly identify and implement portfolios of innovative, high-impact interventions on a deep decarbonisation pathway;
- Provide web-based assistance to European cities that are not yet ready to commit to climate neutrality for their city by 2030, but are ready to engage to accelerate their transition in accordance with the principles of the Cities Mission;
- Foster mutual learning and exchange of good practice;
- Offer mentoring and twinning opportunities for cities committing to the objectives of the Mission.

The Mission Platform should build on existing actions, including relevant ones developed through Horizon 2020 projects. It should collaborate closely with successful ongoing initiatives that have developed knowledge and expertise, in particular with the Covenant of Mayors and their methodologies and processes co-developed with the JRC, and the Covenant Community Group of Cities Practitioners. The assets of the Smart Cities and Communities context (including Energy Communities and Living-in.eu, data space for smart communities), the Smart Cities Marketplace and the Common Services Platform should be factored in, with regard to engaging public, private and civil society stakeholders to support project financing and implementation as well as the promotion of shared standards and technical specifications to facilitate data exchange and to ensure interoperability of solutions. Synergies should be ensured with the upcoming European Urban Initiative of the Cohesion Policy and with the Urban Agenda for the EU and with actions funded under the DIGITAL European Programme.

The Mission Platform will coordinate with the European Commission to ensure that advice and support provided to cities remains aligned to the latest policies and initiatives and makes full use of available tools and services provided or supported by the Commission.

This action will be implemented through Research and Innovation Actions (RIA).

Funding rate: 100%

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative timetable: First quarter 2023

Indicative budget: EUR 40.00 million from the 2023 budget³⁷²

Call - Changing urban spaces and mindsets to accelerate the transition to climate neutrality

HORIZON-MISS-2024-CIT-01

Conditions for the Call

Indicative budget(s)³⁷³

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁷⁴	Indicative number of projects expected to be funded
		2024		
Opening: 17 Sep 2024 Deadline(s): 16 Jan 2025				
HORIZON-MISS-2024-CIT-01-01	IA	45.00 ³⁷⁵	Around 15.00	3
HORIZON-MISS-2024-CIT-01-02	RIA	20.00 ³⁷⁶	Around 5.00	4
HORIZON-MISS-2024-CIT-01-03	CSA	5.00 ³⁷⁷	Around 5.00	1

³⁷² Of which EUR 3.38 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 7.63 million from the 'Digital, Industry and Space' budget, EUR 0.90 million from the 'Civil Security for Society' budget, EUR 27.15 million from the 'Climate, Energy and Mobility' budget, EUR 0.94 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁷³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

³⁷⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

³⁷⁵ Of which EUR 6.73 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 7.45 million from the 'Digital, Industry and Space' budget and EUR 0.97 million from the 'Civil Security for Society' budget and EUR 28.72 million from the 'Climate, Energy and Mobility' budget and EUR 1.13 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁷⁶ Of which EUR 2.99 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.31 million from the 'Digital, Industry and Space' budget and EUR 0.43 million from the 'Civil Security for Society' budget and EUR 12.76 million from the 'Climate, Energy and Mobility' budget and EUR 0.50 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁷⁷ Of which EUR 0.75 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.83 million from the 'Digital, Industry and Space' budget and EUR 0.11 million from the 'Civil Security for Society' budget and EUR 3.19 million from the 'Climate, Energy and Mobility' budget and EUR 0.13 million from the 'Culture, Creativity and Inclusive Society' budget.

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HORIZON-MISS-2024-CIT-01-04	IA	28.00 ³⁷⁸	Around 9.00	3
Overall indicative budget		98.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CIT-01-01: Rethinking urban spaces towards climate neutrality

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 45.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

³⁷⁸ Of which EUR 4.19 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 4.64 million from the 'Digital, Industry and Space' budget and EUR 0.60 million from the 'Civil Security for Society' budget and EUR 17.87 million from the 'Climate, Energy and Mobility' budget and EUR 0.71 million from the 'Culture, Creativity and Inclusive Society' budget.

	The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform³⁷⁹ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p>

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Development and implementation of solutions for a smart urban public space design and physical infrastructure planning and management across different areas related to the transport and integrated energy systems, which enable the integration of mobility services within the city and its street network and layout.
- Mobility and/or energy solutions that respond to people’s and cities’ needs co-designed with local authorities, citizens, and stakeholders, tested and implemented in cities to achieve climate neutrality by 2030.
- Raise awareness on the potential of this policy area to support urban public space revitalization and reallocation as well as more economically viable and resilient urban environments.
- Improvement of public health with better local air quality, reducing the urban overheating and pollutant emissions (air and noise), with better conditions and infrastructure for active modes and increased liveability.
- Improve overall urban public space connectivity and the accessibility of different urban districts/neighbourhoods/industrial districts by integrating/embedding multimodality and shared services within the street/urban public space layout and infrastructure.
- More efficient and fair use of urban space through the dynamic management of space in general and of the curb side in particular, according to varying needs and functions, and with the help of digital tools.

³⁷⁹ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

- Contribution to a better use of vehicles (in particular public transport and active modes for passengers and for urban logistics), better use of car parking spaces for other usages, prioritising modes and shared mobility services which have the smallest impact on the public domain and environment.
- Reducing the pressure on public space thanks to reduced parking needs and integration of off-street space use in the overall public space concept.
- Creation of smart energy and/or transport services management in cities thanks to digitalisation and consumer awareness related to smart charging and energy demand response.
- Improving the planning of green infrastructures/green city zones, enhancing their capability to increase human restoration and well-being.
- Better preparedness of citizens and urban planners to shift from fossil to renewable energy and energy system integration to allow electrifying mobility, in ways that optimise the use of public space and budgets.

Scope: With our cities being overly populated and dense, the scarcity of urban public space requires smart urban design, planning, management and prioritisation in urban space allocation to different uses, amenities, and services. From the reallocation of the urban public space to more sustainable forms of transport and energy generation and use, intermodal hubs, and interchanges to the dynamic management of the street profile and curb side, and the integration of suburban/peripheral areas in the general urban fabric and patterns, current and future research should aim to make urban public spaces more liveable while enabling better a connectivity, accessibility, social interaction, inclusion and transit in the context of a changing climate. Concepts like the “15-minute city” and “superblocks” are gaining momentum and have an enormous potential in shaping the urban planning and design practice and the mobility services based on the principle of proximity. This is supporting the efficient and green mobility goals, the transport and energy policies, the Sustainable and Smart Mobility Strategy and the new EU Urban Mobility Framework.

Considering the optimisation of urban public spaces, aspects related to air quality and urban climate must be considered by designing strategies based on new technologies and green infrastructures/green city zones.

The proposal should address the question on how to deal with limited urban public space and conflicting demands for it between transport and other users, considering social and climate goals and the need to shift towards more energy efficient and sustainable modes of transport, decarbonisation of the heating and cooling infrastructures.

Each proposal should envisage pilot demonstrations in at least three cities (lead cities) situated each in a different Member State or Associated Country including both urban and sub-urban areas. Proposals should provide the necessary evidence of the cities’ commitment to test and implement the co-designed solutions. To foster replicability and up-taking of the outcomes,

each proposal should also engage at least three replication/follower cities with the development of local replication plans. The size and characteristics of the cities should be considered. Each proposal should include at least one city of the 112 selected ones for the EU Mission on Climate-Neutral and Smart Cities for the lead cities and one for the replication/follower cities.

The pilots should involve a co-design process with the stakeholders concerned by the re-design of the urban space. The pilots should involve public and private local energy, mobility and industrial stakeholders as well as civil society to identify integrated, locally supported and space-saving solutions and related pre-conditions (incentives, participatory methods, etc.) in a change management process to gain public acceptance by information, participation and consideration of groups that were so far disadvantaged by existing conditions.

Demonstrations should be ‘digital by default’ and use Local Digital Twins and, where possible, Mobility Data Spaces as tools for optimizing traffic, improving mobility services, monitoring environmental benefits in air and noise, and modelling a better use of urban space.

Activities and pilot demonstrations of technological nature of the proposed solutions in operational environment are expected to be at minimum TRL 7 by the end of the project.

Proposals should address the following two areas of intervention:

1. Reallocation of space and re-design of infrastructure

This is a major game changer in cities in favour of more sustainable and efficient use of resources through integrated approaches that promote decarbonisation of different sectors notably sustainable modes of transport, buildings and industry and related services. By (re)designing and reallocating the urban public space to reflect the level of use of different transport modes, unsustainable transport, heating and cooling modes can be discouraged while sustainable ones incentivised. Smart urban public space design and management is also a key enabler for scaling-up new mobility services. First, it can help to develop more sustainable and accessible mobility services, with stations and hubs for shared devices and charging infrastructures, dedicated lanes for light and active modes, pick-up and drop-off zones, etc. Also, it can help to increase the acceptance of sustainable mobility services, by mitigating negative externalities caused by the inadequate use of urban space, such as illegal parking, and cluttering the sidewalks by e-scooters, advertising banners, traffic signals and others. The reallocation of space is also important to transform roads from mere transit spaces into public spaces with a higher socioeconomic value to people – a feature which has become extremely important for local recreation during the COVID-19 pandemic.

The same applies to the planning and management of urban space to accommodate local clean and smart energy infrastructures to power the different uses of energy including mobility, buildings, commercial and industrial activities. One goal of the energy system integration would be to optimise the use of urban space and existing infrastructures to avoid unnecessary investments in distribution grids while increasing energy autonomy of the municipalities and reducing losses in transmission and distribution of energy. Moreover, planning and

implementing simultaneously infrastructure projects can significantly reduce investment costs and space needs such as e.g. building an underground car park together with space for a geothermal heat pump or thermal heat storage.

Four of the following research actions should be addressed to overcome these challenges either in the mobility (points 1 to 4) or energy area (points 5 to 8):

1. Develop integrated transport and urban planning tools and methods to coordinate sustainable mobility services and the design of future public realms, accounting also for their interrelations and impacts across different spatial and temporal scales. This should be linked to the Sustainable Urban Mobility Plans (SUMP) of the cities.
2. For electromobility, foster research results from pilot projects on reallocation of use of transport infrastructure – or use of the single infrastructure for diverse types of vehicles, amenities (such as bi-directional charging points), and vehicles (e.g. after hours sharing of publicly accessible transport fleets) throughout the community of stakeholders at EU level.
3. Research solutions for the exploitation of legacy infrastructure and how it can contribute to the scaling of sustainable mobility services followed by projects and demonstrations that can help to better understand this space shift, and play a significant role in the design, piloting and roll-out and assessment of these new mobility services.; Past experiences with street space reallocation (e.g. temporary infrastructures under COVID-19) can serve as a basis.
4. Involvement of current service providers and infrastructure managers (e.g. parking service providers) in the urban space ecosystem to understand how current players can contribute to new mobility services, increased multimodality, electrification and integrated city logistics and citizens' mobility.
5. With regards to energy, support pilot projects to increase understanding and exploitation of the potential of road space allocation and smart distributed energy generation and green city zones/infrastructures in a systemic manner and monitoring their positive effects on human well-being.
6. Research opportunities for exploiting current infrastructures (e.g. buildings, grids, underground spaces) complemented by additional elements (e.g. access to data in real time, demand response, storage, smart charging, heat and energy storage) to facilitate local energy communities, virtual power plants and energy sharing while minimising the need for new infrastructures requiring space and facilitating multipurpose construction projects. This should also include the integration of thermal and electricity grids and storage to better manage and balance renewable electricity generation and demand.
7. Establish an integrated approach for designing and decarbonising the heating and cooling networks (including distributed installations and small-scale networks and related storage) in cities and urban areas in synchronisation with planning of new

housing, major renovations or industrial development related to major heat consuming or waste heat generating facilities.

8. Explore ways of using/optimising green and blue infrastructures to city and street scale for improving urban climate, reduce the energy demand and in view of emission free transport.

2. Dynamic curb-side management and use

Smart management of urban space and existing infrastructure includes their dynamic use, when considering curb space, changing its role and function in time, depending on parameters, functions and needs in relation to commuting peak hours, deliveries, public transport priority, market days, nightlife, etc. Dynamic space management is already being explored in some cities and represents an opportunity for further integration in mobility plans with the support of smart technologies, Intelligent Transport Systems, Local Digital Twins and Mobility Data Spaces, AI based autonomous optimal control and management systems.

As the rise of new shared mobility services such as ride hailing, micromobility and the growth in urban goods delivery (even more so with the recent exponential growth of e-commerce) are challenging traditional ways of managing curb space, novel approaches are needed. Research on a shift away from curb use focused on street parking to a more flexible and dynamic allocation that for example includes pick-up and drop-off zones for passengers and freight or dedicated public transport lanes during peak hours, has also shown the potential to enhance and prioritise sustainable mobility services, and thus decrease the pressure on traffic thanks to an increased percentage of shared rides.

To ensure the implementation of these innovative approaches, R&I could support by developing:

- Tools and guidelines to ensure the implementation of innovative approaches of dynamic space and curb use, resulting from tests and pilots of flexible allocation of curb side functions, including pick-up and drop-off zones for passengers and freight.
- New models of fee calculation (e.g. trip purpose, space demand (size) of each vehicle using the public domain, etc.) and financial model for the use of public space in cities in view of reaching public policy goals including climate neutrality.

To increase impact and coherence, project(s) should maximise coordination with leading European associations and initiatives in this domain, e.g. Living-In.EU, the New European Bauhaus, Covenant of Mayors, the EIT KIC Culture and Creativity, the EIT Urban Mobility, the CIVITAS initiative, the 2Zero partnership and EU co-funded projects in the domain of Technologies for Smart Communities. Collaboration with the Cities Mission Platform is essential, and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.

HORIZON-MISS-2024-CIT-01-02: Zero-pollution cities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: Proposals are required to address at least two areas listed in the scope.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-CIT-02-03 Collaboration with the Cities Mission Platform ³⁸⁰ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Methods for more precisely assessing exposure to air, water, soil and/or noise pollution, health impacts and public information at regional and/or local level;
- Methods for better assessing exposure of vulnerable groups (including due to socio-economic context) to air, water, soil and/or noise pollution at regional and/or local level, enabling more precise evidence to inform health impact assessments;

³⁸⁰ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

- Improved and comparable assessment of mortality and morbidity impacts of air, water, soil and/or noise pollution at regional and/or local level³⁸¹;
- Improved understanding of the role of behavioural economics, psychology and organizational behaviour to design measures oriented to lower pollution in urban environments;
- Improved understanding of the correlation between improving environmental quality of urban spaces and human health and wellbeing;
- Methods for determining the sources of air pollutants at urban level so that local authorities, stakeholders and citizens know the proportion of the pollutant emissions attributable to urban transport, heating etc.
- Comparative analysis of selected successful pollution reduction/abatement strategies at local level and identify key factors underlying such successes and their replication potential.

Scope: Cities are concerned by various types of pollution, including air, water, soil and noise pollution, and their negative impacts on human health and the environment. Many of these pollutants emanate from the same sources as greenhouse gas emissions being tackled in the context of the EU Mission Climate-Neutral Smart Cities, so it is clear there are potential environmental co-benefits from reducing GHG emissions.³⁸² Designing effective policies to protect city dwellers from pollution depends on solid evidence as well as on cooperation and communication between and with policy makers and citizens.

Due to resource constraints, city administrations may often need to prioritise between different actions on different forms of pollution – and for this a solid risk-based evidence-base of the exposure to, impacts of and measures against pollution will allow to arrive at more informed and cost-effective local measures. These measures are often closely connected and affected by energy policy choices demonstrating the benefits of holistic approaches in for instance the planning, budgeting and assessment of costs and benefits in environmental, energy and climate policies at local level.

More informed, coherent and targeted local measures will help European cities to deliver environmental co-benefits under the EU Mission for Climate-Neutral, Smart Cities, comply with or exceed EU legislative standards for air and water quality, and supporting the delivery of environmental objectives such as the targets of the EU Zero Pollution Action Plan and commitments under the Green City Accord.

Applicants should propose projects that deliver better and innovative local measures against pollution through, among others, improved knowledge on the exposures of citizens to

³⁸¹ Taking account of known Exposure/Concentration Response Functions (ERF)

³⁸² Important aspect is also climate urban stress and related extreme heat, which is covered in the topic HORIZON-MISS-2024-CLIMA-01-04: Better understanding the local impacts of extreme heat.

pollution and improved health impact assessments and strategies to reduce health impacts related to air, water, soil and/or noise pollution. Where technological solutions are proposed, these are expected to reach up to TRL 5 by the end of the project.

In order to address these needs, individual projects must address at least two of the following areas:

- Improved health impact assessments to highlight and attempt to monetize the (co-)benefits and socio-economic impacts of zero pollution measures, in combination with climate neutrality policies, contributing to better ex-ante cost-benefit analysis and increasing public acceptance of measures.
- Measurement and modelling methods for more precisely assessing exposure and risk-based health impacts at regional and/or local level (should deliver results that can be communicated to the wider public as well).
- More precise evidence on exposure, notably of vulnerable population groups, and making health impact assessments easily comparable.
- Exploration of the effectiveness of dynamic abatement strategies by monitoring changes in pollution levels, complemented by citizen science / observations.

All projects are required to:

- Develop methods and tools that can swiftly be deployed and used by cities and regional authorities. Once implemented they should help policy makers prioritise actions, and address social aspects of zero pollution policies,
- Support implementation of zero pollution policies by overcoming barriers to behavioural change which natural science and evidence alone cannot overcome. New approaches to address these barriers should be explored from the angles of behavioural economics, psychology, communication and organisational behaviour, with a view to inform effective local and regional zero pollution policies.

Project(s) funded under this topic should involve at least two cities. Ideally at least one city in each project should be a city selected for the EU Mission Climate-Neutral Smart Cities and/or a city signatory to the EU Green City Accord (these can be the same city).

To increase impact and coherence, project(s) should maximise coordination and complementarity with the 'Climate-Neutral Smart cities' Mission platform. Collaboration with the Cities Mission Platform is essential, and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. Synergies should also be explored and, as appropriate, pursued with other relevant initiatives, such as the European Green Capital / Leaf Awards, European Urban Initiative, the Covenant of Mayors Europe and the New European Bauhaus. Work performed

or underway in other Horizon funded projects should also be considered, to the extent feasible, to avoid overlaps or contradictory conclusions. Cooperation with various stakeholders is recommended, for example, with health experts to professionally assess the impact of environmental influences on human health.

HORIZON-MISS-2024-CIT-01-03: Mobility Management Plans and Behavioural Change

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: At least four cities should be part of the consortium as beneficiaries. The cities must each be situated in different EU Member States or countries associated to Horizon Europe, ensuring geographical balance.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-CIT-02-03 Collaboration with the Cities Mission Platform ³⁸³ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.

Expected Outcome: Projects are expected to contribute to all the following outcomes:

³⁸³ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

- Better understanding of schemes' conditions and users' motivations leading to the uptake of urban mobility management schemes, including identification of levers as well as of challenges and barriers preventing their rapid and wide replication and uptake;
- Enhanced societal acceptance (e.g. measured by actual uptake) of mobility management schemes by relevant categories of "destination" organisations and their users: e.g. schools, universities, hospitals and other health facilities, tourism and leisure sectors, shopping malls, private companies;
- Shift towards low- and zero-emission means of mobility, such as active mobility (e.g. walking and cycling), public transport, shared mobility services or micromobility and a decrease in the use of motorised vehicles, in particularly internal combustion engine driven ones (e.g. through low emission zones);
- Broader acceptance and uptake of smart and bi-directional electric vehicle recharging of electric vehicles to alleviate the need to invest in distribution grid extension due to the increase in the number of electric vehicles used in cities, and to facilitate locally powered zero-emission mobility in cities across electric mobility modes including public transport;
- Guidelines and recommendations for national, regional and local authorities, EU institutions, public and private organisations, introducing the benefits of mobility management schemes and how relevant policy levers and regulations facilitate travels' behaviour change and support sustainable mobility choices by different mobility management scheme users.

Scope: The shift towards a decarbonised transport system is considered as challenging compared to other sectors of the economy. Achieving urban mobility decarbonisation can involve a variety of policy and technology measures and solutions. However, technological innovations alone are not sufficient for achieving a decarbonised urban transport system. They should be complemented by measures tapping into changes that target travel patterns and generate a shift in the daily mobility behaviour.

Urban mobility management plans are developed by organisations in the public domain (by local and regional authorities) and the private domain (companies, organisations, and institutions) to promote sustainable urban transport as laid out in the Urban Mobility Framework³⁸⁴ to reach climate neutrality, reduce congestion, air pollutant emissions, noise and other harmful effects of overreliance on fossil fuels-based transport.

In the context of consultations for the preparation of the new Urban Mobility Framework, the support for mobility management plans has been voiced, with a majority of the respondents being in favour of adopting those plans by "travel destination" such as organisers of big events, companies with more than 200 employees, universities, shopping centres/retail areas, primary and secondary schools as well as hospitals.

³⁸⁴ [1_EN_ACT_part1_v7.docx \(europa.eu\)](#)

It is not clear however how many mobility management schemes exist. When they exist, they seem not always fully taken up by their target users. In consequence, they do not lead to the desired behavioural change resulting in a shift towards sustainable mobility choices. Therefore, projects should identify and address specific bottlenecks and barriers that prevent the uptake of sustainable mobility management schemes across the EU and propose solutions that could lead to the desired behaviour change of citizens, aimed at more sustainable and decarbonised urban transport with all its related co-benefits in view of decarbonising the transport sector in line with the European Green Deal.

A closely related challenge is the uptake of electromobility that requires an increase for clean electricity and the related infrastructure enhancement, notably distribution grids in cities. It is relevant to promote vehicle-to-grid solutions, to alleviate the needs to invest in distribution grid extension. In this regard, behavioural change is key to enable and incentivise electric vehicles users to participate in balancing the grid through smart and bidirectional charging.

The objective of this topic is to explore, analyse and evaluate the effectiveness of mobility management schemes (influencing behavioural change, travel demand and travel supply) in achieving a decarbonised and energy-efficient urban mobility system. To this end, projects should:

- Take stock of existing studies, analyse in a structured way and provide an overview of mobility managements schemes in the European urban area in both the public and the private domain, which seek to increase the use of sustainable transport modes infrastructure;
- Identify, analyse and assess leverages as well as barriers in the uptake of mobility management schemes for the most important target groups;
- Co-design with and engaging the organisations proposing the mobility schemes, identify and assess potential behaviour-related solutions to those barriers that ensure a successful uptake of mobility management systems. Those solutions should differentiate between specific target groups, in particular students, employees, customers and patients of relevant categories of organisations: schools, universities, hospitals and other health facilities, tourism and leisure sectors, shopping malls, private companies, living in European urban, peri-urban and rural areas. Identify user groups that are more motivated to change their behaviours and prepared to act as frontrunners, thus leading to a more rapid adoption;
- Propose recommendations that support and incentivise the uptake of sustainable mobility choices by organisations and users;
- Propose recommendations to support the uptake of smart and bidirectional recharging for electric vehicles and related demand side management schemes in cities to enable electric vehicles (EV) participation in electricity markets as active customers that can feed the electricity stored in EV batteries back to the power grid during the peak hours to

help balance the growing the electricity demand (thus avoiding need for investments into grids);

- Establish incentives to promote renewable based e-mobility schemes notably smart and bidirectional charging in cities to reduce reliance on fossil fuels including via support and awareness raising schemes;
- Encourage new mobility behaviour by means of marketing, information and awareness raising campaigns.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. At least half of the four cities should be among the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities³⁸⁵.

HORIZON-MISS-2024-CIT-01-04: Integrated peri-urban areas in the transition towards climate neutrality

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 28.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s):

³⁸⁵ The EU Mission on Climate-Neutral and Smart Cities aims to deliver 100 climate-neutral and smart cities by 2030 and ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050. On 28 April 2022, the Commission announced the 100 EU cities that will participate in the Mission. In addition, 12 cities have been selected from countries associated or expected to be associated the Horizon Europe programme.

	<p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform³⁸⁶ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p>
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Expected Outcome: Project results are expected to contribute to the Climate-neutral and Smart Cities Mission's objective of climate neutrality in at least 2 of the 4 domains listed below (Mobility, Energy, Industry, Governance) and give all the following outcomes in the selected domains by the end of the project:

Mobility:

- Increase accessibility and connectivity of peri-urban areas by providing inclusive, suitable and affordable alternatives with:
 - 30% increase of sustainable transport modes, providing diversity of the transport offer, especially with regards to ensuring mass-transit, including among others energy-efficient shared and/or on-demand mobility services
 - 20% reduction of GHG emissions
 - 20% Improvement of air quality and noise reduction
 - 30% Reduction of urban road congestion whilst increasing the accessibility for both passengers and freight, and the reliability, predictability and efficiency of travel times and transport operations
 - 30% reduction of human health effects due to exposure to transport pollution
- Improved transport peri-urban network performance (demand and supply) and transport connectivity through enhanced interoperability and multimodality;
- Improved access to/from commercial and health services, educational establishments, businesses, leisure and recreational facilities for the inhabitants of peri-urban areas;
- Inclusive mobility solutions that respond to the needs of all peri-urban inhabitants, irrespective of their age, gender, economic or social status, which are co-designed with all the relevant stakeholders (including, local and regional authorities, settled populations, in-migrants, transient workers, developers, entrepreneurs, etc.), and then

³⁸⁶ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

tested and implemented in the identified peri-urban areas, which could have a geographical coverage that goes as far as the full functional urban area;

- Improved safety particularly for vulnerable road users;
- Optimize and improve the use of the existent infrastructure (following the principle of re-use and circularity);
- Integrated land-use and transport planning models and policies, which could have a geographical coverage that goes as far as the full functional urban area.

Energy:

- Improved and decarbonized energy grids with economic & social benefits to peri-urban areas thanks to the vicinity of the city;
- Business models, and technological solutions and/or guidance for setting up local energy communities, with RES and energy storage infrastructure co-financed by peri-urban dwellers, industrial actors and proceeds from energy sales or ancillary service provision (e.g. storage) to the city grid and/or heating and cooling networks. Together with electricity sharing leading to reduction of electricity prices for the community members, counter energy poverty, reduce fossil fuel use and facilitate sustainable mobility;
- Business models and/or guidance for energy generation (biomethane, electricity, biofuels) from agricultural waste, second generation bioenergy crops and technologies such as ground mounted solar or agrivoltaics in rural dominated peri-urban areas. They should include also thermal storage systems (seasonal STES, shorter term UTES etc) and thermal energy generation technologies (e.g. solar thermal, geothermal, etc.) for heating and cooling.

Industry:

- Reduction of GHG emissions (CO₂, methane from waste/wastewater, fluorinated gas, refrigerants) in industries located in peri-urban areas, supporting the 55% reduction goal for 2030;
- 25% improved energy efficiency in industrial processes;
- 30% increase in deployment of strategic net-zero technologies, such as solar (PV and thermal, wind, hydrogen, batteries and storage (incl. thermal energy storage), heat pumps and geothermal energy, electrolysers and fuel cells, biogas/biomethane, carbon capture and storage (CCS), and grid technologies, notably for energy-intensive industries located in peri-urban areas;
- Reinforce the green transition of industry, through Local Green Deals, i.e., mutual agreements between city authorities and local businesses and industry and citizens associations to support the territorial sustainability agenda in the peri-urban areas;

- 25% enhanced recycling in industrial processes and materials reuse, including construction materials and demonstration and optimisation of recycling facilities for industries and processes located in peri-urban areas.

Governance:

- Capacity building (such as training courses and awareness raising activities) among local authorities, users and mobility systems providers, energy and industry stakeholders to accelerate the take-up of shared, smart and zero emission solutions and to implement their monitoring and evaluation;
- Support the development of planning and implementation skills, policy implementation/infrastructure investment impact assessment and funding aspects;
- Better integration of peri-urban areas into the current spatial/land-use/transport/landscape planning;
- Integration of development strategies with planning and regulatory documentations across different administrative levels/scales/territorial units, at least from local level to regional level).

Scope: Peri-urban areas lie at the periphery of cities. They are the interface between rural and urban environments and are often the subject of high pressure from the urban core which results in an un-controlled and uneven urban expansion towards the rural territory often triggering environmental degradation. While dispersed and heterogenous in terms of land-occupancy, density and services and amenities distribution, the peri-urban territory integrates mutual inter-dependences within the urban-rural continuum. These can be associated with people (inwards and outwards migration or socio-demographic change) as well as with linkages and flows between a variety of rural and urban related functions and activities (ranging from industrial and recycling manufacturing, agriculture production and food processing, sanitation, waste disposal, drinking water provisions, to housing – including slums and gated communities – transport and associated infrastructure, large-scale commercial sites, and large recreational areas such as parks or forests), which juxtapose, collide and mesh in unintended and unplanned ways.

Peri-urban areas are also the subject of weaker governance structures and limited institutional capacity, which in return limits the capacity to regulate economic activities and land-use and land coverage and makes it difficult to implement effective and integrated local, regional, and functional urban area wide policies and programs. This is particularly challenging in areas that straddle multiple jurisdictions, such as urban-rural fringe.

This topic aims to foster the integration of green and smart mobility, energy, industry and governance solutions and measures within the current peri-urban development and planning practice to reduce these areas GHG emissions and to improve their liveability.

Proposals, depending on chosen domains, should investigate a sustainable and decarbonised development of the peri-urban areas by shifting from fossil fuels to sustainable energy sources

in mobility, energy or industry domains supported by adequate governance structures and practices based on a sustainable land-use planning and an urban expansion which integrates environmental considerations and determinants. In addition, proposals should provide European demonstration-type examples on how to sustainably integrate climate-neutral, green, and smart solutions and measures into the peri-urban/urban development and the existing transport, energy, and industrial infrastructures, to achieve long-term decarbonization impacts and necessary climate resilience. Activities and pilot demonstrations of technological nature of the proposed solutions in operational environment are expected to be at minimum TRL 7 by the end of the project. Positive, long-term impacts on social cohesion, economic development, and public perception – resulting in behavioural change and policy change – should be fostered and anticipated. Proposals, depending on selected domains should:

- Explore particular characteristics of peri-urban areas that are distinct from rural and urban ones and analyse relevant urban-rural dynamics such as continuous and frequent land-use and functional changes, poor and inaccessible transport infrastructure, scattered and unevenly distributed day-to-day services and amenities.
- Explore models of urban/peri-urban development and planning containing the above-mentioned dynamics (e.g., expansion model, densification model, green-belts and green-corridors model) aimed at overcoming the sustainability, decarbonisation and local climate (e.g. heat islands) challenges of the urban-rural fringe while ensuring co-creation with and engagement of the relevant stakeholders (including citizens and communities).
- Focus on domains that are particularly pertinent in achieving progress in sustainable development, such as:
 - o Mobility and transport with extensive use of personal cars with combustion engines, poor and scattered infrastructure, and lack of sustainable transport options. Transport related emissions that are exacerbated by intensive commuter flows generated by peri-urban areas. City focused solutions that are not adapted to peri-urban areas and challenges often exceeding organizational, financial and knowledge capacities of local authorities. Proposals should analyse and explore how peri-urban generated traffic impacts the transport flows (for both goods and people) and its contribution to the total CO₂/emissions of the entire urbanized territory.
 - o Industry, accounting for 30% of CO₂ emissions and often located in peri-urban areas, is capital in succeeding the transition towards a net zero economy. Proposals should analyse the contribution to the total emissions reduction, of improved energy efficiency measures in industrial processes located in peri-urban areas, as well as of the deployment of strategic net-zero technologies, such as solar, (PV and thermal), wind, hydrogen, batteries and storage (incl. thermal energy storage), heat pumps and geothermal energy, electrolyzers and fuel cells, biogas/biomethane, carbon capture and storage, and grid technologies, as envisaged in the EU Net Zero

Industry Act. Proposals should ramp up and facilitate public-private partnerships, notably the key role of Local Green Deals (LGDs).

- o Circular economy: Peri-urban areas are key for setting up recycling facilities for materials, products and equipment and scaling up material reuse, such as Social Urban Mining and recycling infrastructure across different industries (e.g., online marketplaces to empower exchange for materials, or physical Materials Banks for construction and demolition materials). Proposals should explore, analyse and facilitate the deployment of innovative industrial recycling processes, industrial symbiosis and closed-loop systems, as well as supporting knowledge transfer through innovative practices; piloting local platforms for Social Urban Mining³⁸⁷; demonstrating recycling and re-use processes for building and public works materials, industrial waste, water and waste management; enabling material reuse; inducing circular practices, reuse of materials and behavioural change.
- o Vulnerability of peri-urban areas to environmental damage as most of the urban wastes (solid and liquid) and pollutant activities are pushed in the peripheries.
- o Electricity grids and heating/cooling solutions are suboptimal in some peri-urban areas. The often-low energy efficiency and individual fossil fuel or even solid fuel-based heating of the building stock exacerbates energy poverty in the absence of sufficient population density for district heating while the lower real estate prices hamper deep renovation. The opportunities of available space for i.e., clean energy production or electricity and thermal storage are not sufficiently exploited to increase living comfort, accelerate energy transition for the benefit of the local economy and nearby urban areas.
- o Governance, as peri-urban areas can be beyond the legal authority of cities, nor are they considered as part of the rural administrative units. Therefore, the capacity to regulate economic activities (and thus land-use and land coverage) is weak. This results in the peri-urbanization being largely an unplanned process, informal and sometime illegal and often resulting in environmental hazards and degradation of natural resources. This also results in a scattered and uneven distribution of services, amenities, and resources across the peri-urban area. The weaker governance structures complicate also integrated planning and green procurement of energy, transport, and other services.
- o Social and cultural characteristics of peri-urban areas that are gaining on heterogeneity with continuous social dynamics. In many (Central and Eastern) EU cities the peri-urban expansion was driven by the emergence of a stronger middle class. However, in more recent years there has been an increasingly heterogenous mix of occupants/actors with multiple and most often conflicting interests,

³⁸⁷ Social Urban Mining – is the concept of creating extended value of demolished buildings by optimizing the deconstruction phase through re-use and high-value recycling. Social Urban Mining creates social added value by integrating social businesses in the operational activities.

including settled populations, populations living in gated estates, in-migrants, transient workers, emerging middle-class among others. This overall leads to heterogeneous communities and, in general, to a lack of social cohesion.

The research actions should cover the following:

- Take stock of existing studies, analyse in a structured way, and provide a summary of measures contributing to climate neutrality in European peri-urban areas, identifying barriers.
- Establish co-designing process and engaging with the relevant stakeholders (such as: citizens, local authorities, mobility operators, service providers, energy companies, private businesses...) to ensure a successful uptake of solutions contributing to climate neutrality of peri-urban areas.
- Develop, test, and demonstrate scalable solutions in real life in at least two out of the four domains (Mobility, Energy, Industry, Governance) contributing to climate neutrality of peri-urban areas.

Each proposal should involve stakeholders from at least three ‘lead urban/peri-urban areas’, and at least three ‘replicator’ urban/peri-urban areas. Each urban/peri-urban area should establish a living laboratory where, under real life-conditions, a set of complementary and reinforcing solutions, centred on two to four aspects from the ones presented above (mobility, energy, industry, and governance) should be developed, tested, and implemented in an integrated approach. The participating urban/peri-urban areas, which may have a geographical coverage that goes as far as the full functional urban area, should demonstrate their common interests, and outline how they will ensure a meaningful and close cooperation. The peri-urban areas should each be situated in different EU Member States or countries associated to Horizon Europe. Each proposal should at least include one urban area of the 112 selected ones for the EU Mission on Climate-Neutral and Smart Cities.

To allow for a thorough evaluation of the projects’ outcomes, proposals are expected to provide measurable indicators to demonstrate how the tested solutions are contributing to the climate neutrality objectives of the Climate-neutral and Smart Cities Mission and participating peri-urban areas. These should be supported by clear baselines, quantified targets, and appropriate review processes for each participating urban area. The baselines for the expected outcomes should take into account expected technological developments and policy implementation.

Projects are expected to collaborate with the established and widely applied process and impact evaluation framework (using both clear baselines and measurable impact indicators) as well as the corporate design, the dissemination and information exchange frameworks put in place by the Commission (e.g. the Mission Platform, the CIVITAS initiative, Scalable cities, New European Bauhaus Community, the European Urban Initiative of Cohesion Policy, etc.) and the Knowledge and Innovation Communities (KICs) of the EIT, such as, for example, EIT Urban Mobility, EIT Culture and Creativity or EIT Food, EU Mission Adaptation to

Climate Change, and Driving Urban Transitions Partnership (DUT), depending on the area. They shall contribute to the development of the existing European knowledge base on the effectiveness and impacts resulting from the implementation of innovative, sustainable, green, and inclusive solutions in urban areas.

Clear commitments and contributions to Europe-wide take-up during and beyond the project are expected, which could, for example, be in the form of follow-up actions funded by CEF, ELENA, or similar programmes.

This topic requires the effective contribution of SSH (Social Sciences and Humanities) disciplines including ethics and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. Inclusiveness of vulnerable populations (older people, children) as well as gender perspectives should be considered.

Call - Support for national, regional and local authorities

HORIZON-MISS-2024-CIT-02

Conditions for the Call

Indicative budget(s)³⁸⁸

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁸⁹	Indicative number of projects expected to be funded
		2024		
Opening: 18 Apr 2024 Deadline(s): 05 Sep 2024				
HORIZON-MISS-2024-CIT-02-01	CSA	3.00 ³⁹⁰	Around 3.00	1

³⁸⁸ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

³⁸⁹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

³⁹⁰ Of which EUR 0.45 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.50 million from the 'Digital, Industry and Space' budget and EUR 0.06 million from the 'Civil Security for Society' budget and EUR 1.91 million from the 'Climate, Energy and Mobility' budget and EUR 0.08 million from the 'Culture, Creativity and Inclusive Society' budget.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

Overall indicative budget		3.00		
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General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CIT-02-01: Supporting national, regional and local authorities across Europe to prepare for the transition towards climate neutrality within cities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-CIT-02-03

	Collaboration with the Cities Mission Platform ³⁹¹ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Increased preparedness and capacity of national, regional and local authorities in EU Member States and countries associated to Horizon Europe to engage in cities' transition towards climate neutrality.
- Identification of country-specific challenges and barriers for cities to achieve climate neutrality related to regulatory framework, funding and financing, and governance structures and promotion of best-practices through transnational exchanges and sharing of experience.
- Enhanced synergies with R&I national/international communities, relevant initiatives, and partnerships such as the 'Driving Urban Transitions to a Sustainable Future' Horizon Europe Partnership and the Mission Platform for the implementation of the Climate-neutral and smart cities Mission.

Scope: Cities are increasingly taking a leading role in the green and digital transition. 100 EU cities and 12 cities from countries associated to Horizon Europe have raised their ambition by joining the Climate-neutral and smart cities Mission and actively pursuing their transition towards climate-neutrality by 2030. Many more cities across Europe expressed their willingness to engage in climate neutrality pathways and actively engage with the Mission. National and regional authorities have a key role to play to support cities ambition and facilitate the process.

The objective of this action is to strengthen existing national networks in Member States and Associated Countries as well as encourage and support the creation of such structures in countries where this has not yet taken place and empower them to act as clearly identifiable national contacts to support cities in pursuing their climate neutrality ambition and related targets.

Such networks by combining relevant multi-level (e.g. national, regional and local) institutional competence and multi-stakeholders capacities, expertise, and responsibilities, would ensure coherence across city-relevant policy, financing and regulatory frameworks and promote higher efficacy and impact of undertaken action plans.

³⁹¹ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

The project should build upon, broaden and further upscale the activities, tools, methods, and approaches developed under the CapaCITIES project whilst expanding its geographical coverage to cover preferably the entire EU, enhancing institutional competence by involving all relevant actors and working in close collaboration and complementarity with the Cities Mission Platform.

Proposals should:

- Support the set-up of dedicated national networks in countries where these have not yet been established, preferably covering the entire EU, to help cities in their transition towards climate neutrality and promote collaboration, capacity building and coherence of policy, regulation and financing frameworks across national, regional and local levels.
- Promote transnational learning, exchanges and training to foster replication and upscaling of best practices across Europe for effective national support mechanisms to support cities in their transitions to climate neutrality.
- Strengthen the capacity and competence of existing national networks by engaging all relevant institutional players with responsibilities in city-relevant affairs and facilitate exchanges across the national, regional and local levels for policy coherence, better coordination and enhanced impact of city relevant policies, programmes, initiatives, regulatory frameworks and funding.
- Mobilize and support a large number of urban-relevant authorities, across different ministries and implementing agencies, in engaging together with cities in climate-neutrality transitions in line with the overarching objectives of the European Green Deal, and relevant EU policies;
- Support capacity building of local authorities and multi-level governance structures for transitions to climate neutrality through dedicated activities such as e.g. trainings, webinars, capacity building, country visits and bi-or multi-lateral exchanges as well as peer-exchange.
- Identify specific challenges, best-practices and opportunities to make policy and regulatory frameworks, funding and financing and multi-level governance structures best suited for climate neutrality in cities.

To avoid unnecessary proliferation of national networks with overlapping competences, duplication of efforts and uncertainty by cities as to which relevant “interlocutors” to approach, applicants must take into account and build upon existing, planned or ongoing relevant national, regional or local activities and structures aiming to foster climate-neutrality in cities.

Other Actions not subject to calls for proposals

1. Scientific and technical services to the Climate-Neutral and Smart Cities Mission

The Joint Research Centre (JRC) has provided scientific and technical support to the preparatory and early implementation phases of the Climate-Neutral and Smart Cities Mission, hereafter referred to as the Cities Mission. The purpose of this action is to maintain continued scientific and technical support throughout the implementation phase of the Mission aiming at achieving climate-neutrality in the cities participating in the Cities Mission by 2030 and in all other EU cities by 2050, in line with the European Green Deal objectives. The activities will provide extended data, methodologies and analysis for accelerating the transition towards climate-neutrality throughout European cities while also assessing the progress and overall impact of the Cities Mission. This activity will be implemented in close coordination with the Commission's Mission Team and the Mission Owners' Group as well as in collaboration, where relevant, with the Mission Platform.

This activity will focus in particular on:

- Continued support in review process of Climate City Contracts and future iterations of Climate Neutrality Action Plans

The JRC will continue to provide scientific and technical expertise to review the Climate Neutrality Action Plans submitted to the European Commission as part of Climate City Contracts as well as for possible iterations or major updates of such plans, when relevant for the assignment or maintenance of the Mission Label. This will include the review of cities' offsetting strategies and technical/non-technical solutions for addressing residual emissions.

- Continued monitoring of the overall progress and impact of the Cities Mission

The JRC will continue to elaborate regular progress and assessment reports for the Cities Mission. Progress reports will be based on 1) the methodology elaborated by the JRC for assessing the GHG reductions achieved in the context of the Cities Mission and their impact in view of achieving the European Green Deal targets, 2) will build from the coherent baseline established across participating cities and 3) will be based on the reporting system used by and data collected through the Mission Platform. Further topics covered by the impact assessment will include air quality, health, climate adaptation, resilience and just transition.

- Methodological development

Based on preparatory work to establish a framework and guidelines for including scope 3 emissions in city GHG inventories and mitigation actions, and taking into account state-of-the-art literature and guidance documents developed for city emission accounting, the JRC will further refine and test GHG emission modelling frameworks and methods, together with a small number of Mission cities interested in progressing faster and tackling scope 3. It is of interest to address GHG emissions related to cities, occurring beyond their geographic boundaries, and integrate them into the planning of climate neutrality action in cities. Methodological guidelines and support will be provided on data collection, emission factors

and impact assessment modelling, to account for scope 3 emissions in city GHG accounting. This work will be undertaken in close collaboration with the relevant international fora, including the partners under the Global Covenant of Mayors for Climate and Energy (GCoM) as well as the Mission Platform for identifying and engaging interested Mission cities.

The listed activities should ensure the uptake and capitalisation of the existing European urban initiatives and policies, while also considering the necessary interaction with the Cities Mission Platform. The action should last indicatively two years.

- Data, tools and guidance for mission and follower cities

Based on the analysis of common gaps and assistance needs across Climate City Contracts, additional guidance, data and tools will be provided, for instance in view of assessing cities' renewable energy potential, urban green spaces and carbon sinks.

Form of Funding: Direct action grants

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: Fourth quarter 2024

Indicative budget: EUR 2.00 million from the 2024 budget³⁹²

2. Urban Transitions Mission of Mission Innovation

The Urban Transitions Mission³⁹³ is an initiative co-led by the Commission, as member of Mission Innovation on behalf of the European Union, the Global Covenant of Mayors and the Joint Programming Initiative Urban Europe (the transnational R&I funding network behind the co-funded Horizon Europe Partnership DUT). It aims at working with a cohort of up to 300 cities worldwide to demonstrate by 2030 integrated pathways towards holistic, people-centred urban transitions built around clean energy and innovative net-zero carbon solutions. Activities will include the promotion of capacity building, deep demonstrators and enhanced R&D investment that take into account different forms of innovation and challenge-based typologies of different urban environments.

This grant will be awarded without a call for proposals to the legal entity identified below as the Global Covenant of Mayors. On account of its technical competence, its high degree of specialisation and for its role as co-lead of the Urban Transitions Mission, the Global Covenant of Mayors will continue to provide the services of the Mission Director³⁹⁴, responsible for the coordination of mission activities, the involvement of Mission Innovation

³⁹² Of which EUR 0.30 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.33 million from the 'Digital, Industry and Space' budget, EUR 0.04 million from the 'Civil Security for Society' budget, EUR 1.28 million from the 'Climate, Energy and Mobility' budget, EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁹³ <https://urbantransitionsmision.org/>

³⁹⁴ Currently supported through Grant Agreement n. 101102296 MI UTM - A grant to support the Mission Director and the Annual Innovation Summit of the Urban Transitions Mission under Mission Innovation.

members and partners including through facilitating communication activities, meetings and exchange of experience, the organisation of the annual innovation summit and the engagement of stakeholders towards the successful implementation of the mission statement.

Specific conditions

Legal and financial set-up of the Grant Agreements: The rules are described in General Annex G. The following exceptions apply:

- Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)³⁹⁵.

Legal entities:

Global Covenant of Mayors as part of the Foreningen C40 Cities Climate Leadership Denmark, Rådhusstræde 6, 2., 1466 København K, Denmark

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 195 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Fourth quarter 2024

Indicative budget: EUR 1.00 million from the 2024 budget³⁹⁶

3. Financial advisory services and technical assistance to Mission cities

This action aims at supporting the provision of financial advisory services and technical assistance to the 112 cities selected as part of the Climate-neutral and smart cities Mission through its Call for Expression of Interest with the objective to develop and subsequently implement their investment strategy for becoming climate-neutral. Through a top-up of existing activities and advisory structures such as the European Local Energy Assistance

³⁹⁵ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

³⁹⁶ Of which EUR 0.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.17 million from the 'Digital, Industry and Space' budget, EUR 0.02 million from the 'Civil Security for Society' budget, EUR 0.64 million from the 'Climate, Energy and Mobility' budget, EUR 0.03 million from the 'Culture, Creativity and Inclusive Society' budget.

(ELENA), Mission cities will receive targeted support including e.g. technical studies, energy audits, business plans and financial advisory, legal advice, tendering procedure preparation, project bundling, project management.

The action should be implemented through the existing advisory agreement with the EIB Group for the implementation of the InvestEU Advisory Hub.

Legal entities:

EIB, 98-100, boulevard Konrad Adenauer L-2950 Luxembourg

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: First quarter 2024

Indicative budget: EUR 18.97 million from the 2024 budget³⁹⁷

4. Financial and technical input to the Climate City Contracts Review process

This action aims at providing technical and finance-related input to the European Commission in the review process of Climate City Contracts submitted in the context of the Climate-neutral and smart cities Mission, in particular concerning the review of Climate-Neutrality Investment Plans (CNIP).

The European Investment Bank, in particular the InvestEU Advisory Hub and JASPERS, will support the European Commission in reviewing the Climate-neutrality Investment Plan of Mission cities that passed the completeness check carried out by the Mission Platform. The activities will be carried out through the existing advisory agreement with the EIB Group for the implementation of the InvestEU Advisory Hub as well as in the context of the Contribution Agreement between the Commission (DG REGIO) and the EIB, covering the period 2022- 2027, under the category of development of guidelines, methodologies and general support.

Legal entities:

EIB, 98-100, boulevard Konrad Adenauer L-2950 Luxembourg

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: First quarter 2024

Indicative budget: EUR 1.00 million from the 2024 budget³⁹⁸

³⁹⁷ Of which EUR 2.84 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 3.14 million from the 'Digital, Industry and Space' budget, EUR 12.10 million from the 'Climate, Energy and Mobility' budget, EUR 0.41 million from the 'Civil Security for Society' budget, EUR 0.48 million from the 'Culture, Creativity and Inclusive Society' budget.

Mission: A Soil Deal for Europe

Life on earth depends on healthy soils. Healthy soils provide food, clean water, habitats for biodiversity and other important services while contributing to climate resilience³⁹⁹. We take these services for granted, but in fact, soils are a scarce and a threatened resource, all over Europe and beyond. It is estimated that around 60 of soils in the EU are unhealthy⁴⁰⁰, mainly because of unsustainable management practices. The effects of climate change are putting further pressure on this key resource. The Mission supports Europe's path to sustainable soil management as part of the wider green transition, in urban as well as rural areas. The Mission's goal is to establish 100 living labs and lighthouses to lead the transition towards healthy soils by 2030 for the benefit of food, people, nature and climate.

To reach its goal and objectives, the Mission foresees actions across territories and sectors. It aims at having wide-reaching impact on practices in agriculture, forestry, the food sector and other industries (e.g. biobased and waste) as well as on land use planning in rural and urban areas. The Mission will also tap into the expertise from international partners and contribute to soil health globally.

To be successful, the Mission requires that stakeholders along the whole agri-food chain, including farmers, other land managers, industries, consumers, public authorities, spatial planners, research and civil society at large, acknowledge the value of soils and actively contribute to soil-friendly practices, including through consumer choices.

Many of the actions to address soil health have a direct impact on some of the goals of the other EU Missions: carbon sequestration and storage in soils support climate change mitigation and adaptation, and changes in soil structure influence water-retention capacity (Climate Adaptation Mission and Ocean and Waters Mission); targeted nutrient management will lead to improvements in water quality (Ocean and Waters Mission); soils are the foundation of green urban infrastructure and nature-based solutions, e.g. for urban flood protection (Climate-neutral Cities Mission); a reduction in soil pollution reduces the risk of cancer (Cancer Mission).

The Mission implementation plan specifies the goal and objectives as well as the mode for implementation of the Mission 'A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030'⁴⁰¹. Proposals for topics under Work Programme 2023-2024 of this Mission will be part of a wider portfolio of Mission activities. They will contribute to the Mission's goal and objectives, and more specifically to several of the following impacts:

³⁹⁸ Of which EUR 0.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.17 million from the 'Digital, Industry and Space' budget, EUR 0.64 million from the 'Climate, Energy and Mobility' budget, EUR 0.02 million from the 'Civil Security for Society' budget, EUR 0.03 million from the 'Culture, Creativity and Inclusive Society' budget.

³⁹⁹ In line with the Mission's implementation plan, soil health is defined as "the continued capacity of soils to support ecosystem services".

⁴⁰⁰ <https://esdac.jrc.ec.europa.eu/esdacviewer/euso-dashboard/>

⁴⁰¹ https://ec.europa.eu/info/publications/implementation-plans-eu-missions_en

- Increased knowledge on soils and the underlying soil processes is widely available to a range of stakeholders and the wider public, and is used to further inform science, practices and policies to reduce pressures on soils.
- Land managers⁴⁰², industries, businesses, consumers and society at large work together, in particular through Living Labs, to take effective action on soil health across sectors and land uses.
- A wide range of innovations – adapted to local conditions - are in place to address the manifold pressures on soils and improve soil conditions, thus contributing to the specific objectives of the Mission ‘A Soil Deal for Europe’.
- “Soil literacy”, awareness and societal engagement, and appreciation of the vital functions of soils is increased, including awareness on the links between healthy soils, nutritious and safe food and a healthy environment.
- More sustainable methods for soil management are applied and contribute to healthy oceans and water, and climate adaptation on land.
- The successful implementation of the Mission supports several EU policy and international commitments ranging from land degradation neutrality, food and nutrition security to biodiversity (e.g. Sustainable Development Goals, United Nations Convention to Combat Desertification, United Nations Convention on Biodiversity, European Green Deal including the New Soil Strategy or the Long-term Vision for the EU’s rural areas and the Common Agricultural Policy).
- The Mission supports the proposal for a Directive on Soil Monitoring and Resilience (Soil Monitoring Law⁴⁰³). The Mission is recognised as a key instrument for the implementation of the Directive, and in particular the living labs and activities supporting soil monitoring, soil education and citizens engagement. The Mission Soil will also contribute to the definition of sustainable soil management practices.

Projects under these calls are expected to liaise closely with the Mission Secretariat and actively contribute to the development of the European Soil Observatory (EUSO), hosted by the European Commission’s Joint Research Centre (JRC). To this end, several topics provide the opportunity to establish formal collaborations with the JRC. Proposals are also encouraged to build on existing research results and best practices (for instance from the EJP Soil projects⁴⁰⁴).

Specific requirements for multi-actor projects:

Proposals submitted for topics requesting to follow the multi-actor approach should meet all requirements listed below.

⁴⁰² The term "land manager" includes farmers, foresters, urban and spatial planners and other decision-makers in the public or private domain with regard to land use and rural areas.

⁴⁰³ https://environment.ec.europa.eu/publications/proposal-directive-soil-monitoring-and-resilience_en

⁴⁰⁴ <https://ejpsoil.eu/>

The multi-actor approach described here, which is a form of responsible research and innovation, aims to make the research and innovation process and its outcomes more reliable, demand-driven, shared and relevant to society. A multi-actor project ensures the genuine and sufficient involvement of a targeted array of actors, which serves the objectives of the topic. For instance, actors could include but not be limited to: researchers, farmers, foresters and representatives of their professional associations, advisors, land managers and owners, spatial planners, food and bioeconomy businesses, consumer associations, local communities, educators, cultural and creative industries, citizens, civil society organisations including NGOs, and government representatives. The choice of the key actors participating in projects will depend on the objectives of the call topic and the proposals. The actors are essentially the (end-) users⁴⁰⁵ of the project results backed up by any other useful intermediaries and actors who can contribute with further expertise and innovative ideas relevant to the topic's objectives and support communication and dissemination. The genuine and sufficient involvement of different actors should take place over the whole course of the project: from participation in development, planning and experiments to implementation, dissemination of results and a possible demonstration phase. Building blocks for the project proposal are expected to come from science as well as from practice: it is a 'co-creation' process. (End-) users and practitioners are to be involved, not as a study-object, but to use their practical and local knowledge and/or entrepreneurial skills to develop solutions and create 'co-ownership' of results. This will contribute and speed up the acceptance and up-take of new ideas, approaches, and solutions developed in the project. Therefore, a multi-actor project proposal must describe:

- How the proposed objectives and planning are targeting the needs/problems/challenges and opportunities of the (end-)users of the project results.
- How the description of the project concept and in particular the composition of the consortium reflects a balanced choice of relevant key actors who have complementary types of knowledge (scientific, practical etc.), and will ensure a broad implementation of project results which should be ready for practice.
- How the project intends to include existing practices and tacit knowledge. This should be illustrated in the proposals with a sufficient number of high-quality knowledge exchange activities indicating the precise and active roles of the different non-scientific actors in the work. The cross-fertilisation of skills, competencies and ideas between actors should generate innovative findings and solutions that are more likely to be applied on a broad scale.
- How the project will facilitate the multi-actor engagement process by making use of the most appropriate methods and expertise.
- How the project will result in practical and ready to use knowledge, approaches, tools or products, that are easily understandable and freely accessible.

⁴⁰⁵ An“(end-) user” of project result is a person who is him/herself putting the project results into practice.

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- How outputs ready for practice will feed into the existing dissemination channels most consulted by the (end-) users of the project results in the countries and regions.

In addition, to ensure EU-wide communication in all areas related to the Common Agricultural Policy (CAP) specific objectives⁴⁰⁶, in particular agriculture, forestry and rural development, and the EU CAP Network - European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI)⁴⁰⁷, this knowledge must also be summarised in an appropriate number of 'practice abstracts'⁴⁰⁸ in the common EIP-AGRI format⁴⁰⁹.

For areas falling outside the EIP-AGRI⁴¹⁰ and CAP specific objectives remit, other similarly effective solutions ensuring dissemination at EU level should be sought.

Where applicable, involvement of interactive innovation groups, such as EIP-AGRI Operational Groups funded under Rural Development Programmes⁴¹¹, is strongly recommended.

The following call(s) in this work programme contribute to this Mission:

Call	Budgets (EUR million)		Deadline(s)
	2023	2024	
HORIZON-MISS-2023-SOIL-01	126.00		20 Sep 2023
HORIZON-MISS-2024-SOIL-01		134.50	08 Oct 2024
Overall indicative budget	126.00	134.50	

⁴⁰⁶ For areas covered by the CAP specific objectives see Article 6 of the Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2021.435.01.0001.01.ENG

⁴⁰⁷ see https://eu-cap-network.ec.europa.eu/index_en

⁴⁰⁸ see <https://ec.europa.eu/eip/agriculture/en/eip-agri-common-format>

⁴⁰⁹ The EIP common format for "practice abstracts" is available at: <https://ec.europa.eu/eip/agriculture/en/eip-agri-common-format>

⁴¹⁰ see <https://ec.europa.eu/eip/agriculture/en>

⁴¹¹ see <https://ec.europa.eu/eip/agriculture/en/about/operational-groups>

Call - Research and Innovation and other actions to support the implementation of mission A Soil Deal for Europe

HORIZON-MISS-2023-SOIL-01

Conditions for the Call

Indicative budget(s)⁴¹²

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴¹³	Indicative number of projects expected to be funded
		2023		
Opening: 17 Jan 2023 Deadline(s): 20 Sep 2023				
HORIZON-MISS-2023-SOIL-01-01	RIA	12.00 ⁴¹⁴	Around 6.00	2
HORIZON-MISS-2023-SOIL-01-02	RIA	14.00 ⁴¹⁵	Around 7.00	2
HORIZON-MISS-2023-SOIL-01-03	IA	12.00 ⁴¹⁶	Around 6.00	2
HORIZON-MISS-2023-SOIL-01-04	IA	14.00 ⁴¹⁷	Around 7.00	2

⁴¹² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁴¹³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁴¹⁴ Of which EUR 9.90 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.69 million from the 'Digital, Industry and Space' budget and EUR 0.20 million from the 'Civil Security for Society' budget and EUR 0.21 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴¹⁵ Of which EUR 11.55 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.98 million from the 'Digital, Industry and Space' budget and EUR 0.23 million from the 'Civil Security for Society' budget and EUR 0.24 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴¹⁶ Of which EUR 9.90 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.69 million from the 'Digital, Industry and Space' budget and EUR 0.20 million from the 'Civil Security for Society' budget and EUR 0.21 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴¹⁷ Of which EUR 11.55 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.98 million from the 'Digital, Industry and Space' budget and EUR 0.23

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HORIZON-MISS-2023-SOIL-01-05	IA	13.00 ⁴¹⁸	Around 6.50	2
HORIZON-MISS-2023-SOIL-01-06	RIA	7.00 ⁴¹⁹	Around 7.00	1
HORIZON-MISS-2023-SOIL-01-07	CSA	6.00 ⁴²⁰	Around 6.00	1
HORIZON-MISS-2023-SOIL-01-08	RIA	36.00 ⁴²¹	Around 12.00	3
HORIZON-MISS-2023-SOIL-01-09	RIA	12.00 ⁴²²	Around 12.00	1
Overall indicative budget		126.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General

million from the 'Civil Security for Society' budget and EUR 0.24 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴¹⁸ Of which EUR 10.72 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.83 million from the 'Digital, Industry and Space' budget and EUR 0.22 million from the 'Civil Security for Society' budget and EUR 0.23 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴¹⁹ Of which EUR 5.77 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.99 million from the 'Digital, Industry and Space' budget and EUR 0.12 million from the 'Civil Security for Society' budget and EUR 0.12 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴²⁰ Of which EUR 4.95 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.85 million from the 'Digital, Industry and Space' budget and EUR 0.10 million from the 'Civil Security for Society' budget and EUR 0.10 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴²¹ Of which EUR 29.70 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 5.08 million from the 'Digital, Industry and Space' budget and EUR 0.60 million from the 'Civil Security for Society' budget and EUR 0.62 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴²² Of which EUR 9.90 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.69 million from the 'Digital, Industry and Space' budget and EUR 0.20 million from the 'Civil Security for Society' budget and EUR 0.21 million from the 'Culture, Creativity and Inclusive Society' budget.

	Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-SOIL-01-01: Discovering the subsoil

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.</p>

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’⁴²³, in particular towards its specific objectives 2 “Conserve and increase soil organic carbon stocks” and 6 “Improve soil structure to enhance habitat quality for soil biota and crops”. Activities should also contribute to the EU Soil Strategy⁴²⁴ and to the Long-term vision for EU’s rural areas⁴²⁵, as the Mission is one of its flagship initiatives.

Project results should contribute to all of the following outcomes:

- Improved access for land managers and public authorities to data and knowledge on the spatial variations of the chemical, physical and biological conditions and dynamics in subsoils. This should support the development of sustainable soil management practices as well as financial and policy incentives.

⁴²³ https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe/soil-health-and-food_en

⁴²⁴ https://ec.europa.eu/environment/strategy/soil-strategy_en

⁴²⁵ Long-term Vision for EU’s rural areas, https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

- Accelerated deployment of sustainable management practices for protecting and restoring subsoils in agricultural, forest and other types of soils, and increasing relevant soil-dependent ecosystem services such as the provision of food and fibre or habitats for soil biodiversity.
- Improved understanding of the role of the subsoil in climate change adaptation and mitigation, e.g. regarding carbon and water storage.

Scope: The term “subsoil” refers to the horizons immediately below the topsoil⁴²⁶. In the past, this layer has often been neglected as most land management practices (e.g. tillage, cover crops, forestry) are focused on the topsoil. Our understanding of subsoil issues (e.g. compaction and its persistence) in semi-natural environments (e.g. heathlands, peatlands, natural grassland) is even less developed than for agricultural and forestry subsoils. Spatial datasets on soils at both national and EU-scale have also mostly focused on topsoils.

The subsoil can have a large impact on soil's potential for productivity and the supply of ecosystem services. It is estimated, for example, that plants extract between 10 and 80% of their nutrient and water requirements from the subsoil. Carbon sequestered in subsoils generally contributes to more than half of the total stocks within a soil profile. In contrast to topsoil, organic matter stored in subsoil horizons is characterised by high mean residence times⁴²⁷. Conversely, subsoil degradation (e.g. through compaction, pollution, salinization) may limit root penetration, reduce nutrient uptake and result in plants becoming increasingly susceptible to stress such as from pests and diseases or drought and floods. Reduced water infiltration in subsoils limits plant growth, while increasing surface water runoff and the risk of soil erosion. Timber-related activities in forests, for example, can also cause considerable soil compaction leading to a decrease in productivity of forests due to increased surface water runoff and erosion.

Activities under this topic should improve our understanding and knowledge of the links between the subsoil and ecosystem services, and they should promote practices that enhance the health status of subsoils in agriculture, forestry and urban areas, as well as in sites of nature conservation and sensitive landscapes.

Proposed activities should:

- Increase knowledge on the properties (e.g. soil structure) as well as chemical, physical and biological process dynamics and their relationships in subsoils, and how these contribute to overall soil health and the delivery of ecosystem services such as carbon storage and greenhouse gas (GHG) mitigation, water retention, nutrient provision, crop productivity, and habitat for soil biodiversity. Amongst others, activities should explore

⁴²⁶ For the purpose of this topic topsoil is defined as the uppermost layer of natural soil. Typically, this means a layer of about 10-30 cm in thickness, although this can vary according to soil type. Generally, it contains most plant roots, nutrients and biological activity, and it is affected by agricultural activities.

⁴²⁷ Rumpel, C., Chabbi, A., Marschner, B. (2012). Carbon Storage and Sequestration in Subsoil Horizons: Knowledge, Gaps and Potentials. In: Lal, R., Lorenz, K., Hüttl, R., Schneider, B., von Braun, J. (eds) Recarbonization of the Biosphere. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-4159-1_20

the potential of modelling to help capturing the complexity of processes and dynamics in subsoils.

- Identify pressures on the subsoil that impair a range of soil functions and ecosystem services, as well as drivers for subsoil degradation.
- Identify indicators to assess subsoil driven changes in soil ecosystem functioning.
- Identify the potential of subsoils to store and maintain carbon, and to contribute to mitigating other GHG (e.g. N₂O) emissions. Work should take into account potential barriers and the synergies and trade-offs between climate regulation and other ecosystem services, such as the support to biodiversity. Consideration should be given to existing and future land use options.
- Identify existing as well as develop and test sustainable management practices to improve the conditions and functions of subsoils (e.g. water retention, nutrient provision, habitat for soil biodiversity, carbon storage). Activities should be undertaken in close cooperation with land managers and allow for wide demonstration and dissemination of practices.
- Develop tools and methods for risk assessment as regards subsoil degradation, reflecting diverse soil uses. Demonstrate practical approaches for the use of these tools and methods by land managers and policy-decision makers.
- Establish robust methods to spatially assess and monitor the chemical, physical and biological characteristics of subsoils and to improve data collection and use. For this, sampling methods for subsoil should be harmonised in order to provide comparable and reliable data. The long-term storage and access to subsoil data should be done in close collaboration with the European Soil Observatory (EUSO).

In carrying out activities, proposals should consider various soil types and land uses and climatic/biogeographical regions in the EU and Associated Countries. With regard to agriculture, work should draw on sustainable practices, applied across a range of farming systems and benefit both conventional and organic farming. The proposals selected under this topic should dedicate the necessary resources to work closely together and maximise synergies.

Activities should be undertaken in close cooperation with the European Commission's Joint Research Centre (JRC). The cooperation with the JRC is particularly relevant for further developing the LUCAS Soil survey and the Soil Health Dashboard under the European Soil Observatory (EUSO). Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs, amongst others through close collaboration with the EUSO. Potentially, the projects funded under this topic could also cooperate with living labs and lighthouses that will be created in this and future calls of the Mission 'A Soil Deal for Europe'.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-MISS-2023-SOIL-01-02: Soil pollution processes – modelling and inclusion in advanced digital decision-support tools

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular to its operational objective of building the knowledge base for soil health and its support to ecosystems services and its specific objective 4 “Reduce soil pollution and enhance restoration”.

Project results should contribute to all of the following outcomes:

- Increased understanding of the impact of various types of soil pollution on soil processes, soil functions and related ecosystem services along with increased insight into how soil pollution responds to different land-uses and soil-management practices, restoration mechanisms, emission controls, climate extremes, drying-rewetting cycles and land cover dynamics at various scales.
- Enhanced access to soil relevant knowledge and data for a wide range of stakeholders that can inform practices and policies for reduced levels of pollution, enhanced take up of sustainable soil management practices and restoration of polluted soils, especially those with high risk to human health and environmental wellbeing.
- Enhanced capacities are in place to integrate diverse data streams (including from Earth Observation), to model and predict soil-related processes and their interactions with soil

pollutants, and ultimately to demonstrate the effectiveness of policy measures (for air, water, soils) and their impact on soils.

- Data and tools available can feed effectively and further advance the “Destination Earth” initiative⁴²⁸.

Scope: Depending on the scale, severity and type of contamination, pollutants can have a detrimental effect on soils by altering underlying chemical, physical and biological processes. Examples of common soil pollutants include heavy metals, persistent organic pollutants, pesticides, microplastics and emerging pollutants like pharmaceutical and personal care products. In agriculture, soil pollution has severe consequences with regard to food safety.

The capacity to carry out a comprehensive scenario analysis at EU level on the impact of key drivers on soil pollution (e.g. societal behaviour, changes in emissions, climate, land management practices) is currently lacking. Soil-oriented fate and transport models exist for certain pollutants (e.g. pesticides, radionuclides, nutrients, metals) but they are generally not integrated with each other, often lack a temporal capacity, and do not always provide a quantification of actual risk to human and environmental health. Models that address the extent, fate, and transport, of emerging contaminants (e.g. microplastics, pharmaceuticals, PFAS) are even scarcer.

In addition, environmental pollution modelling is also often compartmentalized despite a clear understanding that soil can be both a recipient of atmospheric deposition (e.g. nitrogen and sulphur) and a source of atmospheric pollutants and greenhouse gases (e.g. N₂O, NH₄, CO₂, dust, nutrients). While also acting as a buffer to water bodies from pollutants, soils can be at the origin of some of the main problems affecting terrestrial ecosystems, freshwater and marine ecosystems (e.g. nitrification, eutrophication, pesticides, in both water column and sediment) as well as compromise the production of safe food and human health. Currently, there is no integrated modelling system that seamlessly links all three environmental compartments (soil, air, water). In addition there is a clear need to demonstrate that policy measures that affect air quality or industrial emissions can, over time, have a positive impact also on soils and water bodies.

Proposed activities should:

- Integrate and improve existing models and develop and test new models of soil processes that allow for better and easier integration of and reduced uncertainty about soil-related processes (physical, chemical and biological), with a particular focus on different forms of pollution and with a view to its prevention and reduction.
- Integrate soil processes modelling for quantification of soil ecosystem services with assessments of threats from diverse pollution sources.
- Ensure inter-operability between existing databases and their integration into Destination Earth and the EU Soil Observatory.

⁴²⁸

<https://digital-strategy.ec.europa.eu/en/policies/destination-earth>

- Develop specific use cases for soil modelling towards the integration of local sustainable soil management practices or catchment or field scale modelling. This includes for example, the role of water and wind erosion in the movement of pollutants, nutrient flows in the context of circular economy, interactions between surface-subsurface-groundwater-air components, and links with the objectives of the Oceans and Climate Missions.
- Develop scenarios based on integrated models that show a) how changes in land management practices can reduce soil pollution (and in consequence air and water pollution) and b) the effects of policies on land management practices that avoid/reduce soil pollution.

Projects funded under this topic should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and project outputs through close collaboration with the Joint Research Centre and its EU Soil Observatory⁴²⁹ and take into account other relevant projects funded under the Mission ‘A Soil Deal for Europe’ (e.g. projects funded under the topic HORIZON-MISS-2022-SOIL-01-04: Remediation strategies, methods and financial models for decontamination and reuse of land in urban and rural areas and HORIZON-MISS-2023-SOIL-01-01: Discovering the subsoil) and Destination Earth.

The proposals selected under this topic should dedicate the necessary resources to work closely together to maximise synergies and minimise overlaps. Furthermore, coordination with the successful proposals under topic HORIZON-CL3-2024-DRS-01-0201: ‘Prevention, detection, response and mitigation of chemical, biological and radiological threats to agricultural production, forestry and to food processing, distribution and consumption’ should be envisaged to avoid duplication, and to exploit complementarities as well as opportunities for increased impact. To this end, proposals should foresee dedicated tasks and allocate appropriate resources.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-MISS-2023-SOIL-01-03: Onsite digital technologies to monitor nutrients and chemical or biological stressors in soil and plants with relevance for food safety and nutrition

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.

⁴²⁹ https://joint-research-centre.ec.europa.eu/eu-soil-observatory-euso_en

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<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B.

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular its operational objective 2, “Co-create and upscale place-based innovations to improve soil health in all places”.

Project results should contribute to all of the following outcomes:

- Increased scale-up, availability and use of onsite digital tools (e.g., light-based technologies, remote sensing, Artificial Intelligence (AI)) to monitor nutrients, micro-nutrients, chemical and biological stressors in soil, plants and subsequently in food in various stages of the production process (from farm to processing stages).
- Improved capacities for food safety risk mitigation and management throughout the various food production stages.

Scope: Onsite digital technologies and applications are emerging in food production and have the potential to detect chemical and biological stressors in soil and plants to help assessing, managing and eventually eliminating potential food safety risks that these stressors may pose. There is a need to improve the development and application of digital tools in primary production and food industries and boost their technological scale-up as a means to address more effectively the soil-food nexus. Moreover, those technologies will help the food industry to track safety and quality of post-harvested food grown in soils.

Proposed activities should:

- Advance and/or develop onsite digital technologies and applications (e.g., light-based technologies, remote sensing, AI) to analyse (detect and quantify) nutrients that could support appropriate interventions at the various food production stages (from farm to processing stages) to enrich soil or remove excess nutrients and micronutrients.
- Advance and/or develop onsite digital technologies and applications (e.g., light-based technologies, remote sensing, AI) to analyse (detect and quantify) chemical (contaminants, anti-nutrients, pollutants) and biological contaminants (bacteria, viruses, fungi, parasites) in soil, plants and food with the aim to mitigate/manage the potential of food safety risks associated with their presence.

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- Advance and/or develop digital technologies and applications for in-field detection of soil parameters with relevance for food safety and nutrition to improve soil management practices (e.g., targeted fertilization, soil remediation).
- Advance and/or develop innovative digital technologies including exploratory modelling for calibration and prediction, to detect nutrients and micronutrients, chemical and biological contaminants which have a bearing on food quality and safety.
- Identify challenges to the scale-up of existing digital technologies related to the soil-food nexus.

Proposals should also include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic, and ensure as well synergies with projects funded under topics HORIZON-MISS-2021-SOIL-02-03: “Linking soil health to nutritional and safe food”, and HORIZON-CL6-2023-GOVERNANCE: “Digital technologies supporting plant health early detection, territory surveillance and phytosanitary measures”.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre’s EU Soil Observatory (EUSO).

Potentially, the projects funded under this topic could cooperate with living labs and lighthouses that will be created in this call and future calls under the Mission.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-MISS-2023-SOIL-01-04: Innovations to prevent and combat desertification

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of</p>

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular its specific objective 1, “Reduce land degradation relating to desertification”.

Project results should contribute to all of the following outcomes:

- The socio-economic and climatic drivers, the extent and the impacts of different types of land degradation (incl. water scarcity, vegetation loss, soil erosion) in (semi-)natural and agricultural systems of arid areas and areas becoming increasingly arid are clearly understood, accurately and reliably measured at the most relevant scale and in connection with specific land uses. This knowledge is widely shared among relevant actors from various sectors.
- The economic viability and environmental effectiveness of solutions for the prevention of desertification and for the restoration of degraded land (such as soil protection measures that help retain water and reduce water needs, improve management of soil organic matter, avoid salinization, protect biodiversity, minimise soil sealing and increase land resilience to droughts) is demonstrated in the different local or regional contexts.
- Enhanced access for land managers in desertification-prone areas to effective, context-specific restoration and prevention solutions and to information about the conditions under which they are effective.
- The number and size of areas under sustainable soil and water management are expanded, and the retention of moisture in the landscape and the management of soil organic matter are improved across different land-use types and local-regional conditions. In consequence, dryland soils become more resilient and less vulnerable to drought and desertification.

Scope: In 2017, 25% of land in Southern, Central and Eastern Europe was estimated to be at high or very high risk of desertification⁴³⁰. The risk is likely to have further increased since then, and to continue increasing because of accelerating climate change and continued pressures from land use and land-use change. Desertification leads to loss of biodiversity, of

⁴³⁰ Prävălie, R., Patriche, C., Bandoca, G., “Quantification of land degradation sensitivity areas in Southern and Central Southeastern Europe. New results based on improving DISMED methodology with new climate data”, *Catena – An Interdisciplinary Journal of Soil Science – Hydrology – Geomorphology focusing on Geoecology and Landscape Evolution*, No 158, 2017; pp. 309-320. The concept of desertification does not refer to the physical expansion of existing deserts but rather to the various processes – natural and human-induced – that threaten all dryland ecosystems and their biological productivity.

organic carbon and of other land-based ecosystem services, including reduced agricultural and forest productivity. Desertification further amplifies global warming through the release of CO₂ and other greenhouse gases linked with the decrease in vegetation cover. Thus, it has severe environmental, social and economic consequences which need to be urgently tackled.

Proposed activities should:

- Synthesise and gather evidence on the drivers and impacts of land degradation at all relevant scales, using diverse data flows and where relevant models, with a view to supporting alternative land management actions (scenarios) that alleviate the pressures from land uses and land-use changes leading to desertification.
- Identify, demonstrate the effectiveness, and promote the scale-up of measures for reducing and reversing desertification and increasing soil's water-retention capacity, taking into account (actual and projected) changes in climatic conditions. Work should be carried out at different scales and address various types of land use (agriculture, forestry and natural land) and land use changes. Due attention should be given to the role of plant and microbial diversity in increasing the resilience of land vis-a-vis desertification processes.
- Specifically for agricultural land including both conventional and organic farming, identify and demonstrate farming or other land-use practices which are more resilient and are suitable for combatting desertification while sustaining ecosystem services and preventing land abandonment.
- Facilitate learning and exchange among all relevant actors, including across sectors, by promoting in the scope of activities various types of innovations (nature-based, technological, socio-economic, cultural and institutional) and/or various types of land use (natural and semi-natural as well as agricultural, agroforestry and forest areas).
- Develop policy recommendations for creating incentives and overcoming obstacles for the widespread uptake of measures that have demonstrated to be effective for the prevention of desertification and restoration and are suitable for scaling-up.
- Carry-out activities for awareness-raising on desertification and for the demonstration and dissemination of solutions, also as part of the UN Day to combat desertification and drought.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre's EU Soil Observatory (EUSO) and with other projects to be funded under the Soil Mission. Proposals should also include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic, and ensure synergies with projects funded as part of the Partnership for Research and Innovation in the Mediterranean Area (PRIMA)⁴³¹ and with the EU LIFE project NewLIFE4-Drylands⁴³². In

⁴³¹ <https://prima-med.org/>

order to achieve the expected outcomes, international cooperation is encouraged, in particular with third countries in the Mediterranean region.

Potentially, the projects funded under this topic could cooperate with living labs and lighthouses that will be created in this call and future calls under the Mission ‘A Soil Deal for Europe’.

HORIZON-MISS-2023-SOIL-01-05: Soil-friendly practices in horticulture, including alternative growing media

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-7 by the end of the project – see General Annex B.

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular its specific objectives 2 “Conserve and increase soil organic carbon stocks”, 4 “Reduce soil pollution and enhance restoration” and 6 “Improve soil structure to enhance habitat quality for soil biota and crops”. Activities should also contribute to EU climate action and to other policies in the framework of the European Green Deal, such as the Organic Action Plan⁴³³, the Biodiversity Strategy for 2030⁴³⁴ and the proposed Nature Restoration Law⁴³⁵.

Project results should contribute to all of the following outcomes:

⁴³² <https://www.newlife4drylands.eu/>

⁴³³ https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organic-action-plan_en

⁴³⁴ https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

⁴³⁵ https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-law_en

- Reduced carbon and overall environmental footprint of the horticultural sector⁴³⁶ and more sustainable production systems, reducing negative impacts on soil health throughout the value chain.
- Novel products (e.g. alternative potting and soil-improving materials), production processes and management options for soil management are developed and tested and show improved environmental, social, health and safety performance, as demonstrated through improved testing and validation methods throughout the entire life cycle.
- Sustainable alternatives to peat are more widely available and used in conventional and organic horticulture.
- Policy measures and other incentives have been explored and elaborated to further the uptake of sustainable alternatives to peat.

Scope: Practices in horticulture can affect soil health and related ecosystem services at different points in the value chain, for example at production sites as well as further upstream. Within horticultural production systems, soils are often subjected to particularly intensive use, which can cause among others soil compaction, soil pollution (e.g. excess nutrients, pesticides or microplastics), and salinization as a consequence of intensive irrigation. Peat is commonly used in nurseries, greenhouses and amateur horticulture as a growing medium and for soil improvement, as it has an excellent water retention capacity, is highly fertile due to the reduced leaching of nutrients and can improve the soil buffering capacity. The extraction of natural peat, however, is highly contentious as the disturbance of peatlands leads to habitat loss, soil degradation, CO₂ emissions and increased flood risks. Therefore, sustainable alternatives to natural peat are required. While various peat-free or peat-reduced growing media have become more widely available in recent years, their performance with regard to environmental and other relevant criteria remains difficult to assess.

Proposed activities should:

- Identify, develop and promote horticultural practices and production systems that conserve or improve soil health. This should include alternative materials to be used as sustainable substitutes for peat as substrate or soil improver in organic and conventional horticulture, with the aim of attenuating soil stress and strengthening ecosystem services.
- Demonstrate the feasibility and economic viability of the newly developed alternatives to the use of peat in horticulture. This should be done in accordance with relevant EU regulatory frameworks related to their placing on the market.
- Generate data to support improved environmental, social, health and safety performance of alternative growing media in a life-cycle perspective and taking into account potential trade-offs and indirect consequences, including outside of the EU, where relevant.

⁴³⁶ For the purposes of this topic, horticulture is understood broadly to include the production, by professionals or amateurs, of various types of vegetables, fruits, grapes, nuts, medicinal and ornamental plants (including trees and woody plants) and mushrooms as well as related practices (e.g. hydroponics and aquaponics), while excluding large-scale arable crop production or animal husbandry.

- Develop and/or improve sustainable management practices in horticulture (including digital technologies and infrastructures) to reduce the use of inputs such as plant protection products, fertilizers and water in horticultural crops. Measures should also contribute to improving soil structure and mitigating soil compaction. Where applicable, practices should cover both protected (greenhouses and tunnels) and open field systems.
- Identify and analyse barriers (economic, social or regulatory) that may hinder the uptake of the proposed soil-friendly practices by professional producers as well as by private consumers in amateur horticulture, and where relevant suggest suitable measures to overcome the identified obstacles.
- Develop and test material for awareness raising, dissemination and training to promote the uptake of soil-friendly horticultural practices. This material should be used by agricultural advisory services, in vocational training and other relevant contexts.

In this topic the multi-actor approach has to be implemented by involving a wide range of stakeholders (e.g. industry including SMEs, public authorities, research centres, public and private investors, civil society) to co-create sustainable solutions and increase opportunities for them to be scaled up. The topic should involve the effective contribution of SSH disciplines.

The proposals selected under this topic should dedicate the necessary resources to work closely together to maximise synergies. Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the EU Soil Observatory and other projects funded under the Mission ‘A Soil Deal for Europe’. Furthermore, proposals should take into account and build on outputs from other relevant projects such as e.g. EXCALIBUR⁴³⁷.

Potentially, the projects funded under this topic could also cooperate with living labs and lighthouses that will be created in this call or future calls of the Mission ‘A Soil Deal for Europe’.

HORIZON-MISS-2023-SOIL-01-06: Soils in spatial planning

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions

⁴³⁷ <https://cordis.europa.eu/project/id/817946>

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
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Expected Outcome: Activities under this topic will support a more structured approach to sustainable land management in line with global commitments for land degradation neutrality⁴³⁸ and EU efforts for a balanced development of the EU territory. This will help to sustain ecosystems in rural and urban areas, as aimed for in the EU Long-term Vision for Rural Areas and other EU Green Deal strategies. Activities will in particular contribute to the implementation of the roadmap towards no net land take and reduced soil degradation as defined under the EU Soil Strategy⁴³⁹.

Project results should contribute to all of the following outcomes:

- The value of soil functions and ecosystem services provided by soils is more systematically recognised and integrated in spatial planning and land use decisions in urban and rural areas, due to increased awareness of spatial planning authorities on the importance of soil functions and soil health overall. Therefore, the various societal demands for land are more easily reconciled.
- Municipalities and public authorities have information, data and planning tools at hand to develop and implement (participatory) strategies for more adaptive land management in accordance with land neutrality targets (no net land take by 2050). This will allow increasing land use efficiency, reducing soil sealing and applying the principles of the “land take hierarchy”⁴⁴⁰.
- Spatial plans promote the use of nature-based solutions to support soil functions and the provision of ecosystem services, in particular on currently sealed areas.
- Approaches for rezoning, restoration and de-sealing are available and applied for building land and infrastructure which is no longer in use or to be reused.

Scope: Land is a limited resource and needs to be managed carefully to meet the various, sometimes conflicting societal demands on land and soil. These demands arise e.g. from urbanisation, food/biomass production and environmental protection. Inadequate practices in land management and in land use planning are main drivers of land degradation and result in

⁴³⁸ SDG target 15.3 on land degradation neutrality: <https://sdgs.un.org/goals/goal15>

⁴³⁹ https://ec.europa.eu/environment/strategy/soil-strategy_en

⁴⁴⁰ EU Soil Strategy for 2030, section 3.2.2: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0699>

the loss of important soil functions. In urban areas for example, soil sealing leads to reduced evaporation and infiltration of water into the soil. As a consequence, the risk of floods and heat waves in cities increases significantly. In rural areas, fragmented landscapes lead to a loss of habitats for species and to reduced capacities of soils to perform important functions such as water regulation or carbon storage. At the same time, pressures on rural housing, such as in the aftermath of COVID-19, also call for adequate planning to ensure that soil and land management addresses the manifold needs of rural populations. Spatial planning has a considerable role to play when it comes to steering a more balanced and sustainable use of land and ensuring that net land take is reduced, in particular if applying the principles of a “land take hierarchy”⁴⁴¹.

Activities under this topic should identify mechanisms and highlight associated benefits that accrue from the increased consideration of soil functions by the spatial planning sector, both in urban and rural environments.

Proposed activities should:

- Undertake a systematic review and analysis of how soils, their functions and ecosystem services as well as soil threats are considered in the various levels of spatial planning systems in the EU and Associated Countries.
- Improve the knowledge on potential trade-offs regarding the provision of ecosystem services in the context of further expanding urban, peri-urban and rural areas.
- Identify good planning practices that integrate soils and their ecosystem services into spatial planning and show the impact of these practices on actual land use in urban and rural areas such as on: land take, the re-use of land, restoration, de-sealing and the support to soil functions. In addition to examples from Member States and Associated Countries, good experiences from Third Countries could be highlighted as well. Due attention shall be given to examples promoting soil functions and reducing soil sealing through nature-based solutions.
- Work together with public authorities to develop strategies for zero net land take by 2050 and provide practical recommendations for a better integration of soils into existing spatial planning practices, taking into account synergies with the management of other resources such as water. Activities should identify the main bottlenecks for the adoption of planning systems, which are based on a more integrated, sustainable, and resource efficient use of land.
- Provide opportunities for training and skill development of planners as well as for the exchange of experiences (e.g. events, information tools) between the various actors involved in (participatory) planning processes and land use decisions at various levels.

⁴⁴¹ See section 3.2.2 of the EU Soil Strategy: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0699>

- Improve the tools as well as the data and information basis (including maps) available to spatial planners and decision-makers regarding soil functions and ecosystem services.

The selected project(s) should liaise with the Joint Research Centre to make sure that relevant data, maps and information can potentially be used and displayed by the European Soil Observatory.

As relevant, activities should seek to link up with the European Bauhaus and contribute to its objectives and initiatives.

HORIZON-MISS-2023-SOIL-01-07: Back to earth: bringing communities and citizens closer to soil

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>International organisations with headquarters in a Member State or associated country are exceptionally eligible for funding.</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p> <p>The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries should provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 150 000. This should allow projects and initiatives to have the appropriate scale and ambition needed to achieve the objectives of the actions described under the scope. The financial support to third parties should not exceed 40% of the EU funding.</p>

Expected Outcome: Activities under this topic will help progress towards the overall goal of the Mission ‘A Soil Deal for Europe’, in particular by contributing to its specific objective 8 “Increase soil literacy across society”⁴⁴². Activities should also contribute to the Education for Climate Coalition⁴⁴³ and to the Long-term vision for EU’s rural areas⁴⁴⁴ as the Mission is one of its flagship initiatives.

Project results are expected to contribute to all of the following outcomes:

- Increased societal awareness on the importance of soil and the challenges it faces and of the impact of individual decisions (like housing, food and transport behaviour) on soils. This is manifested by an increased engagement in the protection and restoration of soil health.
- Opportunities for engaging in creative ways in soil protection are widely available and supported by soil-related arts products and innovative methodologies (including digital ones, but not limited to these).
- Cultural and creative industries (CCIs), artists and civil society organisations are mobilised and work together alongside with universities, research institutes and public institutions and citizens to increase soil literacy in society.
- Increased capacity of public and private institutions at different levels (e.g. European, national, regional and local) to engage with the wide public in creative ways to promote sustainable soil management.

Scope: The cultural and creative sectors were particularly affected during the COVID-19 crisis, but they are considered to be “a significant driver of local development through job creation and income generation, and generate important spillovers to the wider economy”⁴⁴⁵ as well as to the society.

CCIs, artists and civil society organisations can play a significant role in promoting a green transition by engaging people and giving visibility to environmental issues. Working together with soil experts, they can contribute to increasing soil literacy by mobilising the population in the protection and restoration of soil health as well as by tackling soil challenges through creative activities.

With regard to soil health, CCIs, artists and civil society organisations have a major role to play in acting as ambassadors and giving visibility to soil related challenges. They are key for raising awareness, for example on the importance of soil and its functions for society (e.g.

⁴⁴² Mission Implementation Plan, https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/soil_mission_implementation_plan_final_for_publication.pdf

⁴⁴³ Education for Climate Coalition, https://education-for-climate.ec.europa.eu/_en

⁴⁴⁴ Long-term Vision for EU’s rural areas, https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

⁴⁴⁵ OECD, The culture Fix, <https://www.oecd-ilibrary.org/docserver/991bb520-en.pdf?expires=1654264045&id=id&accname=oid031827&checksum=094F587A2DCB621EAA3F8486CCFAB8E1>

documentaries, communication campaigns, podcasts, music, artistic performances, exhibitions, literary arts, etc.), and for inspiring and engaging people to take part in a broader debate and in taking actions, including through innovative methodologies and tools, arts and participatory processes. Arts and other creative forms of engagement have shown to be able to mobilise people that would otherwise not easily connect to more scientific or technical information on soils. Existing examples include initiatives to raise awareness on soils in schools by painting with earth colours or citizen projects on collective composting and urban gardening or the production of documentaries and exhibitions for the general public.

Various and innovative methodologies and tools to increase citizens' awareness and engagement should be tested in different contexts to reach and involve a large number of people with the overall scope of increasing soil literacy across society. An increased societal awareness of the importance of soil and of the challenges it faces should lead to a better protection and restoration of this precious resource across Europe and possibly beyond.

The successful proposal should:

- Establish a network of relevant actors (e.g. artists, soil scientists, researchers, communication and engagement experts, public authorities including local administrations) and projects around art, humanities, cultural and creative industries. The network should carry-out a range of activities and campaigns to elevate the importance and value of soils in the context of citizen's lives and increase people's awareness (both as citizens and professionals) on soils, as well as ensure meaningful citizens' engagement.
- While including relevant actors as beneficiaries from the beginning, the network should gradually expand during the lifetime of the project its activities by providing financial support to third parties. This financial support should be used to fund smaller projects or initiatives (being either transnational, regional or local ones) that contribute to increasing soil literacy across society. In selecting the projects, the consortium should take into consideration quality, geographical balance and coverage aiming at covering a range of Member States and Associated Countries, and include a variety of territories ensuring that both rural and urban areas are covered. The selection process for these projects will be based on principles of transparency, fairness and objectivity.
- Coordinate, monitor (with appropriate indicators and KPIs) and evaluate the actions of the projects and initiatives from third parties receiving financial support. It should also scale up successful initiatives and contribute to the implementation of the third-party activities, in particular in view of supporting innovative communication campaigns and building capacities for interacting with policy makers at different levels on how to best engage people from all walks of life in the protection and restoration of soil health.
- Design and provide tools and material as well as build capacities and skills for supporting public and private institutions at different levels (e.g. European, national, regional and local) in their activities to engage with citizens in creative ways in the protection and restoration of soil health.

- Organise regular festivals (at least two) open to the public with the participation of the projects and initiatives financed through the financial support to third parties to present activities aimed at increasing soil literacy across society to a broader audience. The festival should give visibility to exemplary projects in particular areas, for example (but not exclusively) through awards. In the organisation of the festival, the proposal should consider accessibility, inclusiveness and sustainability. The proposal should also include a long-term plan to ensure the continuity of the festival beyond the life of the Horizon Europe funded project.

The projects and initiatives financed through the financial support to third parties should:

- Run innovative communication campaigns through different tools (e.g. social media, magazines, podcasts, posters, arts, movies, documentaries) to raise awareness on the importance of soil. Furthermore, selected projects should engage with citizens by proposing hand-on activities on proven sustainable practices for soil protection and management. The campaigns should highlight the relevance that soil has in people's daily lives and link it with people's values. They should also lift the public profile of the Mission 'A Soil Deal for Europe' and promote its eight specific objectives⁴⁴⁶.
- Organise and promote artistic, soil-related activities that target and/or involve the public, such as cultural/arts events, exhibitions, and creative workshops that have at their centre the importance of soils.
- Engage citizens in the protection and preservation of soil as well as in tackling soil challenges (including the ones addressed by the specific objectives of the Soil Deal Mission), through innovative, participatory and creative methodologies (e.g. by applying arts-based methods for transformative engagement, citizen assemblies and collaborative projects (e.g. on composting, greening cities and reducing soil sealing, avoiding soil pollution, promoting soil biodiversity).

The financial support to third parties will provide funding of up to 150 000 € per project or initiative. While a substantial amount of the total budget should be allocated to third parties, the support should not exceed 40%.

Proposals must implement the multi-actor approach and involve a wide range of actors (including the end-users), such as artists, cultural and creative industries, civil society organisations, citizen engagement experts and public authorities, along with soil scientists.

Proposals under this topic should include social sciences and humanities (SSH) disciplines (e.g. behavioural sciences, communication, and arts).

They should demonstrate a comprehensive strategy to deal with issues of multilingualism when implementing the project to ensure effective outreach.

⁴⁴⁶ See section 2. of the implementation plan of Mission 'A Soil Deal for Europe': https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/implementation-plans-eu-missions_en

Proposals are encouraged to demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Soil Observatory (EUSO).

Proposals should create synergies with projects funded under the topics HORIZON-MISS-2021-SOIL-02-06 “Engage with and activate municipalities and regions to protect and restore soil health” and HORIZON-MISS-2022-SOIL-01-07 “Foster soil education across society”⁴⁴⁷. Proposals are also encouraged to create synergies with relevant activities supported under the Creative Europe programme⁴⁴⁸.

Legal entities established in non-associated third countries may exceptionally participate in this Coordination and Support action, as the collaboration with international experts in the fields relevant for this topic (from soil science to art, culture, communication and public engagement) can contribute to achieve the expected outcomes beyond the European territory.

International organisations with headquarters in a Member State or associated country are exceptionally eligible for funding such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), due to its role in advancing international cooperation in the areas of education, sciences and culture.

HORIZON-MISS-2023-SOIL-01-08: Co-creating solutions for soil health in Living Labs

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 36.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants (further to

⁴⁴⁷ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-12-missions_horizon-2021-2022_en.pdf

⁴⁴⁸ [Creative Europe | Culture and Creativity, https://culture.ec.europa.eu/creative-europe](https://culture.ec.europa.eu/creative-europe)

	calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 200 000, to allow for the active participation of appropriate stakeholders, including farmers, businesses or civil society in living labs and achieve the objectives of the actions described under the scope.
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Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘A Soil Deal for Europe’⁴⁴⁹ of setting up 100 living labs to lead the transition to healthy soils by 2030. They support the specific objectives of the Mission ‘A Soil Deal for Europe’ dealing with urgent soil health challenges (see in particular specific objectives 1 to 6 and 8). Activities should thereby contribute to meeting the European Green Deal ambitions and targets, such as those related to food and nutrition security, climate, biodiversity, environment and rural areas⁴⁵⁰.

Project results are expected to contribute to all of the following outcomes:

- Living labs across Europe are fully operational and have established themselves as places for co-creation and testing of solutions for soil health in rural and urban areas.
- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I approaches, allowing for effective cooperation between research, practice and policy to tackle soil health challenges.
- Practice oriented knowledge and tools are more easily available to land managers and contribute to an enhanced uptake of solutions for soil health and related ecosystem services.
- Strengthened collaborations between actors across territories and sectors and increased consideration of effective solutions for soil health in regions where the selected living labs are operating.
- Policy makers in the EU and Associated Countries are more aware of local needs with regard to soil health and can use this knowledge to design more effective policies.

Scope: While more research is needed to restore and maintain healthy soils in the EU, an important barrier still encountered to accelerate the transition towards a climate-neutral and green European Union is the gap between science and practice, between knowledge and implementation. The Mission ‘A Soil Deal for Europe’ proposes a novel approach to research and innovation in the area of soil health, including the implementation of living labs. Living labs have the potential to empower a green transition towards healthy soils by developing solutions in a co-creative manner and involving actors in real life settings at territorial level to achieve large-scale impact.

⁴⁴⁹ [EU Mission Soil Deal for Europe Implementation Plan | European Commission \(europa.eu\)](https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en)

⁴⁵⁰ https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

Nowadays, there exist various definitions and conceptualizations of living labs. However, three components are recognizable within the now well-established living labs research concept, which include (a) co-creation with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users⁴⁵¹. For the purpose of the Mission ‘A Soil Deal for Europe’, Soil health living labs are defined as “user-centred, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and co-design, testing, monitoring and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption”.

Living labs are collaborations between multiple partners that operate and undertake experiments on several sites at regional or sub-regional level⁴⁵². Individual sites could be e.g. farms, forest stands, urban green or industrial areas, enterprises and other entities, where the work is carried-out and monitored under real-life conditions, regardless of the land size, tenure (land ownerships) or the type of economic activity.

Lighthouses, in contrast, are defined as “places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”. They are individual, local sites (one farm, one forest exploitation, one industrial site, one urban city green area, etc.) that either can be part of a living lab or be situated outside a living lab.

According to the Mission Implementation Plan, living labs involve partners from different backgrounds, disciplines and/or sectors and are composed of 10 to 20 experimental sites. However, depending on the specific context (e.g. the land use(s), the soil health challenge(s) addressed), applicants can propose living labs with fewer experimental sites. By working together on themes of common interest, the various partners involved in a living lab will be able to replicate actions and solutions, compare results, exchange good practices, validate methodologies and benefit from cross-fertilisation within a local/regional setting.

More specifically, each of the funded projects should:

- Set up four to five living labs (or more, as applicable to the land use(s) and purpose of the project) to work together on thematically related soil health challenges, addressing the same or several land use types. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should describe the rationale for cooperation across the various living labs and explain how the work

⁴⁵¹ International Agroecosystem Living Laboratories Working Group. Agroecosystem Living Laboratories: Executive Report. G20 - Meeting of Agricultural Chief Scientists (G20-MACS). 2019. Available online: https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf (accessed on 30 June 2022)

⁴⁵² For the purpose of the topic the regional/sub regional level will not be defined in administrative terms (e.g. NUTS 2 or 3). Instead, applicants should describe the local context and the area in which the work of the living lab will be carried out.

undertaken will contribute to one or more of the Mission's specific objectives⁴⁵³. Living labs on carbon farming are excluded from this topic as a dedicated topic for carbon farming living labs is opened in this work programme⁴⁵⁴.

- Establish, based on the projects' goals and objectives, a detailed work plan with the activities to be undertaken in an interdisciplinary way, ensuring the co-design, co-development, and co-implementation of locally adapted solutions.
- Carry out participatory and transdisciplinary research and innovation in living labs to seek practical solutions to problems/challenges identified, taking into account the relevant drivers and pressures. Moreover, activities should address challenges to the scaling up and the transferability of solutions. Proposed strategies and solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating. Living labs working in the area of agriculture are expected to promote sustainable practices, applied across a range of farming systems and benefit both conventional and organic farming.
- Identify sites that demonstrate high performance in terms of their actions and results on soil health improvement and that may be converted into lighthouses.
- Establish for each living lab a baseline for the selected soil health challenge(s), in order to allow for an accurate assessment of the conditions and changes of soils in the different sites over time and for monitoring of progress towards the objectives of the respective living labs and the project overall. As appropriate, make use of the set of soil health indicators presented in the Soil Mission Implementation Plan. To this end, funded projects should work closely with the European Commission's Joint Research Centre (JRC) to contribute to their efforts on soil monitoring and the development of the European Union Soil Observatory (EUSO).
- Monitor and carry out an assessment of the effects of the developed innovative practices or introduced solutions on soil health and related ecosystem services. This should include a demonstration of the viability (e.g. technical, economic) of the proposed solutions.
- Propose strategies (e.g. financial, organisational) to ensure long-term sustainability and continuity of the living labs beyond the Horizon Europe funding, including the identification of possible business models and actions involving local authorities, business communities, SMEs, investors, entrepreneurs.
- Document in an easy and accessible way the developed solutions in order to facilitate their uptake by land managers and transmit the acquired knowledge to relevant actors.

⁴⁵³ Reduce land degradation relating to desertification; no net soil sealing and increase the reuse of urban soils; reduce soil pollution and enhance restoration; prevent erosion; improve soil structure to enhance habitat quality for soil biota and crops; reduce the EU global footprint on soils; increase soil literacy in society.

⁴⁵⁴ See topic HORIZON-MISS-2023-SOIL-01-09: Carbon farming in living labs

In line with the nature of living labs, proposals must implement the multi-actor approach. The list of stakeholders will vary depending on features specific to each living lab and can involve different types of actors such as researchers, land owners or land managers, industry (e.g. SMEs), public administrations, representatives of civil society (e.g. consumers, environmental NGOs). Care should be taken to describe the capabilities and roles of the different partners involved in the project, depending on their area of expertise. For example, while some partners may lead the conceptual work and coordinate the work within and across living labs, others may focus on carrying-out experiments, providing advice, testing and validating innovative solutions, or be involved in outreach activities.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe: This includes not only beneficiaries (or their affiliated entities) but also associated partners, third parties giving in-kind contributions, subcontractors and recipients of financial support to third parties.

Proposals may provide for financial support to third parties (FSTP) to implement one or more of the living lab activities described in this topic⁴⁵⁵ further to calls or, if duly justified, without a call for proposals. Applicants are reminded to consult the standard conditions for “financial support to third parties” set out in Annex B of the General Annexes including those that apply to FSTP calls.

Proposals should include a dedicated task and appropriate resources to collaborate with other Living Lab projects funded under this topic as well as with projects funded under other Work Programme topics of the Mission ‘A Soil Deal for Europe’ which are relevant to the chosen soil health challenge(s). In addition, proposals should seek for synergies with projects PREPSOIL⁴⁵⁶, NATI00NS⁴⁵⁷ and NBSSOIL⁴⁵⁸. Additionally, projects should cooperate and benefit from the services of a dedicated ‘Living Lab Support Structure’ to be established by the Specific Grant Agreement under this Work Programme⁴⁵⁹.

Cooperation with relevant networks active at local level, such as EIP-AGRI operational groups, is encouraged in order to promote the involvement of key local stakeholders in living labs activities or in the dissemination of solutions. The projects should also build on other existing activities and ensure cooperation with relevant projects and partnerships, such as EIT Knowledge and Innovation Communities (EIT KICs) or the ‘European partnership on accelerating farming systems transition: Agroecology living labs and research infrastructures’, which will also support living labs.

⁴⁵⁵ To explore the full range of options including what type of costs and activities are eligible to be funded under Horizon Europe, applicants should refer to the AGA – Annotated Model Grant Agreement https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

⁴⁵⁶ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details>

⁴⁵⁷ [Funding & tenders \(europa.eu\)](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details)

⁴⁵⁸ [Funding & tenders \(europa.eu\)](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details)

⁴⁵⁹ Other Actions not subject to calls for proposals: SGA: Specific Grant Agreement for a Living Lab Support Structure

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Union Soil Observatory (EUSO).

HORIZON-MISS-2023-SOIL-01-09: Carbon farming in living labs

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants (further to calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 200 000, to allow for the active participation of appropriate stakeholders, including farmers, businesses or civil society in living labs and achieve the objectives of the actions described under the scope.

Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘A Soil Deal for Europe’⁴⁶⁰ of setting up 100 living labs by 2027 to lead the transition to healthy soils by 2030. In particular, it supports the Mission’s specific objective 2, “Conserve and increase soil organic carbon stocks”.

Activities should also contribute to meeting the European Green Deal ambitions and targets and more specifically those of the Farm to Fork Strategy, of the Commission’s Communication on Sustainable Carbon Cycles⁴⁶¹ and of the upcoming regulatory proposal on the certification of carbon removals⁴⁶², as well as to Sustainable Development Goal (SDG) 13

⁴⁶⁰ [EU Mission Soil Deal for Europe Implementation Plan | European Commission \(europa.eu\)](#)

⁴⁶¹ [Proposals to remove, recycle and sustainably store carbon \(europa.eu\)](#)

⁴⁶² By the end of 2022, the Commission plans to propose an EU regulatory framework for the certification of carbon removals based on robust and transparent carbon accounting rules and requirements to

on climate action. Activities performed within living labs will also support the Long Term Vision for EU's Rural Areas (LTVRA)⁴⁶³.

In its 2021 Communication on Sustainable Carbon Cycles, the Commission sets out how to increase removals of carbon from the atmosphere, including by upscaling carbon farming to store more carbon in nature. Research and innovation will also contribute to this goal, providing further solutions to farmers and foresters. Measures to achieve this goal include: standardising the monitoring, reporting and verification methodologies needed to provide a clear and reliable certification framework for carbon farming, allowing for developing voluntary carbon markets; and provide improved knowledge, data management and tailored advisory services to land managers.

Project results are expected to contribute to all of the following outcomes:

- Increased carbon sequestration and protection of carbon in soils, living biomass and dead organic matter, with environmental co-benefits safeguarded or enhanced, in different regions within the EU and Associated Countries where the selected living labs are operating.
- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I approaches, allowing for effective cooperation between research, practice and policy, to tackle carbon farming challenges.
- Practice-oriented knowledge and tools are more easily available to land managers and contribute to an enhanced uptake of carbon farming.
- Strengthened collaborations between actors across territories and sectors as well as increased consideration of effective solutions for carbon farming in regions where the selected living labs are operating.
- Policy-makers in the EU and Associated Countries are more aware of local needs with regard to carbon farming and can use knowledge to design and implement more effective policies.

Scope: Carbon farming can be defined as a green business model that rewards land managers for taking up improved land management practices, resulting in the increase of carbon sequestration in living biomass, dead organic matter and soils by enhancing carbon capture and/or reducing the release of carbon to the atmosphere, in respect of ecological principles favourable to biodiversity and the natural capital overall⁴⁶⁴.

More research is still needed to increase removals of carbon from the atmosphere and achieve the EU's legally binding commitment to become climate neutral by 2050, as well as to close

monitor and verify the authenticity and environmental integrity of high-quality sustainable carbon removals. Such rules will provide the necessary legal framework to scale up carbon farming. More details at [Certification of carbon removals – EU rules \(europa.eu\)](https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en).

⁴⁶³ https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

⁴⁶⁴ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6687

the gap between science and practice, between knowledge and implementation. The Mission ‘A Soil Deal for Europe’ proposes a novel approach to research and innovation in the area of soil health, including the implementation of living labs. Living labs have the potential to empower a green transition towards healthy soils by developing solutions in a co-creative manner, involving actors in real-life settings at territorial level to achieve large-scale impacts.

Nowadays, there exist various definitions and conceptualizations of living labs. However, three components are recognizable within the now well-established living labs research concept, which include (a) co-creation with a large set of stakeholders, (b) in real-life sites and (c) involving the end-user⁴⁶⁵. For the purpose of the Mission ‘A Soil Deal for Europe’, “Soil health living labs” are defined as “user-centred, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and co-design, testing, monitoring and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption”.

Living labs are collaborations between multiple partners that operate and undertake experiments on several sites at regional or sub-regional level⁴⁶⁶. Individual sites could be e.g. farms, forest stands, urban green or industrial areas, enterprises and other entities, where the work is carried-out and monitored under real-life conditions regardless of the land size, tenure (land ownerships) or the type of economic activity.

Lighthouses in contrast are defined as “places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”. They are individual, local sites (one farm, one forest exploitation, one industrial site, one urban city green area, etc.) that can either be part of a living lab or be situated outside a living lab.

According to the Mission Implementation Plan, living labs involve partners from different backgrounds, disciplines and/or sectors and are composed of 10 to 20 experimental sites. However, depending on the specific context (e.g. the land use(s)), applicants can propose living labs with fewer experimental sites. By working together in a carbon farming living lab, the various partners involved will be able to replicate actions and solutions, compare results, exchange good practices, validate methodologies and benefit from cross-fertilisation within a local/regional setting.

More specifically, the funded project(s) should:

⁴⁶⁵ International Agroecosystem Living Laboratories Working Group. Agroecosystem Living Laboratories: Executive Report. G20 - Meeting of Agricultural Chief Scientists (G20-MACS). 2019. Available online: https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf (accessed on 30 June 2022)

⁴⁶⁶ For the purpose of the topic the regional/sub regional level will not be defined in administrative terms (e.g. NUTS 2 or 3). Instead, applicants should describe the local context and the area in which the work of the Living Lab will be carried out.

- Set up four to five living labs (or more, as applicable to the land use(s) and purpose of the project) to work together on carbon farming, covering one or several land use types. The living labs shall be located in at least three different Member States and/or Associated Countries. Proposals should describe the rationale for cooperation across the various living labs and explain how the work undertaken will contribute to the Mission's specific objective 2.
- Establish, based on the goals and objectives of the project(s), a detailed work plan with the activities to be undertaken in an interdisciplinary way, ensuring the co-design, co-development, and co-implementation of locally adapted solutions.
- Carry out participatory and transdisciplinary research and innovation in living labs in view of seeking practical solutions to carbon farming challenges, taking into account the relevant drivers and pressures. Moreover, challenges to the scaling up and the transferability of solutions should be addressed. Proposed strategies and solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating. Living labs working in the area of agriculture are expected to address sustainable practices, applied across a range of farming systems, and benefit both conventional and organic farming.
- Identify sites that demonstrate high performance in terms of their actions and results on carbon farming and that may be converted into lighthouses.
- Establish for each living lab a baseline for carbon farming, in order to allow for an accurate assessment of the conditions and changes of soils in the different sites over time, and a clear monitoring of progress towards the objectives of the respective living lab and of the project overall. The funded project(s) should make use of relevant accounting methodologies for quantification of carbon removals, addressing the durability, additionality and environmental safeguards/co-benefits of carbon farming. They should work closely with the European Commission's Joint Research Centre (JRC) to contribute to the JRC's efforts on soil monitoring and the development of the European Union Soil Observatory (EUSO).
- Monitor and carry out an assessment of the innovative practices for carbon farming, taking into account the effects of ongoing climate change on carbon sequestration potential and dynamics. This should include a demonstration of the viability of the proposed solutions. Propose strategies (e.g. financial, organisational) to ensure long-term sustainability and continuity of the living labs beyond the Horizon Europe funding, including through identification of possible business models and actions involving local authorities, business communities, SMEs, investors, entrepreneurs, etc.
- Document in an easy and accessible way the newly developed solutions in order to facilitate their uptake by land managers and transmit the acquired knowledge to all relevant actors.

In line with the nature of living labs, proposals must implement the multi-actor approach. The list of stakeholders will vary depending on features specific to each living lab and can involve different types of actors such as researchers, land owners or land managers, industry (incl. SMEs), public administrations, representatives of civil society (e.g. consumers, environmental NGOs). Care should be taken to describe the capabilities and roles of the different partners involved in the project and their areas of expertise. For example, while some partners may lead the conceptual work and coordinate the work within and across living labs, others may focus on carrying out experiments, providing advice, testing and validating innovative solutions, or be involved in outreach activities.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe. This includes not only beneficiaries (or their affiliated entities) but also associated partners, third parties giving in-kind contributions, subcontractors and recipients of financial support to third parties.

Proposals may provide for financial support to third parties (FSTP) to implement one or more of the living lab activities described in this topic⁴⁶⁷ further to calls or, if duly justified, without a call for proposals. Applicants are reminded to consult the standard conditions for “financial support to third parties” set out in Annex B of the General Annexes including those that apply to FSTP calls.

Proposals should include a dedicated task, and appropriate resources, on how they will collaborate with projects funded under other Work Programme topics of the Mission ‘A Soil Deal for Europe’ which are relevant to carbon farming and related challenges (such as, but not limited to, HORIZON-MISS-2022-SOIL-01-06: Network on carbon farming for agricultural and forest soils). In addition, proposals should seek synergies with projects PREPSOIL⁴⁶⁸, NATI00NS⁴⁶⁹ and NBSSOIL⁴⁷⁰. Additionally, projects should cooperate with and benefit from the services of a dedicated ‘Living Lab Support Structure’ to be established by the Specific Grant Agreement under this Work Programme.

Cooperation with relevant networks active at local level, such as EIP-AGRI operational groups, is encouraged, in order to promote the involvement of key local stakeholders in living labs’ activities or in the dissemination of solutions. The project should also build on other existing activities and ensure cooperation with relevant projects and partnerships, such as EIT Knowledge and Innovation Communities (EIT KICs), in particular EIT Food and its regenerative agriculture activities, or the ‘European partnership on accelerating farming systems transition: Agroecology living labs and research infrastructures’ which will also support living labs.

⁴⁶⁷ To explore the full range of options including what type of costs and activities are eligible to be funded under Horizon Europe, applicants should refer to the AGA – Annotated Model Grant Agreement https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

⁴⁶⁸ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details>

⁴⁶⁹ [Funding & tenders \(europa.eu\)](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details)

⁴⁷⁰ [Funding & tenders \(europa.eu\)](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details)

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Union Soil Observatory (EUSO).

Call - Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'

HORIZON-MISS-2024-SOIL-01

Conditions for the Call

Indicative budget(s)⁴⁷¹

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁷²	Indicative number of projects expected to be funded
		2024		
Opening: 08 May 2024 Deadline(s): 08 Oct 2024				
HORIZON-MISS-2024-SOIL-01-01	RIA	36.00 ⁴⁷³	Around 12.00	3
HORIZON-MISS-2024-SOIL-01-02	RIA	12.00 ⁴⁷⁴	Around 12.00	1
HORIZON-MISS-2024-SOIL-01-03	RIA	11.50 ⁴⁷⁵	Around 11.50	1
HORIZON-MISS-2024-SOIL-01-04	RIA	11.50 ⁴⁷⁶	Around 11.50	1

⁴⁷¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁴⁷² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁴⁷³ Of which EUR 25.09 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 5.49 million from the 'Digital, Industry and Space' budget and EUR 3.86 million from the 'Health' budget and EUR 0.71 million from the 'Civil Security for Society' budget and EUR 0.84 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁷⁴ Of which EUR 8.36 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.83 million from the 'Digital, Industry and Space' budget and EUR 1.29 million from the 'Health' budget and EUR 0.24 million from the 'Civil Security for Society' budget and EUR 0.28 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁷⁵ Of which EUR 8.02 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.75 million from the 'Digital, Industry and Space' budget and EUR 1.23 million from the 'Health' budget and EUR 0.23 million from the 'Civil Security for Society' budget and EUR 0.27 million from the 'Culture, Creativity and Inclusive Society' budget.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

HORIZON-MISS-2024-SOIL-01-05	RIA	7.50 ⁴⁷⁷	Around 7.50	1
HORIZON-MISS-2024-SOIL-01-06	IA	16.00 ⁴⁷⁸	Around 8.00	2
HORIZON-MISS-2024-SOIL-01-07	RIA	23.00 ⁴⁷⁹	Around 11.50	2
HORIZON-MISS-2024-SOIL-01-08	RIA	10.00 ⁴⁸⁰	Around 10.00	1
HORIZON-MISS-2024-SOIL-01-09	IA	7.00 ⁴⁸¹	Around 7.00	1
Overall indicative budget		134.50		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.

⁴⁷⁶ Of which EUR 8.02 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.75 million from the 'Digital, Industry and Space' budget and EUR 1.23 million from the 'Health' budget and EUR 0.23 million from the 'Civil Security for Society' budget and EUR 0.27 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁷⁷ Of which EUR 5.23 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.14 million from the 'Digital, Industry and Space' budget and EUR 0.81 million from the 'Health' budget and EUR 0.15 million from the 'Civil Security for Society' budget and EUR 0.17 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁷⁸ Of which EUR 11.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.44 million from the 'Digital, Industry and Space' budget and EUR 1.72 million from the 'Health' budget and EUR 0.32 million from the 'Civil Security for Society' budget and EUR 0.37 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁷⁹ Of which EUR 16.03 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.51 million from the 'Digital, Industry and Space' budget and EUR 2.47 million from the 'Health' budget and EUR 0.46 million from the 'Civil Security for Society' budget and EUR 0.53 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁸⁰ Of which EUR 6.97 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.53 million from the 'Digital, Industry and Space' budget and EUR 1.07 million from the 'Health' budget and EUR 0.20 million from the 'Civil Security for Society' budget and EUR 0.23 million from the 'Culture, Creativity and Inclusive Society' budget.

⁴⁸¹ Of which EUR 4.88 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.07 million from the 'Digital, Industry and Space' budget and EUR 0.75 million from the 'Health' budget and EUR 0.14 million from the 'Civil Security for Society' budget and EUR 0.16 million from the 'Culture, Creativity and Inclusive Society' budget.

<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-SOIL-01-01: Co-creating solutions for soil health in Living Labs

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 36.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants (further to calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 200 000, to allow for the active involvement of stakeholders, including farmers, businesses or civil society, in the living labs to deliver on the actions described under the scope.

Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘[A Soil Deal for Europe](#)’ of setting up 100 living labs and lighthouses to lead the transition to healthy soils by 2030. They support the specific objectives of the Mission ‘A Soil Deal for Europe’ dealing with urgent soil health challenges (see in particular specific objectives 1 to 6 and 8 in the [Mission implementation plan](#)). Activities should thereby contribute to meeting the European Green Deal ambitions and targets, such as those related to food and nutrition security, climate, biodiversity, environment and rural areas ⁴⁸².

⁴⁸² https://ec.europa.eu/info/strategy/priorities-2019-2024/new-push-european-democracy/long-term-vision-rural-areas_en

Project results are expected to contribute to all of the following outcomes:

- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I across EU Member States and Horizon Europe Associated Countries, allowing for effective cooperation and collaboration among research, practice and policy to co-create and test solutions for soil health.
- Enhancement of soil health in rural or urban areas where living labs are deployed, based on an established monitoring framework.
- Practice-oriented knowledge and tools are more easily available to land managers and contribute to an enhanced consideration and uptake of effective solutions for soil health and related ecosystem services across territories and sectors, in regions where the selected living labs are operating.
- Policy makers in the EU and Associated Countries are more aware of local needs and differences with regard to soil health and can use this knowledge to design more effective policies.

Scope: While more research is needed to restore and maintain healthy soils in the EU and Associated Countries, an important barrier still encountered to accelerate the transition towards a climate-neutral and “green” European Union is the gap between science and practice, between knowledge and implementation. The Mission ‘A Soil Deal for Europe’ proposes a novel approach to research and innovation in the area of soil health, including the implementation of living labs. Living labs have the potential to empower a green transition towards healthy soils by developing solutions in a co-creative manner and involving actors in real life settings at territorial level to achieve large-scale impact.

Nowadays, there exist various definitions and conceptualizations of living labs. However, three components are recognizable within the now well-established living labs research concept, which include (a) co-creation with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users⁴⁸³. For the purpose of the Mission ‘A Soil Deal for Europe’, soil health living labs are defined as “user-centred, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and co-design, testing, monitoring and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption”.

⁴⁸³ International Agroecosystem Living Laboratories Working Group. Agroecosystem Living Laboratories: Executive Report. G20 - Meeting of Agricultural Chief Scientists (G20-MACS). 2019. Available online:https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf (accessed on 30 June 2022)

Living labs are thus collaborations between multiple actors that operate and undertake experiments on several sites at regional or sub-regional level ⁴⁸⁴. Individual sites could be, e.g., farms, forest stands, urban green or industrial areas, enterprises and other locations, where the work is carried out and monitored under real-life conditions.

Lighthouses, in contrast, are defined as “places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”. They are individual, local sites (one farm, one forest exploitation, one industrial site, one urban city green area, etc.) that either can be part of a living lab or be situated outside a living lab.

According to the Mission Implementation Plan, living labs involve actors from different backgrounds, disciplines and/or sectors and are composed of 10 to 20 experimental sites. However, depending on the specific context (e.g., the land use(s), the soil health challenge(s) addressed), applicants can propose living labs with fewer experimental sites. By working together on themes of common interest, the various actors involved in a living lab will be able to replicate actions and solutions, compare results, exchange good practices, validate methodologies and benefit from cross-fertilisation within a local/regional setting. While normally projects run for four years, the duration of soil health living labs may vary and be longer depending on the focus of the work and the soil health challenge(s) addressed.

More specifically, each of the funded projects should:

- Support the setup of four to five living labs (or more, as applicable to the land use(s) and purpose of the project) to work together on one or more soil health challenge(s), addressing the same or several land use types. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should describe the rationale for cooperation across the various living labs and explain how the work undertaken will contribute to one or more of the Mission’s specific objectives ⁴⁸⁵. Proposals should present a realistic combination of a limited selection of variables (e.g., number of soil health challenges addressed, pedo-climatic conditions, land uses, Mission objectives addressed). Living labs exclusively focused on urban areas ⁴⁸⁶ are excluded from this topic as a dedicated topic is opened in this work programme.
- Establish, based on the projects’ goals and objectives, a detailed work plan with the activities to be undertaken in the living labs in an interdisciplinary way, ensuring the co-design, co-development, and co-implementation of locally adapted solutions for the selected soil health challenge(s). Seek practical solutions to the identified problems related to the selected soil health challenge(s), taking into account the relevant drivers

⁴⁸⁴ For the purpose of the topic the regional/sub regional level will not be defined in administrative terms (e.g., NUTS 2 or 3). Instead, applicants should describe the local context and the area in which the work of the living lab will be carried out.

⁴⁸⁵ Reduce land degradation relating to desertification; conserve and increase organic carbon stocks; no net soil sealing and increase the reuse of urban soils; reduce soil pollution and enhance restoration; prevent erosion; improve soil structure to enhance habitat quality for soil biota and crops; increase soil literacy in society

⁴⁸⁶ EU-[OECD](#) definition of a functional urban area

and pressures. Proposed solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating. Moreover, activities should address challenges to the scaling up and the transferability of solutions. Living labs working in the area of agriculture are expected to promote sustainable practices, applied across a range of farming systems and benefit both conventional and organic farming. Living labs working on forestry, peat and natural areas are expected to address sustainable management for healthy soils in conjunction with productive biomass and other ecosystem services.

- Establish for each living lab a baseline for the selected soil health challenge(s), in order to allow for an accurate assessment of the conditions and changes of soils in the different sites over time and for monitoring of progress towards the objectives of the respective living labs and the project overall. As appropriate, make use of the set of soil health indicators presented in the [Soil Mission Implementation Plan](#) and the descriptors of the proposal for a [Directive on Soil Monitoring and Resilience](#).
- Monitor and carry out an assessment of the effects of the developed innovative practices or introduced solutions on soil health and related ecosystem services. This should include a demonstration of the viability (e.g., technical, economic) of the proposed solutions and quantification of the impact of the tested practices and/or solutions on relevant soil health indicators.
- Identify sites that demonstrate high performance in terms of their actions and results on soil health improvement and that may be converted into lighthouses.
- Propose strategies (e.g., financial, organisational) to ensure long-term sustainability and continuity, impact and ambition of the established living labs beyond the Horizon Europe funding, including the identification of possible business models and actions involving local authorities, business communities, SMEs, investors, entrepreneurs including co-funding schemes.

In line with the nature of living labs, proposals must implement the multi-actor approach. The list of actors will vary depending on features specific to each living lab and can involve different types of actors such as researchers, landowners or land managers, industry (e.g., SMEs), public administrations, representatives of civil society (e.g., consumers, environmental NGOs). Care should be taken to describe the capabilities and roles of the different partners involved, depending on their area of expertise. For example, while some partners may lead the conceptual work and coordinate the work within and across living labs, others may focus on carrying-out experiments, providing advice, testing and validating innovative solutions, or be involved in outreach activities.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe. This includes not only beneficiaries (or their affiliated entities) but also associated partners,

third parties giving in-kind contributions, subcontractors and recipients of financial support to third parties⁴⁸⁷.

Financial support to third parties (FSTP) to facilitate active involvement of actors in one or more of the living labs can be provided through calls or, if duly justified, without a call for proposals. Applicants are advised to consult the standard conditions set out in Annex B of the General Annexes including those that apply to FSTP.

Applicants are reminded they can benefit from the services of [NATI00NS](#), the project dedicated to support potential applicants to the living labs topics.

In order to increase impact and sustainability, applicants are encouraged to explore and test new (or combination with existing) funding schemes and financial instruments, either public or private (including, for example and for agricultural land, Common Agricultural Policy eco-schemes), involving, where relevant, the finance providers such as public authorities or financial institutions and investors.

Projects should cooperate and benefit from the services of SOILL⁴⁸⁸, the dedicated ‘Living Lab Support Structure’ established to provide tailor made advice to participants of living labs and lighthouses in their day-to-day operations, as well as enforce the monitoring of their activities in a systematic way, reporting on the main outcomes and experiences⁴⁸⁹. Proposals should include dedicated tasks and appropriate resources to collaborate with SOILL as well as with other projects relevant to the chosen soil health challenge(s), funded either under the Mission ‘A Soil Deal for Europe’ or under other parts and pillars of Horizon Europe or other EU programmes, as appropriate. For the latter these would include networking, attendance to meetings and organisation of joint activities (e.g., workshops, establishing best practices, joint communication or citizen engagement activities). The details of the joint activities would be further defined during the grant agreement preparation phase and the life of the project.

Additionally, funded projects should collaborate with [BENCHMARKS](#) and [AI4SoilHealth](#), which are key projects looking at sampling, monitoring, validation and further development of indicators and proxy measurements for soil health, as well as using AI technology to accelerate the collection and use of soil health information.

Cooperation with relevant networks active at local level, such as EU CAP Network operational groups for agricultural soils, is encouraged in order to promote the involvement of key local stakeholders in living labs activities or in the dissemination of solutions. The projects should also build on other existing activities and ensure cooperation with relevant projects and partnerships, such as EIT Knowledge and Innovation Communities (EIT KICs), the ‘European partnership on accelerating farming systems transition: Agroecology living labs

⁴⁸⁷ To explore the full range of options including what type of costs and activities are eligible to be funded under Horizon Europe, applicants should refer to the AGA – Annotated Model Grant Agreement https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

⁴⁸⁸ [Funding & tenders \(europa.eu\)](#)

⁴⁸⁹ Topic HORIZON-MISS-2022-SOIL-01-08: Framework Partnership Agreement (FPA) for a Living Lab network support structure under [wp-12-missions_horizon-2021-2022_en.pdf \(europa.eu\)](#)

and research infrastructures’ or the ‘Partnership for Sustainable Food Systems (SFS) for people, planet and climate’, which will also support living labs.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Union Soil Observatory (EUSO) and the project [SoilWISE](#). In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO.

HORIZON-MISS-2024-SOIL-01-02: Living Labs in urban areas for healthy soils

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants (further to calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 200 000, to allow for the active involvement of stakeholders, including farmers, businesses or civil society, in the living labs to deliver on the actions described under the scope.

Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘[A Soil Deal for Europe](#)’ of setting up 100 living labs and lighthouses by 2027 to lead the transition to healthy soils by 2030. It supports the Soil Mission specific objectives, in particular the following ones: 3 “No net soil sealing and increase the reuse of urban soils”, 4 “Reduce soil pollution and enhance restoration”, 5 “Prevent erosion”, and specific objective 8 “Increase soil literacy in society across Member States”.

Project results are expected to contribute to all of the following outcomes:

- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I across EU Member States and Horizon Europe Associated Countries, allowing for effective cooperation and collaboration among research, practice and policy to co-create and test solutions for soil health.
- Enhancement of soil health in rural or urban areas where living labs are deployed, based on an established monitoring framework.
- Practice-oriented knowledge, tools and techniques are more easily available to urban communities, local city councils/regions and land managers and contribute to an enhanced consideration and uptake of effective solutions for soil health and related ecosystem services across across neighbourhood/communities, territories and sectors, in regions where the selected living labs are operating.
- Policy makers in the EU and Associated Countries are more aware of local needs and differences with regards to soil health and can use this knowledge to design more effective policies.

Scope: While more research is needed to restore and maintain healthy soils in the EU and Associated Countries, an important barrier still encountered to accelerate the transition towards a climate-neutral and green European Union is the gap between science and practice, between knowledge and implementation. The Mission ‘A Soil Deal for Europe’ proposes a novel approach to research and innovation in the area of soil health, including the implementation of living labs. Living labs have the potential to empower a green transition towards healthy soils by developing solutions in a co-creative manner and involving actors in real life settings at territorial level to achieve large-scale impact.

Nowadays, there are various definitions and conceptualizations of living labs. However, three components are recognizable within the now well-established living labs research concept, which include (a) co-creation with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users⁴⁹⁰. For the purpose of the Mission ‘A Soil Deal for Europe’, “soil health living labs are defined as “user-centred, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and co-design, testing, monitoring and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption”.

Living labs are thus collaborations between multiple actors that operate and undertake experiments on several sites at regional or sub-regional level⁴⁹¹. Individual sites could be e.g.,

⁴⁹⁰ International Agroecosystem Living Laboratories Working Group. Agroecosystem Living Laboratories: Executive Report. G20 - Meeting of Agricultural Chief Scientists (G20-MACS). 2019. Available online:https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf (accessed on 30 June 2022)

⁴⁹¹ For the purpose of the topic the regional/sub regional level will not be defined in administrative terms (e.g., NUTS 2 or 3). Instead, applicants should describe the local context and the area in which the work of the living lab will be carried out.

urban green or industrial areas, enterprises and other locations, where the work is carried-out and monitored under real-life conditions.

Lighthouses, in contrast, are defined as “places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”. They are individual, local sites (one industrial site, one urban city green area, etc.) that either can be part of a living lab or be situated outside a living lab.

According to the Mission Implementation Plan, living labs involve actors from different backgrounds, disciplines and/or sectors and are composed of 10 to 20 experimental sites. However, depending on the specific context, applicants can propose living labs with fewer experimental sites.

Urbanization is a challenge for soil health, due to construction and infrastructure development that entails, among other, land take, soil sealing, contamination or compaction. Against this background and by working together on common challenges, actors in living labs in urban areas will be able to replicate actions and solutions, compare results, exchange good practices, validate methodologies, benefit from cross-fertilisation, and connect with their local/regional ecosystem. While normally projects run for four years, the duration of soil health living labs may vary and be longer depending on the focus of the work and the soil health challenge(s) addressed.

More specifically, each of the funded projects should:

- Support the setup of four to five living labs (or more, if relevant) to work together on one or more soil health challenge(s) faced by soils in urban areas (e.g., sealing, contamination, fertility, erosion, compaction, etc.) while increasing the overall resilience of urban areas. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should describe the rationale for cooperation across the various living labs and explain how the work undertaken will contribute to one or more of the Mission’s specific objectives⁴⁹². Proposals should present a realistic combination of a limited selection of variables (e.g., number of soil health challenges addressed, land uses, Mission objectives addressed).
- Establish, based on the projects’ goals and objectives, a detailed work plan with the activities to be undertaken in the living labs in an interdisciplinary way, ensuring the co-design, co-development, and co-implementation of locally adapted solutions for the selected soil health challenge(s). Seek practical solutions to the identified problems related to the selected soil health challenge(s) identified, taking into account the relevant drivers and pressures. Proposed strategies and solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating. Moreover, activities should address challenges to the scaling up and the transferability of solutions. Where relevant, regeneration of soil health or repurpose of

⁴⁹² In particular the following ones: 3 “No net soil sealing and increase the reuse of urban soils”, 4 “Reduce soil pollution and enhance restoration”, 5 “Prevent erosion”, and specific objective 8 “Increase soil literacy in society across Member States”

soils on urban areas to provide locally sourced fresh and healthy food to local food services (e.g., canteens, restaurants, food trucks, markets, etc.) and citizens should be considered.

- Establish for each living lab a baseline for the selected soil health challenge(s), in order to allow for an accurate assessment of the conditions and changes of soils in the different sites over time and for monitoring of progress towards the objectives of the respective living labs and the project overall. As appropriate, make use of the set of soil health indicators presented in the [Soil Mission Implementation Plan](#) and the descriptors of the proposal for a [Directive on Soil Monitoring and Resilience](#).
- Monitor and carry out an assessment of the effects of the developed innovative practices or introduced solutions on soil health and related ecosystem services. This should include a demonstration of the viability (e.g., technical, economic) of the proposed solutions and quantification of the impact of the tested practices and/or solutions on relevant soil health indicators. In particular, for living labs working on soil sealing, identify urban-specific monitoring methods in connection to the work developed by Copernicus and for the functional and ecological impacts of the soil sealing process.
- Identify sites that demonstrate high performance in terms of their actions and results on soil health improvement and that may be converted into lighthouses.
- Propose strategies (e.g., financial, organisational) to ensure long-term sustainability and continuity, impact and ambition of the established living labs beyond the Horizon Europe funding, including the identification of possible business models and actions involving local authorities, business communities, SMEs, investors, entrepreneurs including co-funding schemes.

In line with the nature of living labs, proposals must implement a multi-actor approach. The list of stakeholders will vary depending on features specific to each living lab and should involve different types of actors such as researchers, landowners or land managers, industry (e.g., SMEs), public authorities (e.g., administrators responsible for green spaces (such as parks, gardens and urban farms), urban planners, schools, and representatives of civil society (e.g., citizens, environmental NGOs). Care should be taken to describe the capabilities and roles of the different partners involved, based on their areas of expertise. For example, while some partners may lead conceptual work and coordinate work within and across living labs, others may focus on conducting experiments, providing advice, testing and validating innovative solutions, or participating in outreach activities. Where relevant, soil literacy activities for citizens including on agroecology and permaculture should be considered.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe: This includes not only beneficiaries (or their affiliated entities) but also associated partners,

third parties giving in-kind contributions, subcontractors and recipients of financial support to third parties⁴⁹³.

Financial support to third parties (FSTP) to facilitate active involvement of stakeholders can be provided through calls or, if duly justified, without a call for proposals. Applicants are advised to consult the standard conditions set out in Annex B of the General Annexes including those that apply to FSTP.

Applicants are reminded that they can benefit from the services of [NATIOONS](#), the project dedicated to support potential applicants to the living labs topics.

In order to increase impact and sustainability, applicants are encouraged to explore and test new (or in combination with existing) funding schemes and financial instruments, either public or private involving, where relevant, finance providers such as public authorities or financial institutions and investors.

Projects should cooperate and benefit from the services of SOILL¹⁸, the dedicated ‘Living Lab Support Structure’ established to provide tailor-made advice to participants of living labs and lighthouses in their day-to-day operations, as well as enforce the monitoring of their activities in a systematic way, reporting on the main outcomes and experiences. Proposals should include dedicated tasks and appropriate resources to collaborate with SOILL as well as with other projects relevant to the chosen soil health challenge(s) and urban soils, funded either under the Mission ‘A Soil Deal for Europe’ or under other parts and pillars of Horizon Europe or other EU programmes, as appropriate. For the latter these would include networking, attendance to meetings and organisation of joint activities (e.g., workshops, establishing best practices, joint communication or citizen engagement activities). The details of the joint activities would be further defined during the grant agreement preparation phase and the life of the project.

Collaboration and synergies with the Mission “100 [Climate-Neutral and Smart Cities](#)” is highly encouraged if living labs are established within one or more of the cities nominated as part of that EU Mission⁴⁹⁴. In addition, if relevant, projects should explore complementary synergies with ongoing Horizon Europe projects such as [CLEVERFOOD](#) that is developing a Food 2030 Connected Lab Network of living labs. Additionally, funded projects should collaborate with [BENCHMARKS](#) and [AI4SoilHealth](#), which are key new projects looking at sampling, monitoring validating and further development of indicators and proxy measurements for soil health, as well as using AI technology to accelerate the collection and use of soil health information.

The projects may also build on other existing activities and ensure cooperation with relevant projects and partnerships, such as EIT Knowledge and Innovation Communities (EIT KICs)

⁴⁹³ To explore the full range of options including what type of costs and activities are eligible to be funded under Horizon Europe, applicants should refer to the AGA – Annotated Model Grant Agreement https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

⁴⁹⁴ [Nominated EU cities](#)

or the upcoming European partnerships on Agroecology⁴⁹⁵ and on Sustainable Food Systems⁴⁹⁶.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge/data and outputs through close collaboration with the Joint Research Centre’s EU Soil Observatory (EUSO) and the project SoilWISE. In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO.

HORIZON-MISS-2024-SOIL-01-03: Towards a dynamic monitoring system to assess status and spatiotemporal changes of soil erosion at European scale

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

Expected Outcome: Activities under this topic will help to progress towards the objective of the Mission ‘A Soil Deal for Europe’, in particular specific objective 5 “Prevent erosion”. Activities will also contribute to the EU Soil Strategy 2030, the Common Agricultural Policy and its Common Monitoring and Evaluation Framework (CMEF), the framework of indicators in the proposed Soil Monitoring Law, and the EU Sustainable Development Goals (SDGs) indicator set for monitoring progress towards SDG 15 and SDG 2.

Project results are expected to contribute to all of the following outcomes:

- Enhanced knowledge on multi-process soil erosion dynamics (e.g., water, wind, tillage, etc.) across Europe based on a combination of novel computer-based estimates and monitoring activities for better estimation of policy impact.

⁴⁹⁵ HORIZON-CL6-2023-FARM2FORK-01-1: European partnership on accelerating farming systems transition – agroecology living labs and research infrastructure

⁴⁹⁶ HORIZON-CL6-2023-FARM2FORK: European partnership on sustainable food systems for people, plant and climate

- Further validation of soil loss by water and wind erosion indicators at continental scale with local/regional assessments which can be used for policy making and implementation (e.g., in the Common Agricultural Policy, the Soil Strategy for 2030 or the proposed directive of soil monitoring and resilience).
- Best management practices that significantly reduce erosion adjusted to different pedo-climatic conditions in Europe and various cropping systems are compiled and more widely known by relevant stakeholders including land managers such as farmers.
- A robust soil erosion monitoring network is established across EU and Associated Countries to further develop estimates and validate gross erosion rates at parcel level.

Scope: Current EU/European estimates on soil loss by water and wind erosion are long-term averages performed with empirical models, which, in agricultural areas, are subject to huge uncertainties. Policies such as the Common Agricultural Policy (CAP) would benefit from more up to-date and annual estimates. Improved estimates would contribute to developing a process-based model, which can incorporate management practices and their potential for reducing soil loss by water, and wind erosion in agricultural fields and facilitate the adoption of the best practices. Other processes such as tillage erosion or gullies can also be considered. Existing partially explicit parcel data (e.g., LPIS-GSA), data from the EU Land use and land cover survey (LUCAS) and the latest updates from the COPERNICUS platform could/should be used to improve current pan-European modelling frameworks.

Proposed activities should:

- Create a network of stakeholders to monitor soil loss by water and wind erosion across EU Member States and Horizon Europe Associated Countries in different crop conditions (including managed grasslands).
- Develop a monitoring scheme to implement, test and validate methods for assessing soil loss by soil erosion at European (continental) scale.
- Develop process-based models at continental scale, which consider soil erosion factors such as management practices applied by farmers, rainfall intensity, soil properties, topography and other biophysical attributes.
- Incorporate both field observations and latest state-of-the-art Copernicus products to better quantify and calibrate soil erosion factors.
- Quantify the impact of different management practices (e.g., cover crops, reduced tillage, plant residues, mulching, grass margins, crop rotation, terraces, etc.) on reducing soil erosion.
- Link those scientific outputs (e.g. improved soil erosion factors, impact of management practices) with the Good Agricultural and Environmental Conditions (GAEC) requirements of the CAP (e.g., impact of management practices such as cover crops or reduced tillage in CAP GAECs).

- Provide landowners and various stakeholders with best information on soil losses and with recommendations on the most suitable management practices to reduce soil loss.

Proposals should include a dedicated task and appropriate resources to collaborate and capitalise on activities and results from projects financed under other Work Programme topics of the Mission ‘A Soil Deal for Europe’, in particular [AI4SoilHealth](#), [Benchmarks](#) and [Soil O-Live](#).

Cooperation with international networks in UNCCD, FAO Global Soil Partnership and the IPCC is encouraged to upscale the produced knowledge at global scale.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the EU Soil Observatory (EUSO) and the project SoilWISE. In particular, to ensure that relevant data, maps and information can potentially be used and displayed in the EUSO.

HORIZON-MISS-2024-SOIL-01-04: Systems to quantify nitrogen fluxes and uncertainties in European landscapes

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.50 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular to its specific objective 4, “Reduce soil pollution and enhance restoration” and the operational objective 3, “Develop an integrated EU soil monitoring system and track progress towards soil health.” Project results are expected to contribute to all of the following outcomes:

- Enhanced understanding of the sources that contribute to spatio-temporal variability in soil biogeochemical processes and in particular how these sources influence total nitrogen fluxes across major climatic conditions throughout Europe and Associated Countries.
- Advanced comprehension of the mechanisms governing nitrogen translocation from soil, including gaseous emissions and subsurface leaching into groundwater.
- More effective monitoring, reporting and verification of greenhouse gas emissions and mitigation efforts and significant reduction in the uncertainty associated with the estimates of the full nitrogen budget at the European continental scale.

- Assessment of improved nitrogen management and conservation strategies.
- Improved land managers confidence in the implementation of advanced strategic nitrogen management practices that aim at reducing nitrogen losses from soil.

Scope: Achieving climate neutrality by 2050 is a central goal of the European Green Deal. However, soil-derived gaseous nitrogen emissions from agriculture are often overlooked due to challenges in monitoring. A comprehensive assessment of both gaseous and non-gaseous nitrogen losses, including their geographical distribution and varying temporal resolution, is essential to inform effective greenhouse gas (GHG) mitigation strategies and encourage the adoption of higher Intergovernmental Panel on Climate Change (IPCC) tiers at the national level.

Nitrogen losses are highly episodic, and the current temporal and spatial resolution of information regarding nitrogen dynamics across Europe is insufficient for a comprehensive estimation of the full nitrogen budget at a continental scale. The most commonly used methodology for measuring N-flux involves discontinuous flux measurements accompanied by standard gap-filling methods, which lead to large uncertainties and biased emission factors. Additionally, most existing observations focus on temperate zones and single flux exit pathways, neglecting the full spectrum of nitrogen forms, including both gaseous and non-gaseous forms across different climatic conditions. Data and observations are particularly lacking in the Mediterranean basin and some nitrogen transformation pathways are not well investigated. For example, widely used modelling approaches estimate the reduction of N₂O to N₂ by applying a conversion factor developed in laboratory conditions that do not comprehensively represent the vast array of soil types found in Europe. These ratios are subject to bias associated with the use of linear rates for nonlinear dynamics. To address these gaps, accurate information must be acquired, which will facilitate the development of effective management strategies that effectively minimise total nitrogen losses from soil. Additionally, this information will improve the parameterization and validation of models and increase the confidence of model predictions when scaled to the continental level. This will ultimately lead to a more refined and accurate estimation of nitrogen surplus, enrich existing dashboard estimates, and further support the evaluation of the effectiveness of management strategies, and guide future research and policy decisions related to mitigation efforts.

Proposed activities should:

- Develop and employ advanced nitrogen monitoring and analytical techniques to generate high temporal resolution data on nitrogen fluxes and their drivers in various climatic conditions with particular focus on underrepresented pedo-climatic conditions.
- Implement a coordinated, holistic approach to develop and evaluate robust, practical management strategies that effectively minimise total nitrogen losses from soils while addressing potential trade-offs with other environmental concerns, such as water quality and soil carbon preservation.

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- Utilise advanced modelling approaches to analyse the collected data, identify patterns and relationships between soil biogeochemical processes and nitrogen fluxes, and improve predictive tools that can be used to inform management strategies on a regional to continental scale.
- Implement and monitor pilot projects that test the effectiveness of the developed management strategies in diverse pedo-climatic zones, accounting for local environmental conditions, agricultural practices both in conventional and organic farming systems, and socio-economic factors that may influence adoption and outcomes.
- Synthesise the findings from field studies, modelling efforts, and pilot projects into a comprehensive estimation of the full nitrogen budget at the European continental scale contributing to the EU Soil Observatory through the provision of high-quality datasets for monitoring, reporting and verification.
- Development of scenarios on how climate change and land use change will affect nitrogen cycling through the soil-plant-atmosphere system.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre’s EU Soil Observatory (EUSO) and the project Soil-WISE. In particular, to ensure inter-operability between existing databases and models and their integration in the EUSO.

Proposals should include a dedicated task and appropriate resources to build on the work of other projects working on quantification of nitrogen fluxes in Europe that are being funded by other entities, including philanthropic organisations, particularly where there is geographical or thematic complementarity.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-MISS-2024-SOIL-01-05: Soil health, pollinators and key ecosystem functions

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

	Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
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Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular its specific objectives 4 “Reduce soil pollution and enhance restoration”, 6 “Improve soil structure to enhance habitat quality for soil biota and crops” and 8 “Improve soil literacy in society”. Activities will also contribute to the EU Biodiversity Strategy for 2030, to the revised EU Pollinators Initiative “[A new deal for pollinators](#)”, to the future EU Nature Restoration Law and the proposed Soil Monitoring and Resilience Directive, to the EU Farm to Fork Strategy, including the EU Action Plan on the Development of Organic Production, and to the goals of the UN CBD COP-15. It also directly contributes to the achievement of several of the Sustainable Development Goals ([SDGs](#)) in particular SDG 15 by halting biodiversity loss and halting and reversing land degradation and SDG2 on food security as activities are expected to improve pollination ecosystem services, which are key for food production.

Projects results are expected to contribute to all of the following outcomes:

- Improved knowledge and understanding of the biology and ecology of insect species spending part of their life cycle on or in the soil, with specific focus on ground-nesting pollinators.
- Better understanding of the major causes of the decline of these insects and the synergistic effects of various threats, including the quantitative and qualitative aspects related to the magnitude of their decline.
- More effective measures to tackle the loss of soil-dependent insects.

Scope: Soil-dependent insects are under threat because of non-adapted soil management practices such as tillage and issues like contamination, compacting or sealing. A better understanding of the causes of their decline and effective measures to tackle them are needed.

Pollination is a key ecosystem service for crops and food production. Therefore, a specific focus on pollinating insects is required. Many solitary wasps and 70% of wild bees nest below ground and require protection during this crucial period of their lifecycle. Other ground-nesting pollinators also contribute to soil quality and other ecosystem functions, but little is known about their below ground lives.

The “New Deal for Pollinators” calls for more research to better understand the taxonomic and functional diversity of pollinator communities and their distribution, as well as the threats to pollinators and their interactions.

Proposed activities should:

- Improve the knowledge on the biology, ecology and population dynamics of insects spending part of their life cycle on or in the soil, with specific focus on ground-nesting pollinators, as well as on the interactions between life below and above ground. Focus

should be put on lesser-known species, regions and major threats and causes of their decline. The potential buffer and protective role of soil against threats in different soil and land uses, including applied agricultural practices, such as ploughing (e.g., agricultural, forestry, urban and natural areas) should be explored.

- Contribute to the development of monitoring methods including on threats and pressures that can be of relevance for the pollinator monitoring framework, under the revised EU Pollinators Initiative : “A New deal for Pollinators”.
- Identify soil conditions associated with a high diversity of pollinators and map regions of particular importance for the protection of soil-dependent pollinators.
- Analyse the effects of different soil management practices, including different plant protection and/or soil management methods, across different farming systems, such as organic farming or conventional approaches, and compare intensively managed areas with protected areas.
- Develop and demonstrate soil remediation and mitigation practices to address the causes of insect (and in particular pollinator) decline.
- Provide recommendations for best soil management practices to integrate pollinator conservation and restoration across the wider landscape and enhance habitat connectivity and pollination services.

Projects should seek potential synergies and capitalise on the results of past or ongoing projects (e.g., Horizon projects [Safeguard](#), [PollinERA](#) and WILDPOSH ⁴⁹⁷). Furthermore, specific tasks and resources should be envisaged to collaborate and capitalise on activities and results from projects financed under other Work Programme topics of the Mission ‘A Soil Deal for Europe’, in particular [BIOserviceES](#) and [SOB4ES](#) and under the topic HORIZON-MISS-2024-SOIL-01-06: Harnessing the multifunctional potential of soil biodiversity for healthy cropping systems.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre’s EU Soil Observatory and the SoilWISE project and the EU Knowledge Centre for Biodiversity.

International cooperation and links to global conservation actions are encouraged. Potentially, the projects funded under this topic could also cooperate with living labs and lighthouses that will be created in this and future calls of the Mission ‘A Soil Deal for Europe’.

Proposals must implement the multi-actor approach and should involve at least researchers, landowners and/or land managers, and representatives of civil society notably environmental NGOs.

⁴⁹⁷ European-funded consortium project that seeks to evaluate the risks of exposure of wild pollinators to pesticides across Europe

HORIZON-MISS-2024-SOIL-01-06: Harnessing the multifunctional potential of soil biodiversity for healthy cropping systems

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties (FSTP) to implement demonstration sites and encourage stakeholder engagement. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000. Applicants should review Annex B of the General Annexes' standard conditions for 'financial support to third parties' for FSTP calls.

Expected Outcome: Activities under this topic contribute to the implementation of the Mission A Soil Deal for Europe⁴⁹⁸ in particular to its specific objective 4 "reduce soil pollution and enhance restoration" and 6 "improve soil structure to enhance soil biodiversity" dealing with the most urgent soil health challenges. Activities will also contribute to the targets of the EU biodiversity strategy for 2030 and of the Farm to Fork strategy on pesticide use reduction (reducing the use and risk of pesticides by 50% and the use of more hazardous pesticides by 50%), the EU Action Plan on the Development of Organic Production, the Common Agricultural Policy, and will support the objectives of the future Nature Restoration Law and of the UN Convention on Biological Diversity COP-15. Activities will also provide knowledge to improve integrated pest management practices, directly contributing to the achievement of several of the Sustainable Development Goals ([SDGs](#)) in particular SDG's target 12.2 of achieving sustainable management and efficient use of natural resources by 2030.

Project results are expected to contribute to all of the following outcomes:

⁴⁹⁸ [Mission implementation plan](#)

- Soil and crop health are enhanced, sustaining crop productivity and food security while promoting the stability and resilience of agriculture and increasing agrobiodiversity.
- The dependence on external inputs in crop management is reduced through effective plant-soil interactions and exploiting the potential of the soil microbiome.
- Harnessing the role of soil biodiversity through a better knowledge of the relationship between biodiversity and soil functions.
- The availability of integrated pest management practices is enlarged.
- Increased and accelerated uptake of good practices which enhance plant and soil health for effective crop management supporting long-term provision of ecosystem services.

Scope: Below ground biodiversity plays a major role in soil structure, nutrient supply, water cycling, nutrient uptake by plants, and in the biocontrol of plant pests and diseases. The interactions between communities of soil organisms, crops and their environment (holobiont) profoundly influence crop, soil and agroecosystem health and productivity. Notably, the interplay between soil fauna, soil microbial community, soil chemistry, and plant immune responses can be enhanced to harness the potential of soil ecosystem to defend against pathogens, pests and other detrimental organisms and to promote plant health and productivity. By managing soil ecosystems to enhance soil health through farming practices (e.g., crop rotation, use of microbiome solutions, etc.), it is possible to support plant defences, suppress diseases, improve nutrient availability and enhance plant resilience to various stressors. In addition, agricultural sustainability will be increased and contribute to climate change mitigation.

There is a need to develop, test and deploy management practices that, by enhancing soil health, will facilitate, for instance, the management of soil-borne plant pests and diseases (e.g., bacteria, fungi, nematodes, root-feeding insects), and support ground nesting pollinators.

Proposed activities should:

- Develop and test site-specific innovations including management practices, solutions and tools that promote soil biodiversity, enhance soil health, stimulate plant growth, reduce chemical inputs to control soil borne plant diseases and root-feeding insects, and support ground nesting pollinators.
- Set up demonstration sites to test the proposed innovations and promote the benefits of soil biodiversity and healthy soils not only for growers and the agroecosystem but for the entire food value chain.
- Assess the social, economic and environmental issues associated with the proposed innovative solution, including trade-offs, the impact on labour, safety culture, and risk management on farms;

- Generate comprehensive capacity building material, organize trainings or knowledge sharing activities, including the development of guidelines to accelerate the dissemination, uptake and upscale of results.
- Enhance peer-to-peer learning with relevant stakeholders from farmers and advisors to policy makers and consumers, supporting a coordinated scientific and policy approach towards healthy soils.

Proposals should focus on arable crops. Work under this topic should be carried out in various pedo-climatic zones⁴⁹⁹ and benefit both the conventional and the organic farming as reflected in the expertise of the consortia. Agroecological approaches such as those developed for example under organic farming should be capitalised on and given due attention in the proposed activities.

Proposals must implement the ‘multi-actor approach’ including a range of actors to ensure that knowledge and needs from various sectors such as researchers, farmers, advisors, and industry including SMEs are brought together. Beneficiaries may provide financial support to third parties (FSTP) to implement activities in the demonstration sites and encourage end-user engagement.

Proposals should include a dedicated task and appropriate resources to collaborate with other projects funded under this topic as well as to capitalise on activities and results from relevant Horizon projects such as [EXCALIBUR](#), [SoildiverAgro](#), [EcoStack](#), [IWM PRAISE](#), [SOILGUARD](#), [WHEATBIOME](#), [TRIBIOME](#), [BIOservicES](#), [SOB4ES](#), [GOOD](#), [AGROSUS](#) and [CONSERWA](#) and those to be funded under *topic HORIZON-CL6-2023-FARM2FORK-01-7: Innovations in plant protection: alternatives to reduce the use of pesticides focusing on candidates for substitution*) and *HORIZON-MISS-2024-SOIL-01-05: Soil health, pollinators and key ecosystem functions* to avoid duplication, and to exploit complementarities as well as opportunities for increased impact.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge/data and outputs through close collaboration with the Joint Research Centre’s EU Soil Observatory (EUSO), the EU Knowledge Centre for Biodiversity and the project SoilWISE. In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO.

Potentially, the projects funded under this topic could also cooperate with living labs and lighthouses that will be created in this and future calls of the Mission ‘A Soil Deal for Europe’.

HORIZON-MISS-2024-SOIL-01-07: Development of high spatial-resolution monitoring approaches and geographically-explicit registry for carbon farming

Specific conditions

⁴⁹⁹ <https://www.eea.europa.eu/data-and-maps/figures/biogeographical-regions-in-europe-2>

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<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 23.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular specific objective 2 “Conserve and increase soil organic carbon stocks”. Activities will also support the proposed Carbon Removal Certification (CRC) Framework (including through collaboration with the Commission’s Expert Group on Carbon Removals)⁵⁰⁰, the Land Use, Land-Use Change and Forestry (LULUCF) Regulation⁵⁰¹, the Common Agricultural Policy, the EU Action Plan on the development of Organic Production, and the Sustainable Development Goal (SDG) 13 on Climate action.

Project results are expected to contribute to all of the following outcomes:

- The confidence of stakeholders (including land managers) in participating in possible carbon farming certification schemes and the **attractiveness of the carbon farming**⁵⁰² **business model** are enhanced through **better access to information and data** regarding soil carbon (achievable sequestration and storage, risks of release, etc.). This should allow to improve soil management performance and mitigate the negative climate impact of activities in EU Member States and Associated Countries.
- Reliable benchmarks or **baselines** for soil carbon at land management parcel level across the EU are established, with a view to providing financial rewards to those farmers and forest managers/owners who go beyond the baselines within the proposed framework for Carbon Removal Certification.
- **Improved decision making in the LULUCF sector** at the regional or national level thanks to enhanced quality of national GHG inventories and geographically explicit soil monitoring elements that reflect action at the individual level.

⁵⁰⁰ [Commission proposes certification of carbon removals \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511)

⁵⁰¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511>

⁵⁰² I.e. including enhanced carbon sequestration in forests, etc. See also definition at the bottom of the topic

- **Market situation and social dimension** are better integrated into EU carbon farming policy, in particular as regards the impact of carbon farming incentives on rural development, farmers' and foresters' incomes, competitiveness, food security and land access. **Business strategies and (digital) marketplaces** for carbon farming, including a **registry** for carbon farming credits/certificates, support EU carbon farming policy.
- Regulated EU carbon credits and environmental and financial **incentives**, within legal frameworks and for certified measures for carbon farming deployment strategies, specifically for foresters and agricultural land managers or owners, are supported. This should be aligned with the EU CRC Framework aiming at promoting carbon removal activities and fight greenwashing by encouraging forestry and agricultural sectors to act in this field and effectively demonstrate that carbon farming can be quantified **through appropriate monitoring, reporting and verification (MRV)** methods.

Scope: With the European Commission's proposal for a first EU-wide voluntary framework to reliably certify high-quality carbon removals (**Carbon Removal Certification -CRC-Framework**)⁵⁰³, the EU aims to boost sustainable carbon farming solutions by significantly improving Europe's capacity to quantify, monitor and verify carbon removals. Higher transparency will ensure trust from stakeholders and prevent greenwashing. The development of soil carbon removal deployment strategies and a robust and validated soil carbon **monitoring system approach, at scale relevant for land managers**, are therefore crucial. This system approach is currently underdeveloped and solid and reliable **data for establishment of baselines** for soil carbon at parcel level across Europe are missing. The system approach should further the potential for financial rewards to farmers and forest managers/owners who excel in their carbon farming practices, in line with the CRC Framework proposal. It should also lead to enhanced quality of **national greenhouse gas (GHG) inventories** for the Land Use, Land-Use Change, and Forestry (LULUCF) sector, as well as be relevant for the establishment of the database for the proposed **EU Soil Monitoring Law**.

To show the extent to which a carbon farming activity results in a positive climate impact, the European Commission will establish standardised **baselines** reflecting the standard performance of comparable activities in similar social, economic, environmental and technological circumstances and geographical locations. This type of baselines ensures objectivity and transparency, minimises compliance costs and other administrative costs, and positively recognises the action of first movers who have already engaged in carbon farming activities. However, the geographically-explicit data needed to identify and set such **standardised baselines** and help prioritise regions and actions for carbon farming is currently missing.

Moreover, it is important that the EU boosts sustainable carbon farming solutions by **enabling a business model** that financially rewards land managers for such activities, as stressed by the **EU CRC Framework** and the Commission's 2021 Communication on Sustainable Carbon Cycles. The EU CRC Framework aims to ensure that financial incentives from both private

⁵⁰³ COM(2022) 672 of 30 November 2022, [COM COM\(2022\)0672_EN.pdf \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022COM0672&from=doctrines)

and public sources are channelled towards high-quality carbon removals and nature-based solutions. However, to ensure its correct functioning, **interoperable public registries** and MRV protocols compliant with standards and technical rules to be set out at EU level are needed. These will ensure transparency, full traceability of carbon farming certificates, an easily accessible marketplace for these certificates, and avoid fraud risk and double counting.

Proposed activities should:

- Develop, validate and apply pilot, innovative, robust, local soil carbon **monitoring systems** in line with the CRC Framework proposal, able to gather the data needed for the European Commission to set out standardised **baselines** reflecting the standard performance of comparable activities in similar social, economic, environmental and technological circumstances and geographical locations in Europe. These systems should also allow to evaluate achievable biophysical **potential** of carbon storage and related co-benefits of carbon farming activities, **at land management parcel-scale**⁵⁰⁴ and **for the whole European territory**, and help prioritise regions and actions for carbon farming.
- Investigate and develop approaches and methodologies for **soil**⁵⁰⁵ **sampling** pertinent to the granular level of the monitoring, including assessment and exploitation of the technological innovation opportunities and the potential to reduce monitoring costs.
- Leverage the power of existing **remote sensing** tools such as those typically employed in the Common Agricultural Policy (CAP) control, i.e., in conjunction with spatially explicit parcel data (e.g., Land Parcel Identification System - Geospatial Application (LPIS-GSA)); and develop a structured, standardized system for understanding and managing the direct **effect of** carbon farming practices on soil carbon (including the practices promoted by the CAP).
- Demonstrate and where possible expand the power of **digital tools and technologies** (including electronic databases and geographic information systems/geographically-explicit digital map data, remote sensing, artificial intelligence and machine learning) for (decreasing the costs of) the data collection, for establishing baselines and for the monitoring of carbon removal activities.
- Deliver **guidance** (e.g. manuals) for policymakers and certification bodies on soil monitoring, reporting and verification (MRV), data collection protocols, and baselines against which action is quantified. Such guidance should be designed within the upcoming EU CRC Framework and in consultation with the **Commission's Expert Group on Carbon Removals**.
- Develop and test **harmonisation protocols within a distributed data management system** for the integration and direct comparison of upcoming CRC data and existing

⁵⁰⁴ Paying attention also to those land-uses changes that may impact carbon dynamics in soils, such as the construction of renewable energy plants in soils with high carbon stock

⁵⁰⁵ Including possibly porewater, whenever relevant

spatially explicit information contained in national LULUCF inventories and other soil organic carbon datasets (such as LUCAS, and pertinent national datasets).

- Develop a **framework to collect and analyse data** coming from certificates (both within existing voluntary carbon markets and the upcoming CRC Framework), to define reliable ranges of carbon sequestration and outliers, and consolidate interoperable, quality-checked datasets.
- Use results of the above work to calibrate and **validate modelling frameworks** applicable to the monitoring methodologies mentioned above in this topic.
- Create **metrics to gauge carbon sensitivity** to perturbations, particularly those linked with climate change, by analysing different soil carbon fractions.
- Evaluate the **permanency-related risks** of release of carbon, using modelling scenarios.
- Address key uncertainties and scientific knowledge **gaps** that currently exist within carbon removal quantification methods, helping to develop a **standardised MRV approach**.
- Undertake an in-depth **assessment of the market situation** for carbon farming, building on existing and ongoing research, to assess the (expected) overall market impacts of carbon farming, including the potential income opportunities for farmers and other land managers, impacts on land productivity and land prices, and sensitivities over the “commodification” of carbon removals and ecosystem services, **for different carbon farming activities** (e.g. agroforestry, rewetting of land and other practices).
- Analyse the different **channels and business strategies** for the marketing of certified carbon removals, providing an overview of the current market and outlook for the next 10 years. This analysis should consider differences between marketing certified carbon removals **within and outside the agri-food or forestry value chains** and identify the relevant **market players** in each case.
- Create a network among existing carbon farming schemes across several European countries and scale up their activities by developing **an interoperable digital marketplace**, based on a geographically-explicit **registry**, that provides easier access to the carbon farming units certified by those different schemes. This registry should follow the rules set out in the CRC Framework and be consistent with Member States’ reporting in the LULUCF sector so as to enable Member States to improve their GHG inventory data. The registry should enable monetary transactions involving carbon credits, however the project(s) should not directly carry out such transactions.

The ‘**carbon farming**’ activities to be covered are those defined in the CRC Framework proposal. Whenever relevant, the **synergies and trade-offs between carbon and nitrogen** and their possible optimisation should be covered. **All types of land**, including forests and their above-ground biomass, where relevant, should be covered. In the case of the agricultural

sector, organic farming, as an approach with potential to increase carbon sequestration in the soil, should be included.

Key information/data on soil carbon should be shared with land managers, to enable them to learn from peers and facilitate access to tailored advice and certification services to improve their soil management performance and verify the mitigation impact of their activities in view of possible certification. Given the necessity for new ideas that meet social needs, create social relationships and form new collaborations within this topic's subject, proposals should integrate **social innovation**.

Proposals should include a dedicated task and appropriate resources to collaborate with other relevant forthcoming projects as well as to capitalise on activities and results from on-going, relevant projects. In particular, projects should build on the preparatory work done by projects funded by the [EJP SOIL programme](#) (e.g. [CarboSeq](#) project), [AI4SoilHealth](#), [BENCHMARKS](#), [MaRVIC](#), [MRV4SOC](#), [CREDIBLE](#), [HoliSoils](#), [CLIMB-FOREST](#), [INFORMA](#), [OptFor-EU](#), the [ORCaSa](#) project, [InBestSoil](#), [NOVASOIL](#), [SoilValues](#), and the project originating from the HORIZON-MISS-2023-SOIL-01-09 topic (on carbon farming in living labs), as well as work carried out by the Joint Research Centre on the establishment of baselines for the implementation of the CRC Framework.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge/data and outputs, and between existing databases and models, through close collaboration with the Joint Research Centre's EU Soil Observatory (**EUSO**), the upcoming EU Forest Observatory and the project SoilWISE. In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO.

HORIZON-MISS-2024-SOIL-01-08: Managing forest peatsoils

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this Mission.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>

Expected Outcome: Activities under this topic will contribute to EU climate and nature protection policies and specifically respond to the Mission Soil specific objective 2 “Conserve and increase soil organic carbon stocks “, thereby supporting the implementation of the Land Use, Land Use Change and Forestry (LULUCF) Regulation⁵⁰⁶ with respect to the inclusion of wetland restoration activities.

Project results are expected to contribute to all of the following expected outcomes:

- Improved access to **knowledge and data** on forest peatlands, their management, their role in carbon cycles and societal/economic/environmental values, contributing to the upscaling of carbon farming schemes and their certification under the proposed EU carbon removal certification framework⁵⁰⁷.
- **Management measures** and innovative solutions for sustainable land and forest management are in place at the test locations to maintain and further enhance the status of forest peatlands.
- Forest managers and policymakers in EU Member States and Associated Coun can make **better informed decisions** on the basis of the assessment of the added value of peatland restoration approaches under different scenarios (different types of forests on peat soils) through enhanced monitoring of their benefits and trade-offs in terms of GHG emissions and removals, climate change adaptation and disaster risk reduction, ecosystem services, and biodiversity.

Scope: **Peatlands** can provide multiple ecosystem services such as timber production, climate regulation, water quality control, flood abatement, biodiversity conservation, as well as recreational benefits. However, this **potential is compromised** due to drainage. **Alternative soil management practices for forest peat soils**, in particular through the combination of rewetting techniques and forest management (with the exclusion of afforestation), have the potential to improve the environmental, climate and economic performance of peatlands, as well as reduce the impacts of forest harvesting on nutrient, sediment and dissolved organic carbon exports. In particular, practices are needed that effectively **address trade-offs** from forests multifunctionality and apply an **integrated approach** to their management (considering biodiversity, climate change challenges, bio-economy needs etc.). This topic does not cover agricultural emissions.

Proposed activities should:

- Establish **demonstration(s)** of sustainable, climate-positive and biodiversity-relevant forest management on peat soils, including rewetting;
- **Assess the benefits** of the practices regarding carbon sequestration, while taking into consideration any impacts of forest harvesting on nutrient, sediment and dissolved organic carbon exports from forest peat soils, thus **providing information and**

⁵⁰⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511>
⁵⁰⁷ [Commission proposes certification of carbon removals \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511)

indicators (such as baseline, quantification method, MRV) of the practices to maximise climate change mitigation and adaptation, biodiversity and other benefits.

- **Improve monitoring** techniques, including remote-sensing and field-data methods integrating technologies such as AI and robotics, and develop large-scale, minimally invasive GHG measurement facilities on re-wetted sites, to better assess biodiversity and climate aspects of forest management.
- Consider and **assess the potential of demonstrated activities to be replicated and scaled up**, particularly with a view to developing financial incentives under the EU certification framework, and to this end **develop approaches and recommendations** for policymakers and land managers.

The project(s) must implement the **multi-actor approach** and ensure an adequate involvement of the primary production sector and the wider forest-based value chain and all relevant actors (landowners, foresters, scientists, advisors, local/regional/national public authorities, industry, etc.) throughout the different stages of project development and implementation.

Proposals should include a dedicated task and appropriate resources to build on and **collaborate with ongoing Horizon projects**, notably [MRV4SOC](#), [MaRVIC](#), [ALFAwetlands](#), [WET HORIZONS](#), [RESTORE4Cs](#) and [REWET](#) and with projects to be supported through topics “HORIZON-CL6-2024-BIODIV-01-8: Conservation and protection of carbon-rich and biodiversity-rich forest ecosystems”, “HORIZON-CL6-2024-CLIMATE-01-2: Socio-economic, climate and environmental aspects of paludiculture”, and “HORIZON-CL6-2024-CLIMATE-01-3: Paludiculture: large-scale demonstration”.

Where relevant, proposals should also build links with projects funded under the Mission “Adaptation to Climate Change”. Potentially, the projects funded under this topic could also cooperate with living labs and lighthouses that will be created in this and future calls of the Mission ‘A Soil Deal for Europe’.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge/data and outputs, and between existing databases and models, through close collaboration with the Joint Research Centre’s EU Soil Observatory (EUSO), the upcoming EU Forest Observatory and the project SoilWISE. In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO

HORIZON-MISS-2024-SOIL-01-09: Assessment of Soil Health in Africa

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a

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	proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Due to the scope of this topic, international organisations with headquarters in Africa are exceptionally eligible for funding.

Expected Outcome: Activities under this topic will advance the international dimension of the Mission ‘A Soil Deal for Europe’ and contribute to its specific objectives, in particular objective 4 "reduce soil pollution and enhance restoration". Activities will also contribute to the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture, African Union strategies, initiatives and action plans relevant for soil health and support global commitments and SDGs, in particular in the areas of sustainable agriculture, food and nutrition security, biodiversity, and climate.

Project results are expected to contribute to all of the following outcomes:

- Enhanced and accessible data for policy makers and intergovernmental organisations to inform a continental 'convergence of evidence' map that indicates areas in Africa that are likely to be affected by soil degradation processes (as has been implemented for Europe with the EUSO Soil Health Dashboard).
- Enhanced access to knowledge that can be used by a wide range of stakeholders to inform soil and land management policies and practices, prioritize areas for intervention and research and development, and support improved advisory services for farmers in Africa.
- Improved datasets are available on soil threats/properties which will contribute to the development of an interactive Soil Health Dashboard for Africa.

Scope: Africa has a large degree of degraded soils, suboptimal land use, population growth and increasingly urban population. These factors are contributing to increased competition and pressures on land (less land per farmer, less quality land per farmer, climate change, biodiversity loss) resulting in unfavourable economics of farming and ecosystem management.

The IPBES report on land degradation and restoration ⁵⁰⁸ highlights huge economic cost of land and soil degradation, including increasing cost of no action. Soil health is key to climate change adaptation and mitigation. Therefore, holistic systems approaches are needed for addressing multiple context specific soil health related challenges at country and regional level. In addition, evidence driven analytical framework is urgently needed for adequate soil

⁵⁰⁸ [Assessment Report on Land Degradation and Restoration](#)

health priority setting and planning at regional and national level, alignment of partners and investments.

Proposed activities should:

- Develop a scalable Africa-wide soil health dashboard, building on the experience of the EUSO Soil health dashboard, leveraging existing data (e.g., Africa Soil Information System AfSIS⁵⁰⁹) and other EU funded projects such as [Soils 4 Africa](#).
- Strategic collection of new data to fill soil knowledge gaps (such as pollution, compaction, biodiversity, nutrient status, acidity/acidification, soil organic matter, soil erosion, soil water) and improve the accuracy and functionality of the dashboard through consultative engagement with national stakeholders.
- Identify critical local/regional thresholds for key soil health descriptors.
- Develop roadmaps to highlight trends in soil health responses to policy instruments.
- Support participating African countries in the development of national soil health strategies in at least 8 countries, to better manage soil resources for agriculture and the environment. In developing the strategies, projects should create use cases and provide training opportunities for the interpretation and use of data.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre's EU Soil Observatory (EUSO) and SoilWISE and ensure interoperability between the dashboard and other databases (such as national soil information services or the Horizon 2020 project Soils4Africa).

Proposals should include a dedicated task and appropriate resources to build on the work of Soils4Africa and other projects on soil information that are being funded by other entities (e.g., [ICARDA](#)), including philanthropic organisations, particularly where there is geographical or thematic complementarity. The Consortium is invited to propose a long-term sustainability plan for the dashboard in Africa.

While having a focus on Africa, activities could tap into international expertise (particularly from Community of Latin American and Caribbean States) as deemed necessary.

Other Actions not subject to calls for proposals

1. SGA: Specific Grant Agreement for a Living Lab Support Structure

Within the Framework Partnership Agreement (FPA) awarded under topic HORIZON-MISS-2022-SOIL-01-08: Framework Partnership Agreement (FPA) for a living lab network support structure, the selected consortium is invited to submit a proposal for a Specific Grant

⁵⁰⁹ <https://www.isric.org/projects/africa-soil-information-service-afsis>

Agreement (SGA). This SGA will cover the first three years of the FPA (2023-2025). One single proposal should be submitted.

The expected outcomes of the SGA should be in line with the Expected Outcomes of the FPA described under Work Programme 2022 (HORIZON-MISS-2022-SOIL-01-08).

The SGA should provide further detail to put in practice the action plan presented under the FPA in relation to the following tasks:

- Set up a structure that will act as a one-stop shop catering for the needs of living labs and lighthouses funded under the Mission ‘A Soil Deal for Europe’ and providing tailor made advice to participants of living labs and lighthouses. This structure should support living labs in their day-to-day operations (including on technical, networking and communication issues) and help to harmonise approaches within and across living labs. The support structure should also flag opportunities for the living labs to make use of data and services available from European Research Infrastructures federated under the European Open Science Cloud (EOSC) or from relevant Data Spaces, as indicated in the Soil Mission implementation plan⁵¹⁰. The support structure should provide guidance on how to apply the criteria for living labs (as specified in the Mission Implementation Plan⁵¹¹) to funded living lab projects and propose adjustments to these criteria, if deemed necessary. On this basis, the support structure should develop a methodology and procedure for the validation of living labs and lighthouses to establish “quality standards” (similar to a label) for living labs and lighthouses, as these are gradually established under the Soil Mission. This should support harmonisation and comparability of approaches across soil health living labs working in different settings and on different themes. In cooperation with the PREPSOIL⁵¹² project, the support structure should identify existing living lab and lighthouse initiatives funded outside the Mission that would meet the criteria/standards for Soil Mission living labs, as a basis for their integration into the wider Living Lab network. As part of the services provided to living labs funded under the Mission, the support structure should help living labs in developing strategies to sustain their activities beyond the lifetime of the Horizon Europe project. This will include assisting living lab partners in the development of financial strategies and long-term management plans, as well as strengthen connections with local business communities, in particular SMEs, investors and other commercial stakeholders.
- Facilitate the exchange of knowledge, data, findings and experiences within and across living labs and lighthouses (with a focus on, but not limited to, those funded under the Mission). To this end, the support structure should identify common areas of interest between funded living labs and lighthouses and propose concrete actions to create synergies and capitalise on the wealth of existing experiences and resources. This should include, amongst others, the organization of workshops, seminars, annual network

⁵¹⁰ [EU Mission Soil Deal for Europe Implementation Plan | European Commission \(europa.eu\)](#)

⁵¹¹ As defined in Section 3.2.3 and detailed in 8.D of the Implementation Plan

⁵¹² <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101070045/program/43108390/details>

meetings, cross-visits and training modules. Activities should result in the creation of working groups, learning material and tools addressing specific technical themes (e.g. particular soil challenges or land uses) as well as transversal aspects (e.g. data management, monitoring of progress, the use of digital tools, the integration of behavioural sciences in research and innovation). In addition to enhancing operational capacities of living lab partners, the exchange of experiences should serve to promote a wider dialogue between the various living labs on their contribution to achieving the Mission's objectives and to discuss possibilities for scaling up activities beyond the living lab areas.

- Promote the creation of new living labs and lighthouses by providing external stakeholders and potential applicants with information on the Mission's living lab concept and its implementation under the Mission as well as with ideas for cooperation and with advice on the preparation of proposals for living lab calls under the Mission⁵¹³. To reach a wide audience, the support structure should widely publicise its information, amongst others by organising targeted match-making events in close cooperation with the project NATI00NS⁵¹⁴. Due attention shall be given to reaching out to a wide range of stakeholders to ensure a balanced thematic and geographic coverage of the growing network of living labs and lighthouses.
- Monitor and assess the activities of living labs and lighthouses in a systematic way and report on the main outcomes and experiences. This will include 6-monthly reports informing on main developments, experiences and issues encountered as well as more detailed 12-monthly analyses of the progress achieved by the funded living lab projects. The reports will bring together and complement the information arising from monitoring activities performed by each of the funded living lab projects⁵¹⁵. They will feed into the overall monitoring of the Mission undertaken by the upcoming Mission Implementation Platform (MIP)⁵¹⁶. Close cooperation with the MIP regarding the reporting and monitoring requirements is therefore essential, as the support structure will be the main contact point for the MIP to obtain high quality information and data on the performance of living lab projects. The support structure will also contribute to the Mission's Dashboard developed by the MIP.
- Develop a web-portal and other tools and services for information, dissemination, exchange of experiences and outreach. The web-portal should be linked to and complement the websites of relevant projects and the upcoming MIP. Attention should be given to the integration and further development of existing information and

⁵¹³ Information on the concept of Living Labs can be retrieved from the Implementation Plan of Mission A Soil Deal for Europe ([Implementation Plans for the EU Missions | European Commission \(europa.eu\)](#)) and the living labs topic "HORIZON-MISS-2023-SOIL-01-08: Co-creating solutions for soil health in Living Labs".

⁵¹⁴ [Funding & tenders \(europa.eu\)](#)

⁵¹⁵ See projects funded under topics HORIZON-MISS-2023-SOIL-01-08 and HORIZON-MISS-2023-SOIL-01-09

⁵¹⁶ Link to Tender Specifications once published (Horizon Europe Work Programme 2021, Call HORIZON-MISS- 2021-SOIL-02: Procurement actions: Mission Implementation platform)

resources, in particular the interactive map of living labs and lighthouses set-up by the project PREPSOIL. The support structure should prepare regular newsflashes and a 3-monthly electronic newsletter to support the evolving community of practice of living labs. Communication and outreach should benefit living labs and lighthouses (operating as part of the Soil Mission or outside) as well as a wide range of stakeholders and the wider public. Through the provision of a collaborative space for living labs and lighthouse partners, the web-portal should support the establishment of a dynamic community of practice.

- Disseminate solutions created, tested and demonstrated in living labs and lighthouses, so that these are widely known and can be accessed by potential users outside the living lab areas. As part of outreach activities, propose innovative measures to promote the uptake and upscaling of the innovative approaches and practices to reach new living lab initiatives, as well as the methods and process through which these innovations were generated in the living labs. If relevant, conduct specific networking activities for lighthouses on how to best demonstrate exemplary solutions.

In addition to collaborating closely with living labs and other projects or structures mentioned previously (e.g. the MIP, JRC/EUSO, PREPSOIL, NATI00NS), the support structure funded under this SGA should establish close contact and regular exchange with the TRAMI project (Transnational Cooperation on the Missions Approach⁵¹⁷) in order to make mutual use of relevant tools, advices and services.

Activities performed by the living lab support structure should support all emerging living labs, regardless of their geographical and thematic coverage.

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts C and E of the General Annexes⁵¹⁸.

This action will be implemented through a Coordination and Support Action (CSA). Legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative timetable: Third quarter of 2023

Indicative budget: EUR 3.20 million from the 2023 budget⁵¹⁹

⁵¹⁷ [Home | TRAMI \(trami5missions.eu\)](https://trami5missions.eu)

⁵¹⁸ [wp-13-general-annexes_horizon-2021-2022_en.pdf \(europa.eu\)](#)

⁵¹⁹ Of which EUR 2.64 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.45 million from the 'Digital, Industry and Space' budget, EUR 0.05 million

Missions' Joint Calls

Joint Call between Mission 100 Climate Neutral and Smart Cities by 2030 and Mission Adaptation to Climate Change

Call - Demonstration of climate mitigation and resilience solutions in support of the implementation of the Adaptation to Climate Change and Cities Missions

HORIZON-MISS-2023-CLIMA-CITIES-01

Conditions for the Call

Indicative budget(s)⁵²⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵²¹	Indicative number of projects expected to be funded
		2023		
Opening: 10 Jan 2023 Deadline(s): 27 Apr 2023				
HORIZON-MISS-2023-CLIMA-CITIES-01-01	IA	40.00 ⁵²²	10.00 to 12.00	4
Overall indicative budget		40.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General
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⁵²⁰ from the 'Civil Security for Society' budget, EUR 0.06 million from the 'Culture, Creativity and Inclusive Society' budget.

The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁵²¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁵²² Of which EUR 3.83 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 7.54 million from the 'Digital, Industry and Space' budget and EUR 26.82 million from the 'Climate, Energy and Mobility' budget and EUR 0.88 million from the 'Civil Security for Society' budget and EUR 0.92 million from the 'Culture, Creativity and Inclusive Society' budget.

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	Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CLIMA-CITIES-01-01: Urban greening and re-naturing for urban regeneration, resilience and climate neutrality

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding. The following additional eligibility criteria apply: Each action must include pilot demonstrations in at least four cities ⁵²³ situated each in different Member States or Associated

⁵²³ Their local authorities or their mandated representatives may represent one city defined as a Local Administrative Unit (LAU), or a “greater city” or metropolitan region, taking account of Functional Urban Areas (FUA) where relevant.

	<p>Countries to demonstrate how urban planning and design can be optimally deployed to develop and implement greening and re-naturing solutions for regeneration, repurposing and rehabilitation purposes whilst enhancing their overall urban climate neutrality and resilience.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform⁵²⁴ and the soon to be established Climate adaptation Mission Platform is essential, and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with these Mission Platforms must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the projects' starting date.</p> <p>In grants awarded under this topic, eligible costs for major infrastructure works related to the deployment/instalment of the greening and re-naturing solutions must not constitute more than 20% of the total eligible costs. Beneficiaries' own resources and/or mobilisation and leverage of additional investments from other EU programs and initiatives (such as EU Structural and Investment Funds) and/or other sources, private or public, must make up the remaining investment costs to secure the economic and financial sustainability of the project.</p>
<p><i>Exceptional page limits to proposals/applications</i></p>	<p>The page limit of the application is 70 pages.</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

⁵²⁴ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, to be scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*

- Regenerated, rehabilitated, climate-proofed, resilient, environmentally, socially and economically upgraded built environment and in particular areas such as large estate social housing districts, deprived districts and neighbourhoods, neglected or abandoned areas, derelict industrial sites, brownfields or other dysfunctional urban sites through greening and re-naturing interventions⁵²⁵;
- Improved liveability, functionality, quality of life and social cohesiveness of the urban areas by means of greener, renatured, regenerated, more bio-diverse, safer, mixed/multi-use and shared urban (public) spaces and built environments, whilst catering for climate change mitigation, adaptation, resilience and energy poverty of various social groups, including women and children, elderly and people with low socioeconomic status by:
 - o Increasing the share of newly created and/or restored public green spaces, (such as green/blue infrastructures, parks, gardens, forests, green corridors, community allotments, green roofs, restored degraded urban ecosystems, nature-based solutions) by at least 25% over the total targeted under regeneration area, compared to the baseline at the start of the project;
 - o Evidence-based urban regeneration, re-purposing and rehabilitation plans, blueprints, practical recommendations and guidelines, regulations and standards, focusing on greening and renaturing solutions for pollution abatement, cleaner air, water and soil and climate mitigation and adaptation plans compatible and coherent with the corresponding regional ones;
 - o increased citizens satisfaction by at least 20% compared to the baseline at the start of the project due to increased greening/re-naturing of the urban space and improved quality of life, air, water, soil;
- Integrated, transdisciplinary, adaptive, transparent and participative urban planning practices and decision making processes to facilitate the integration and take-up of greening, renaturing and biodiversity-enhancing approaches and solutions in urban climate plans enabling for considerations of cross-scalar (cities/region) compatibility and coherence of climate planning frameworks and cross-sectorial interdependencies;
- Innovative methods, digital tools and data-driven models enabling identification, prioritization and visualization of place-based holistic solutions and scenario analysis, assessment of feasibility and cost-effectiveness and prediction of their short, mid and long term impact;
- Mutually compatible and supportive EU sectorial and urban/region cross-scalar planning for climate mitigation, adaptation and neutrality at both city and region level;

⁵²⁵ Such as green and blue infrastructures, nature-based solutions, green roofs and corridors, restoring degraded urban ecosystems and/or ecosystem-based approaches.

- Increased social awareness about urban climate-related vulnerabilities (such as flooding, heat-waves, droughts etc.), and the urgency for climate mitigation and adaptation and zero pollution strategies and solutions;
- Innovative monitoring⁵²⁶ frameworks and key performance indicators, accounting, as appropriate, for the established ones, to monitor the performance and assess the performance and impact of the deployed solutions regarding climate mitigation, adaptation and regeneration against a well-defined baseline at the start of the project;
- Contribution, as appropriate, to the implementation of the European Green Deal, the Climate-neutral and smart cities Mission (hereafter referred to as the Cities Mission), the Adaptation to climate change Mission (hereafter referred to as the Climate Mission), as well as other urban relevant policies and initiatives such as the Zero Pollution Action Plan, Biodiversity Strategy, Fit for 55 Strategy, EU Urban Mobility Framework, Water Framework Directive, Circular Economy Action Plan, European Urban Initiative, Urban Agenda for the EU, New Leipzig Charter, Europe’s Digital Decade, the European partnership on Driving Urban Transitions for a sustainable future (DUT) and the New European Bauhaus Initiative.

Scope: Cities are at the forefront of tackling climate change and pollution and managing impacts through mitigation and adaptation measures. However, while in the last decade local and regional authorities gained a better understanding of the inter-related climate challenges and urgencies of their territories, less has been undertaken to effectively implement and assess climate mitigation and adaptation specific approaches and, in consequence, to adopt them into the local urban/regional policies, strategies and planning documentations, such as municipal/regional master planning, Urban Agendas, Sustainable Urban Mobility Plan (SUMP), Sustainable Energy and Climate Action Plan (SECAP), Sustainable Energy Action Plan (SEAP), smart specialisation strategies etc.

To meet the objectives of the European Green Deal, the Paris and Glasgow agreement and the UN (United Nations) Sustainable Development Goals, cities in close cooperation with their surrounding region, should engage in decisive actions to tackle the climate change, biodiversity and pollution imperatives and enhance their climate resilience.

It is widely acknowledged⁵²⁷ that urban “greening” and renaturing approaches and solutions, if properly designed and maintained, can address simultaneously climate change mitigation and adaptation challenges by reducing GHG emissions and atmospheric concentrations, energy demands for e.g. mobility, wastewater treatment, heating and cooling. They can also contribute to significant regeneration and upgrading of built environment whilst delivering

⁵²⁶ Such as CIVITAS Impact and process evaluation framework, or the schemes developed by projects funded under the LC-CLA-11-2020: Innovative nature-based solutions for carbon neutral cities and improved air quality.

⁵²⁷ Authoritative research indicates that nature-based solutions can provide over one-third of the cost-effective climate mitigation needed between now and 2030 to stabilize warming to below 2 °C (IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services).

multiple co-benefits in terms of biodiversity conservation and enhancement, cleaner air, water and soil, noise reduction, flood risks mitigation, public health and well-being.

The objective of this topic is to explore and demonstrate how to operationalize collaborative climate mitigation and adaptation urban planning approaches deploying “greening” and renaturing solutions for regeneration, re-purposing, rehabilitation and pollution abatement purposes. The co-created plans should be in line with the guiding principles of the European Green Deal and the New European Bauhaus initiative.

To this end, it invites for demonstration actions in at least four ‘lead’ cities accompanied by at least four ‘replicator’ cities, representing good geographical, climate and socio-economic diversity across Europe and situated each in a different Member State or Associated Country, where existent urban structure and fabric allow rehabilitation, regeneration, re-purposing or (re)conversion of areas such as large scale social housing districts, deprived districts and neighbourhoods, neglected or abandoned areas and brownfields, derelict industrial sites or dysfunctional urban places through greening and renaturing.

Actions are expected to:

- Set-up in each participating city collaborative platforms (such as living labs) depicting multi-level, and multi-disciplinary governance structures and engaging local authorities, citizens, stakeholders and relevant actors⁵²⁸ and expertise⁵²⁹ for the co-design, testing and demonstration of co-created urban rehabilitation, regeneration, re-purposing or (re)conversion plans deploying greening and re-naturing approaches to foster more climate neutral, resilient, liveable, sustainable and functional cities with thriving nature, communities and economic activities;
- Ensure that the regional dimension concerning climate adaptation is properly accounted for through the continuous and seamless involvement of competent regional authorities responsible for the design and implementation of the regional climate mitigation and adaptation measures to ensure cross-scalar (city/region) compatibility and coherence of the urban/regional climate mitigation and adaptation plans.

Actions should also foresee assessment, quantitative and qualitative, ex-ante and ex-post, of the impact of combining and integrating different greening and re-naturing interventions and actions both at local and at regional level based on robust monitoring schemes and using, as appropriate, existing methodologies and indicators.

The ‘lead’ demonstration cities must, further to the development of the above mentioned plans, also foresee actual implementation of the co-created interventions during the life of the project. To this end, concrete implementation actions and associated costs should be described under a dedicated Work Package or a task.

⁵²⁸ Such as infrastructure providers, knowledge institutions, planners, cultural and creative organizations, energy, mobility and climate agencies.

⁵²⁹ Such as planning, design, ICT sector, social sciences and humanities, behavioural and citizens sciences, gender, ecology etc.

The replicator/follower cities, under the proactive guidance and mentoring of the lead cities, should develop their co-created plans, measures and interventions with not obligation for their actual implementation during the life of the project.

To support the integrated planning process and facilitate involvement of citizens in the decision-making process, actions should make effective use of digital tools (e.g. digital twins) integrating cross-domain static, real time and historic data from observations, modelling and simulation whilst making use of open standards and technical specifications.

Actions should engage in clustering activities with other like-minded projects funded under this topic, other relevant projects⁵³⁰ and projects supported under the Climate-neutral and smart cities and Climate Adaption Missions to promote synergies and complementarities.

Although concrete actions for such activities would only be identified in an early stage in the projects' lifetime, appropriate provisions and resources enabling their implementation should be put aside at the proposal level in a clearly identifiable work package. Furthermore, actions should engage in ambitious outreach, communication, dissemination and training activities to foster replication, upscaling and up-taking of the projects' outputs beyond the projects consortia.

To maximise impacts, in carrying out these activities, actions are strongly recommended to work in coordination and complementarity with the 'Climate-neutral and smart cities' and the (soon to be established) 'Climate Adaptation' Mission Platforms. Opportunities for collaboration and synergies should also be explored and, as appropriate, pursued with other relevant initiatives, such as the European partnership on Driving Urban Transitions for a sustainable future (DUT), the upcoming European Urban Initiative of Cohesion Policy, the Urban Agenda for the EU⁵³¹, the CSA project selected from the call HORIZON-MISS-2021-CIT-01-02, the Covenant of Mayors, the CIVITAS initiative, the Living-in.EU initiative and the New European Bauhaus Community and NEBLab.

Joint Call between Mission Restore our Ocean and Waters by 2030, Mission Adaptation to Climate Change and Mission A Soil Deal for Europe

This call is implemented jointly by Mission 'Adaptation to Climate Change', Mission 'Soil Deal for Europe' and Mission 'Restore our ocean and waters by 2030' to ensure integrated approaches and explore synergies between these Missions. As such, the activities under this joint call will address the objectives and impacts of these three Missions, as stated in their respective introductory statements.

⁵³⁰ Such as the CSA project resulting from the call "HORIZON-CL6-2022-BIODIV-01-03: Network for nature: multi-stakeholder dialogue platform to promote nature-based solutions" and Horizon Europe relevant projects on nature-based solutions in cities under the call "HORIZON-CL6-2023-BIODIV: Stopping biodiversity loss and enhancing ecosystem services in urban and peri-urban areas.

⁵³¹ More particularly, the Partnership for sustainable land use and nature-based solutions, and the resources the Partnership developed, on [Sustainable Land Use | Futurium \(europa.eu\)](https://www.europa.eu/commission/press-room/detail/2022/09/sustainable-land-use) as well as the upcoming Partnership on Greening of Cities, provided that the outcome of the ex-ante assessment concerning the plans to set up this Partnership will be positive.

Call - Demonstration of climate mitigation and resilience solutions in support of the implementation of the Adaptation to Climate Change, Restore our Ocean and Waters by 2030 and A Soil Deal for Europe Missions

HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01

Conditions for the Call

Indicative budget(s)⁵³²

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵³³	Indicative number of projects expected to be funded
		2023		
Opening: 17 Jan 2023 Deadline(s): 20 Sep 2023				
HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01	IA	15.00 ⁵³⁴	Around 15.00	1
Overall indicative budget		15.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.

⁵³² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁵³³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁵³⁴ Of which EUR 4.88 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.63 million from the 'Digital, Industry and Space' budget and EUR 0.31 million from the 'Civil Security for Society' budget and EUR 6.85 million from the 'Climate, Energy and Mobility' budget and EUR 0.32 million from the 'Culture, Creativity and Inclusive Society' budget.

*Horizon Europe - Work Programme 2023-2025
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<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

This call is implemented jointly by Mission 'Adaptation to Climate Change', Mission 'Soil Deal for Europe' and Mission 'Restore our ocean and waters by 2030' to ensure integrated approaches and explore synergies between these Missions. As such, the activities under this joint call will address the objectives and impacts of these two Missions, as stated in their respective introductory statements.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01: Mission Climate adaptation, Mission Ocean & waters and Mission Soil Deal for Europe – Joint demonstration of an integrated approach to increasing landscape water retention capacity at regional scale

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In addition to the standard eligibility conditions, the consortium must carry out demonstration activities in 3 different Member States or Associated Countries, involving and including in the consortium partners from these respective countries.</p> <p>The following additional eligibility criteria apply:</p> <p>The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>

	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices. If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to local and/or regional authorities from an ‘associated region’. The maximum amount to be granted to each 'associated region' is EUR 100,000, to showcase the feasibility, replicability and scalability of the solutions developed within the project in the 'associated region'⁵³⁵. Each 'associated region' may benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.</p>
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is 70 pages.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Demonstrated effective and inclusive integrated approaches to the management of landscape, soil, water and vegetation at a regional level, to increase the resilience to climate change impacts on soils, waters, habitats and biodiversity;
- Demonstrated effective nature-based solutions and ecological approaches to increase landscape water retention capacity, including soil water retention capacity;

⁵³⁵ ‘Associated regions’ are understood as areas with similar ecosystems that can benefit from the demonstration activities (neighbouring regions and/or regions in a different river basin, including less-developed regions), which are selected with a view to building capacity to implement innovative solutions to manage landscape, water and soil in an integrated approach to restore ecosystems. Proposals should ensure that the 'associated regions' are located in Member States/Associated Countries other than those that are part of the project consortium.

- Demonstrated economic feasibility of these solutions, ensuring their long term sustainability;
- Enhanced implementation of the European Green Deal, the EU Adaptation Strategy, the EU Biodiversity Strategy, EU legislation for the protection of freshwaters (such as the EU Water Framework Directive and EU Groundwater Directive) and the EU Soil Strategy for 2030;
- Better information and greater mobilisation of all relevant actors, including citizens, local and regional authorities and planning bodies, farmers, foresters, land owners, business owners and economic operators, soil protection and management organisations, water management and planning bodies, for an effective and sustainable governance of soil, water and all other landscape components to achieve climate change resilience and increase water retention in the landscape.

Scope: This joint topic relates to the Adaptation to Climate Change Mission's third objective, aiming to support at least 75 full-scale deep demonstrations of climate resilience, to the Mission Ocean & Waters' objective 1, protect and restore marine and freshwater ecosystems and biodiversity, and objective 2, prevent and eliminate pollution of marine and freshwaters. The topic also relates to several specific objectives of the Mission "A Soil Deal for Europe", including to the objectives to reduce soil degradation and soil sealing and to prevent erosion. It also contributes to the objectives of the Water Framework Directive (WFD)⁵³⁶, including achieving Good Ecological and Chemical Status and restoration of aquatic ecosystems, to the objectives of the Groundwater Directive as regards improvement of chemical status of ground waters, as well as to the freshwater objectives of the Biodiversity Strategy 2030 on the re-naturalisation of rivers and the restoration of floodplains.

Landscape water retention capacity is understood as the ability of water bodies, soils and other ecosystems to retain water after it has fallen as precipitation; it is fundamental for the protection of biological diversity as life depends on water. High landscape water retention capacity prevents accelerated surface run-off, increases water content in soils and surface and ground water availability for vegetation, improves the quantity and quality of groundwater and aquifer recharge, reduces soil erosion and nutrient run off into surface water bodies, and improves local micro-climate by reducing local air and biomass temperature. As such, it has the potential to prevent and mitigate impacts of extreme hydrological events such as floods and to act as a buffer against heat extremes. Permanent vegetation in a landscape, such as forest areas, wetlands and permanent grasslands, significantly improves water retention capacity.

Projects should demonstrate socio-ecological approaches and nature-based solutions to increase landscape and soil water retention capacity, leading to improvement of quality and quantity of ground and surface waters in the area where they are deployed, and boosting resilience to climate change impacts. A combination of nature-based measures with hybrid

⁵³⁶ https://ec.europa.eu/environment/water/water-framework/index_en.html

solutions and relevant Blue-Green engineering may be considered, provided these combined solutions are sustainable and provide adequate social and environmental safeguards.

The consortium must carry out demonstration activities in 3 different Member States or Associated Countries, involving and including in the consortium partners from these respective countries. Proposals under this topic should comprise full-scale demonstration of innovative solutions in real conditions of landscapes in the countries selected for demonstration activities⁵³⁷, with specific impacts leading to a measurable increase of the resilience and adaptation capacity of the areas involved, whilst contributing to climate change mitigation, surface and ground water quality, soil health improvement and biodiversity protection and conservation. Applying a multi-actor approach, demonstrations should be carried out at the level of socio-ecological territorial units that are large enough to allow covering the different living and non-living systems (soil, water, vegetation and other biota, human communities, etc.) in a landscape and the complex web of relations among them (e.g. a region or a sea/river basin).

Planning, implementation and management of effective measures to increase landscape water retention capacity requires involvement of various stakeholders and their expertise, such as land, owners, spatial planning and other local and regional authorities, soil protection and management experts, water management and planning bodies, landscape planning experts, farmers and forest managers. Local authorities and local communities should be involved in the design and implementation of the solutions, to ensure that these are well suited for local needs and conditions and are “owned” by the local communities. Activities should, therefore, promote the involvement of local communities as well as the relevant authorities, to consider with them the impact of intended actions, and to co-create measures while taking local communities’ needs and values on board. The proposals should involve citizens, including where appropriate European Solidarity Corps, and relevant citizen science activities.

The project(s) should also identify, create and disseminate best-practice examples for end-users (e.g. farmers and other land managers, decision-makers, water management authorities, landscape planners) to ensure landscape water retention capacity in the long term, including soil water retention capacity, with a view to boosting resilience to climate change, preventing biodiversity loss and promoting at the same time socio-economic transition processes in an ecosystem-based and circular economy perspective, and promote those best practices among the end users.

The demonstration sites established within the project(s) funded under this topic could qualify as “lighthouses”⁵³⁸ in the sense of the Mission A Soil Deal for Europe if and when they comply with the criteria laid down in the Implementation Plan of that Mission.

⁵³⁷ These could build on solutions studied e.g. under topic HORIZON-MISS-2022-CLIMA-01-05 “Boost the sponge function of landscape as a way to improve climate-resilience to water management challenges”, among others.

⁵³⁸ “Lighthouses” are defined in the Implementation Plan of the Mission ‘Soil Deal for Europe’ as “places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”. They are local sites (one farm, one forest exploitation, one industrial

Proposals should both:

- Involve at least five 'associated regions'⁵³⁹ as third parties, to showcase the feasibility, replicability and possibility to scale up the solutions developed. The consortium will proactively reach out to these associated regions to enable them to follow closely the project and its demonstration activities, transferring knowledge to them and technical assistance to build capacity and to implement integrated approaches for landscape, water and soil management to increase landscape water retention capacity in their territories; and
- Draw up an action plan and roadmap to replicate and scale up the solutions within the 'associated regions' and beyond them, to increase landscape water retention capacity, including soil water retention capacity.

As a mechanism to provide knowledge transfer and technical assistance to the associated regions, the selected project should provide support to third parties in the form of grants. The maximum amount of the envisaged Financial Support to Third Parties is EUR 100 000 per third party for the entire duration of the action. Proposals should outline the process for selection of the third parties to which financial support would be granted, based on the principles of transparency, objectivity and fairness.

The project(s) funded under this topic should address all the below points:

- Contribute to the networking and coordination activities and joint activities of the three Missions, including by establishing links with projects funded under Horizon 2020⁵⁴⁰, including the European Green Deal call, and under Horizon Europe, where they are relevant for climate adaptation and soil health knowledge and solutions;
- Include a mechanism and resources to establish links with the Implementation Support Platform of the Mission Ocean and Waters and build links with other activities of this Mission to maximize synergies;
- Include a mechanism and the resources to establish operational links with the Climate-ADAPT platform (run by the European Environment Agency (EEA) together with DG CLIMA) that will act as a central element for the monitoring, support and visualisation of the Adaptation to Climate Change Mission progress in European Regions. To this purpose, projects will feed their results to the Climate-ADAPT and EEA assessments

site, one urban city green area, etc.) that can be included in a living lab area or be situated outside a living lab area.

⁵³⁹ 'Associated regions' are understood as areas with similar ecosystems that can benefit from the demonstration activities (neighbouring regions and/or regions in a different river basin, including less-developed regions), which are selected with a view to building capacity to implement innovative solutions to manage landscape, water and soil in an integrated approach to restore ecosystems. Proposals should ensure that the associated regions are located in Member States/Associated Countries other than those that are part of the project consortium.

⁵⁴⁰ See Cordis results packs LC-CLA-13-2020, at https://cordis.europa.eu/programme/id/H2020_LC-CLA-13-2020, and LC-CLA-2020 12a Advancing climate services | Programme | H2020 | CORDIS | European Commission (europa.eu)

and should include a mechanism to establish links with the Mission Adaptation to Climate Change Implementation Platform;

- Include a mechanism and resources to establish links with the Implementation Platform being established for the Mission A Soil Deal for Europe; and
- Support the Ocean and Water Knowledge System⁵⁴¹ and the EU Soil Observatory⁵⁴², in particular by contributing to knowledge creation and data collection.

Joint Call between Mission Restore our Ocean and Seas by 2030 and Mission A Soil Deal for Europe

This call is implemented jointly by the Mission ‘A Soil Deal for Europe’ and Mission ‘Restore our ocean and waters by 2030’ to ensure integrated approaches and explore synergies between these Missions. As such, the activities under this joint call will address the objectives and impacts of these two Missions, as stated in their respective introductory statements.

Call - Mission Ocean & waters and Mission Soil Deal for Europe Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin

HORIZON-MISS-2023-OCEAN-SOIL-01

Conditions for the Call

Indicative budget(s)⁵⁴³

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵⁴⁴	Indicative number of projects expected to be funded
		2023		
Opening: 17 Jan 2023 Deadline(s): 20 Sep 2023				

⁵⁴¹ See the Implementation Plan of Mission Ocean & Waters, [Final outline implementation plans \(europa.eu\)](https://europa.eu)

⁵⁴² https://joint-research-centre.ec.europa.eu/eu-soil-observatory-euso_en

⁵⁴³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁵⁴⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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HORIZON-MISS-2023-OCEAN-SOIL-01-01	IA	16.00 545	Around 8.00	2
Overall indicative budget		16.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Joint action between Mission Ocean, Seas and Waters and Mission A Soil Deal for Europe

This call is implemented jointly by the Mission ‘A Soil Deal for Europe’ and Mission ‘Restore our ocean and waters by 2030’ to ensure integrated approaches and explore synergies between these Missions. As such, the activities under this joint call will address the objectives and impacts of these two Missions, as stated in their respective introductory statements.

Proposals are invited against the following topic(s):

HORIZON-MISS-2023-OCEAN-SOIL-01-01: Mission Ocean and Waters and Mission A Soil Deal for Europe – Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin

Specific conditions

⁵⁴⁵ Of which EUR 6.95 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.72 million from the 'Digital, Industry and Space' budget and EUR 0.32 million from the 'Civil Security for Society' budget and EUR 5.67 million from the 'Climate, Energy and Mobility' budget and EUR 0.33 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply:</p> <p>In addition to the standard eligibility conditions, the consortium must carry out demonstration activities in 3 different Member States or Associated Countries of the Mediterranean basin, involving and including partners from these respective countries in the consortium.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: If projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on FAIR (findable, accessible, interoperable, reusable) principles.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The financial support to third parties may only be awarded to local and/or regional authorities from an 'associated region'. The maximum amount to be granted to each 'associated region' is EUR 100,000, to showcase the feasibility, replicability</p>

	and scalability of the solutions demonstrated within the project in the 'associated region' ⁵⁴⁶ . Each 'associated region' may benefit from the Financial Support to Third Parties provided under this topic within the duration of the project only once.
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is 70 pages.

Expected Outcome: This topic contributes to the implementation of the European Green Deal, the Farm to Fork Strategy, the Biodiversity Strategy for 2030, the Soil Strategy for 2030, the Bioeconomy Strategy and the EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil'. It addresses the Mission 'A Soil Deal for Europe' specific objective 4 – reduce soil pollution and enhance restoration, targets T.4.2 – reducing fertiliser use by at least 20% and T.4.3 – reduce nutrient losses by at least 50%. It relates to the Mission Ocean and waters' objective 2 – prevent, minimize and remediate pollution of marine and freshwater ecosystems, which has a focus on the Mediterranean Sea basin. It also contributes to the objectives of the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD) - including in terms of Good Environmental Status and restoration of aquatic ecosystems - and the Marine Spatial Planning Directive (MSPD).

Project results are expected to contribute to all of the following expected outcomes:

- accelerated uptake of integrated innovative and reproducible approaches to prevent, minimise and remediate soil and water pollution from excess nutrients (especially nitrogen and phosphorus) in the landscape-river catchment-sea system and transition waters in the Mediterranean Sea basin;
- accelerated uptake of integrated innovative and reproducible approaches to reduce the use of fertilisers and to prevent, minimize and remediate nutrient pollution and reduce ocean and inland water eutrophication;
- foundations for future demonstration and upscaling activities on integrated innovative approaches to prevent, minimise and remediate soil and water pollution from excess nutrients, and to reduce the use of fertilisers, in 'associated regions';
- empowerment of citizens to take action against pollution of soils, waters and the ocean.

Scope: Soils are essential for all life-sustaining processes in our planet. If they are healthy and managed sustainably, they provide many benefits to people, nature and climate. However, 60-

⁵⁴⁶ 'Associated regions' are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or regions in a different river basin) and/or less-developed regions, with the view to build capacity to implement the innovative solutions to reduce fertiliser use and to prevent, minimise and remediate pollution from excess nutrients. The proposals should ensure that the 'associated regions' are located in Member States/Associated countries other than those that are part of the project consortium.

70% of soils in Europe are in an unhealthy condition⁵⁴⁷. One of the reasons for poor soil health in Europe is the excess of nutrients (mainly nitrogen and phosphorus) due to an excess of fertiliser applications. The presence of nutrients in soil at concentrations higher than plant requirements not only reduces their capacity for providing their vital ecosystem services, but the nutrient runoff contaminates groundwater, streams, rivers, wetlands, lakes and seas, and increases the risk of water and ocean eutrophication. Addressing nutrient pollution is crucial to achieve the objectives of the Water Framework Directive, in particular in relation to nutrient losses in agriculture.

Consequently, proposals should demonstrate scalable breakthrough innovations (technological, business, social and governance) in the landscape-river catchment-sea system, including coastal ecosystems, in the Mediterranean Sea basin addressing all following issues:

- Upstream prevention and reduction of nutrient (especially nitrogen and phosphorus) losses from soil, and of soil and water pollution from excess nutrients, such as through reduction in the use of traditional/mineral fertilisers and/or their sustainable substitution with bio-based fertilisers, improved nutrient retention in soil and slower release to crops, improved nutrient use efficiency, integrated landscape and soil management, reduction of nutrient losses from rural and urban communities;
- Prevention of entry of nutrients in river catchment areas and their reduction, for example through improved wastewater treatment, use of green filters and other measures for reducing the flow of nutrients through the river system and prevention and reduction of their entry into the estuary/sea;
- Measures to reduce/eliminate excess nutrients in/from the estuary/sea to reduce or eliminate the risk of eutrophication.

Proposed solutions for pollution prevention, elimination and remediation should not increase the level of anthropogenic air emissions or underwater noise, or lead to other potential environmental impacts. Proposed solutions should be in line with the EU taxonomy regulation⁵⁴⁸ and delegated acts.

The consortium must carry out demonstration activities in 3 different Member States or Associated Countries of the Mediterranean basin, involving and including in the consortium partners from these respective countries. The demonstrations should be carried out at the level of territorial units, such as a rural area, an urban community, a region, a river basin or an estuary, to show effectiveness of the demonstrated solutions.

The demonstration of solutions should be fully adapted to the local conditions for reduction of use of fertilisers and of nutrient losses from soil, and they should take place in a real-life demonstrative context (e.g. actual farms and/or forests) with well-defined system boundaries.

⁵⁴⁷ EU Mission Soil Deal for Europe Implementation Plan, September 2021, https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/soil_mission_implementation_plan_final_for_publication.pdf

⁵⁴⁸ [EU taxonomy for sustainable activities | European Commission \(europa.eu\)](https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/soil_mission_implementation_plan_final_for_publication.pdf).

Demonstrations should also involve actual users of the solutions (e.g. land owners, soil managers, water managers, river management authorities, etc.). Proposals should ensure a balanced regional distribution of the demonstration sites, taking into account pedo-climatic conditions, topographic conditions, soil types, farming/forestry systems, soil water regimes, and include all relevant elements of the water system (ground waters, surface waters, streams, as well as, where relevant, coastal and estuarine waters).

In line with the impact-driven approach of the Missions, proposals are expected to work with and engage at least five ‘associated regions’⁵⁴⁹ to showcase in additional geographic areas the feasibility, replicability and potential for upscaling of the solutions developed within the projects. The funded projects should ensure that the associated regions are located in Member States/Associated countries other than those that are part of the project consortium. Regions located in European sea basins other than the Mediterranean Sea basin are eligible to be selected as associated regions, with a view to upscaling and deployment of the demonstrated solutions in other areas.

The consortia should proactively reach out to the associated regions to enable them to follow closely the project and its demonstration activities. The projects should continuously share their outcomes and knowledge with associated regions and may provide them with technical assistance to build capacity and to implement solutions to reduce fertiliser use and to prevent, minimise and remediate pollution of soil and water from excess nutrients in their territory. The technical assistance to the associated regions may include advice for the preparation of roadmaps, plans and projects to reduce fertiliser use and to prevent, minimise and remediate pollution from excess nutrients, to address possible barriers and show the feasibility of implementing integrated innovative approaches.

As a mechanism to provide knowledge transfer and technical assistance to the associated regions, the selected projects may provide support to third parties in the form of grants. The maximum amount of the envisaged Financial Support to Third Parties is EUR 100 000 per third party for the entire duration of the action. Proposals should outline the selection process of the third parties to which financial support would be granted based on principles of transparency, objectivity and fairness. An associated region shall benefit from the Financial Support to Third Parties provided under this topic only once.

Proposals should:

- Ensure the involvement of different stakeholders with complementary expertise in different stages of the projects and take into account the needs of the stakeholders and users;

⁵⁴⁹ ‘Associated regions’ are understood as areas with ecosystems that can benefit from the demonstration activities (e.g. neighbouring regions and/or in a different sea basin) and/or less-developed regions, with the view to build capacity to implement the innovative solutions to reduce fertiliser use and to prevent, minimise and remediate pollution from excess nutrients. The proposals should ensure that the associated regions are located in Member States/Associated countries other than those that are part of the project consortium.

- Build upon existing knowledge and solutions and support the upscaling of successful solutions, including from beyond the EU, designed and developed in the frame of projects funded by current and previous European and national programmes, in particular the European Union Framework Programmes for Research and Innovation (such as Horizon 2020);
- Include dedicated training and communication activities taking place in the demonstration sites, for dissemination and accelerated adoption by other potential users of the approaches demonstrated in the project, as well as for citizen engagement and soil, water and ocean literacy improvement (including for advisory services);
- Include a mechanism and resources to establish links with the Implementation Support Platform of the Mission Ocean and Waters and the Implementation Platform of the Mission A Soil Deal for Europe; as appropriate, also link with other Missions' relevant initiatives.
- Include dedicated tasks and adequate resources for coordination measures, networking and joint activities with other relevant projects funded under Horizon 2020 and Horizon Europe, and in particular with the other project funded under this topic. These coordination measures, networking and joint activities could, for example, involve the organisation of and participation in joint workshops, the exchange of knowledge, the coordinated development and adoption of best practices, or joint communication activities.
- Collaborate with the JRC's EU Soil Observatory, in particular as regards interoperability, sustainability and longevity of data and knowledge; and
- Support the Ocean and Water Knowledge System, in particular by contributing to knowledge creation and data collection.

Potentially, projects financed under this topic could cooperate with future Living Labs and Lighthouses created under dedicated call topics from the Mission A Soil Deal for Europe and working in the area of reduction of fertiliser use and of soil pollution from excess nutrients. Moreover, the sites for demonstration of solutions for reduction of use of fertilizers as well as reduction of nutrient losses from soil established within the projects funded under this topic could themselves qualify to be considered as Lighthouses in the sense of the Mission A Soil Deal for Europe, if they comply with the criteria laid down in the Implementation Plan of that Mission⁵⁵⁰.

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https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/soil_mission_implementation_plan_final_for_publication.pdf

Other Actions (for missions) not subject to calls for proposals

Other budget implementation instruments

1. Commission expert groups: Mission Boards

Objectives and scope:

The Mission Boards experts, who have been appointed following the call for applications published in 2022⁵⁵¹, provide advice, which supports the work of the European Commission in the implementation phase of five EU Missions for Horizon Europe.

The experts included in the Mission Boards are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions above, including knowledge in business, economic social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The advisory role of the Mission Boards is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and prevent conflict of interest and respect confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact. In light of this, and as highly qualified, specialised, independent experts who were selected following a public call for applications in 2022, on the basis of objective criteria, it is justified that the members of the Mission Boards are remunerated for the services they offer pursuant Article 21 of the Commission's horizontal rules on expert groups ('the horizontal rules')⁵⁵².

A special allowance of EUR 450/day will be paid to the Mission Board experts appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work⁵⁵³.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

⁵⁵¹ https://ec.europa.eu/info/news/commission-looking-top-experts-advise-eu-missions-2022-jan-05_en

⁵⁵² C(2016) 3301

⁵⁵³ C(2016) 3301

Indicative timetable: 1st Quarter 2023 – 2nd Quarter 2023

Indicative budget: EUR 0.90 million from the 2023 budget⁵⁵⁴

2. Use of individual experts: Mission Board Chairs

Objectives and scope:

The Mission Boards Chairs (one Chair per Mission Board) have been appointed in 2022⁵⁵⁵ by the Director-General of DG RTD in agreement with other relevant Commission services, in order to maintain a degree of continuity with the previous Mission Boards. They are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions above, including knowledge in business, economic social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The Chairs support and coordinate the work of the Mission Boards. The Chairs are also in charge of steering the work of the Mission Board according to its specific mandate. The Mission Board Chairs do not have a decision-making or executive role.

The advisory role of the Chairs is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and to respect conflict of interest and confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards Chairs provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact.

A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: 1st Quarter 2023 – 2nd Quarter 2023

⁵⁵⁴ Of which EUR 0.23 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.10 million from the 'Digital, Industry and Space' budget, EUR 0.16 million from the 'Health' budget, EUR 0.02 million from the 'Civil Security for Society' budget, EUR 0.38 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁵⁵ https://ec.europa.eu/info/news/commission-looking-top-experts-advise-eu-missions-2022-jan-05_en

Indicative budget: EUR 0.08 million from the 2023 budget⁵⁵⁶

3. Commission expert groups: Mission Boards

Objectives and scope:

The Mission Boards experts provide advice, which supports the work of the European Commission in the implementation phase of EU Missions for Horizon Europe.

The experts included in the Mission Boards are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions, including knowledge in business, economic, cultural, social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The advisory role of the Mission Boards is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and prevent conflict of interest and respect confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact. In light of this, and as highly qualified, specialised, independent experts, it is justified that the members of the Mission Boards are remunerated for the services they offer pursuant Article 21 of the Commission's horizontal rules on expert groups ('the horizontal rules')⁵⁵⁷.

A special allowance of EUR 450/day will be paid to the Mission Board experts appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work⁵⁵⁸.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: 1st Quarter 2024 – 4nd Quarter 2024

⁵⁵⁶ Of which EUR 0.02 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.01 million from the 'Digital, Industry and Space' budget, EUR 0.01 million from the 'Health' budget, EUR 0.00 million from the 'Civil Security for Society' budget, EUR 0.03 million from the 'Climate, Energy and Mobility' budget, EUR 0.00 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁵⁷ C(2016) 3301

⁵⁵⁸ C(2016) 3301

Indicative budget: EUR 1.50 million from the 2024 budget⁵⁵⁹

4. Use of individual experts: Mission Board Chairs

Objectives and scope:

The Mission Boards Chairs (one Chair per Mission Board) have been appointed by the Director-General of DG RTD in agreement with other relevant Commission services, in order to maintain a degree of continuity with the previous Mission Boards. They are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions above, including knowledge in business, economic, cultural, social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The Chairs support and coordinate the work of the Mission Boards. The Chairs are also in charge of steering the work of the Mission Board according to its specific mandate. The Mission Board Chairs do not have a decision-making or executive role.

The advisory role of the Chairs is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and to respect conflict of interest and confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards Chairs provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact.

A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: 1st Quarter 2024 – 4nd Quarter 2024

Indicative budget: EUR 0.12 million from the 2024 budget⁵⁶⁰

⁵⁵⁹ Of which EUR 0.36 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.22 million from the 'Digital, Industry and Space' budget, EUR 0.29 million from the 'Health' budget, EUR 0.03 million from the 'Civil Security for Society' budget, EUR 0.56 million from the 'Climate, Energy and Mobility' budget, EUR 0.04 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁶⁰ Of which EUR 0.03 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.02 million from the 'Digital, Industry and Space' budget, EUR 0.02 million

Indirectly managed actions

1. European Solidarity Corps support to EU Missions

At the heart of the EU's missions approach is the rationale to drive systemic change. Missions will help deliver key EU policy priorities such as the European Green Deal, Europe's Beating Cancer Plan, NextGenerationEU, the EU Industrial Strategy and A Europe fit for the Digital Age, amongst others. With this is the need for connection with the public in general, to build confidence in a sustainable future for the EU and Associated Countries and with the younger generation in particular who will have to make their lives in this future.

Creating a connection between the EU missions and the European Solidarity Corps will help to deliver this systemic change. Young people across the EU and Associated Countries will be supported to take part in European Solidarity Corps projects involving volunteering activities and supporting the aims of the missions.

The Horizon Europe contribution will complement existing European Solidarity Corps actions referred to as "Volunteering projects" in the 2023 Work Programme of the European Solidarity Corps.

The action will comply with conditions laid down in Regulation (EU) No 2021/695⁵⁶¹ establishing the Horizon Europe Programme and will be implemented under the Volunteering Projects covered by the European Solidarity Corps general call for proposals 2023 with the necessary derogations to the Horizon Europe Regulation as set out below. The general call for proposals contains the European Solidarity Corps Programme Guide, which provides detailed information on the rules, procedures and criteria for the applicants and participants interested in developing projects under the Programme. The action will involve individual deployments and/or activities by volunteering teams. Projects are expected to start in 2023, with individual deployments throughout the duration of the projects.

Grants awarded to the beneficiaries will take the form of unit contributions, except for exceptional costs, which will be funded based on actual costs. The use of the different forms of costs is authorised by Decision of 15/11/2021 authorising the use of lump sums, unit costs and flat-rate financing for volunteering and solidarity projects actions under the European Solidarity Corps⁵⁶². The relevant unit contributions and the applicable rates are published in the European Solidarity Corps Programme Guide 2023. The funding rate is up to 100% of the eligible costs.

The budget implementation tasks will be entrusted to the European Solidarity Corps National Agencies via the conclusion of Contribution Agreements under indirect management mode in accordance with Article 62(1)(c) of Financial Regulation (EU, Euratom) 2018/1046.

from the 'Health' budget, EUR 0.00 million from the 'Civil Security for Society' budget, EUR 0.04 million from the 'Climate, Energy and Mobility' budget, EUR 0.00 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁶¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0695&from=EN>

⁵⁶² https://europa.eu/youth/solidarity/organisations/reference-documents-resources_en

In order to take into account the nature and the objectives of this action, and to implement this action in line with the European Solidarity Corps general call for proposals 2023, the following exceptions to Horizon Europe Regulation apply:

- To be eligible for funding, applicant organisations must be established in a Member State or an associated country which have a national agency designated for the management of actions under the European Solidarity Corps. However, organisations established in third countries non-associated to the European Solidarity Corps may participate indirectly as project participants working together with project beneficiaries.
- Financial capacity of the applicants will be verified if the grant requested is greater than EUR 60 000;
- Proposals will not be evaluated on the basis of the excellence award criteria;
- Proposals will be evaluated by the evaluation committee appointed by the National Agencies, which may be supported by independent external experts;
- The period for informing all applicants of the outcome of the evaluation of their application is set at a maximum of six months, from the deadline from submission of proposals;
- The period for signing grant agreements with applicants is set at a maximum of nine months from the deadline from submission of proposals;
- Eligible indirect costs will not exceed 7% of the total direct eligible costs;
- In-kind contributions will not be eligible;
- The risk associated with non-recovery of sums due by beneficiaries to the European Solidarity Corps National Agencies will not be covered by the Mutual insurance mechanism;
- Articles 38 to 41 of Horizon Europe Regulation concerning ownership and protection, exploitation and dissemination, transfer and licensing, and access rights will not apply to this action.

Legal entities:

The implementing bodies will be European Solidarity Corps national agencies established in Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Germany, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Iceland, North Macedonia, Türkiye, Liechtenstein.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: Q4 2023 – Q4 2025

Indicative budget: EUR 16.53 million from the 2023 budget⁵⁶³

2. European Solidarity Corps support to EU Missions

At the heart of the EU's missions approach is the rationale to drive systemic change. Missions will help deliver key EU policy priorities such as the European Green Deal, Europe's Beating Cancer Plan, NextGenerationEU, the EU Industrial Strategy and A Europe fit for the Digital Age, amongst others. With this is the need for connection with the public in general, to build confidence in a sustainable future for the EU and Associated Countries and with the younger generation in particular who will have to make their lives in this future.

Creating a connection between the EU missions and the European Solidarity Corps will help to deliver this systemic change. Young people across the EU and Associated Countries will be supported to take part in European Solidarity Corps projects involving volunteering activities and supporting the aims of the missions.

The Horizon Europe contribution will complement existing European Solidarity Corps actions referred to as "Volunteering projects" in the 2024 Work Programme of the European Solidarity Corps, and will support the objectives of the Horizon Europe missions⁵⁶⁴.

The action will comply with conditions laid down in Regulation (EU) No 2021/695⁵⁶⁵ establishing the Horizon Europe Programme and will be implemented under the Volunteering Projects covered by the European Solidarity Corps general call for proposals 2024 with the necessary derogations to the Horizon Europe Regulation as set out below. The general call for proposals contains the European Solidarity Corps Programme Guide, which provides detailed information on the rules, procedures and criteria for the applicants and participants interested in developing projects under the Programme. The action will involve individual deployments and/or activities by volunteering teams. Projects are expected to start in 2024, with individual deployments throughout the duration of the projects.

Grants awarded to the beneficiaries will take the form of unit contributions, except for exceptional costs, which will be funded based on actual costs. The use of the different forms of costs is authorised by Decision of 15/11/2021 and successive amendments authorising the use of lump sums, unit costs and flat-rate financing for volunteering and solidarity projects actions under the European Solidarity Corps⁵⁶⁶. The relevant unit contributions and the applicable rates are published in the European Solidarity Corps Programme Guide 2024. The funding rate is up to 100% of the eligible costs.

⁵⁶³ Of which EUR 4.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 1.89 million from the 'Digital, Industry and Space' budget, EUR 3.00 million from the 'Health' budget, EUR 0.28 million from the 'Civil Security for Society' budget, EUR 7.00 million from the 'Climate, Energy and Mobility' budget, EUR 0.21 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁶⁴ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe_en

⁵⁶⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0695&from=EN>

⁵⁶⁶ https://europa.eu/youth/solidarity/organisations/reference-documents-resources_en

The budget implementation tasks will be entrusted to the European Solidarity Corps National Agencies via the conclusion of Contribution Agreements under indirect management mode in accordance with Article 62(1)(c) of Financial Regulation (EU, Euratom) 2018/1046.

In order to take into account the nature and the objectives of this action, and to implement this action in line with the European Solidarity Corps general call for proposals 2024, the following exceptions to Horizon Europe Regulation apply:

- To be eligible for funding, applicant organisations must be established in a Member State or an associated country which have a national agency designated for the management of actions under the European Solidarity Corps. However, organisations established in third countries non-associated to the European Solidarity Corps may participate indirectly as project participants working together with project beneficiaries.
- Financial capacity of the applicants will be verified if the grant requested is greater than EUR 60 000;
- Proposals will not be evaluated on the basis of the excellence award criteria;
- Proposals will be evaluated by the evaluation committee appointed by the National Agencies, which may be supported by independent external experts;
- The period for informing all applicants of the outcome of the evaluation of their application is set at a maximum of six months, from the deadline from submission of proposals;
- The period for signing grant agreements with applicants is set at a maximum of nine months from the deadline from submission of proposals;
- Eligible indirect costs will not exceed 7% of the total direct eligible costs;
- In-kind contributions will not be eligible;
- The risk associated with non-recovery of sums due by beneficiaries to the European Solidarity Corps National Agencies will not be covered by the Mutual insurance mechanism;
- Articles 38 to 41 of Horizon Europe Regulation concerning ownership and protection, exploitation and dissemination, transfer and licensing, and access rights will not apply to this action.

Legal entities:

The implementing bodies will be European Solidarity Corps national agencies established in Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Germany, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Iceland, North Macedonia, Türkiye, Liechtenstein.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: Q4 2023 – Q4 2026

Indicative budget: EUR 12.71 million from the 2024 budget⁵⁶⁷

⁵⁶⁷ Of which EUR 3.06 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 1.87 million from the 'Digital, Industry and Space' budget, EUR 2.49 million from the 'Health' budget, EUR 0.21 million from the 'Civil Security for Society' budget, EUR 4.76 million from the 'Climate, Energy and Mobility' budget, EUR 0.31 million from the 'Culture, Creativity and Inclusive Society' budget.

Cross-cluster activities

The European Union wants to put the New European Bauhaus (NEB) on a stable footing going forward as a self-standing Facility.

An intermediary step is needed to develop the current initiative in this sense. The Destination New European Bauhaus described here is this intermediary step. It will build on the NEB activities, calls and experiences so far and anchor the NEB values of sustainability, aesthetics and inclusion in R&I, paying special attention to the green transition at the level of neighbourhoods and communities. This approach is not entirely new: the Horizon Europe Work Programme 2021-2022 already included the Destination “Deployment of NEB lighthouse demonstrators”. At this juncture, the Destination will pave the way for the NEB Facility to be in place from 2025 onwards.

Destination: New European Bauhaus

The European Union is moving ahead with its goals to achieve climate neutrality by 2050 and reduce greenhouse gas (GHG) emissions by at least net 55% by 2030 while increasing climate resilience. It also strives to shift to a circular economy, work towards its zero-pollution ambition, and to protect and restore biodiversity, in line with the European Green Deal goals. The New European Bauhaus (NEB) has been a part of this agenda for the past three years. It is contributing to reducing GHG emissions and embedding circular economy principles in several strategic areas, including the built environment. It is also leveraging the power of culture, art and creativity for the green transition.

The built environment is a central part of our daily lives. On average, Europeans spend 85 to 90% of their time in buildings. Overall, buildings are responsible for about 40% of the EU’s total energy consumption and for 36% of its GHG emissions from energy, as well as for a large share of air pollutant emissions⁵⁶⁸. Half of all extracted materials end up in the construction sector, while construction and demolition waste accounts for more than a third of all water consumption and waste generated in the EU. Spatial planning also affects transport distances to access buildings and can thus impact the amount of noise and GHG emissions from transport. Buildings also have significant impacts on nature and biodiversity. Urbanisation and construction often lead to habitat loss and fragmentation, disrupting ecosystems and displacing wildlife, resulting in biodiversity loss. Moreover, pollution and light emanating from buildings can also affect and disturb wildlife. Furthermore, the built environment needs to be made more resilient against natural (climate-extreme events; pandemics) and man-made hazards (cyber threats; terrorism).

At the same time, innovation in the construction sector spreads slowly. Renovations are still too expensive, too slow, and often of insufficient quality, resulting in renovation rates that are too low. The roll-out of heating and cooling decarbonisation is also progressing at an

⁵⁶⁸ Over 60% of fine particulate matter (PM2.5) emissions come from the residential, commercial and institutional sector (see <https://www.eea.europa.eu/data-and-maps/dashboards/necd-directive-data-viewer-7>).

insufficient pace. And buildings are inefficiently used – 38% of buildings in the EU (28) are under occupied, with a rate higher than 60% in four, and higher than 50% in seven Member States⁵⁶⁹. Design for adaptability to changing household sizes, for shared facilities and for multiple use can help use available buildings more efficiently, thus reducing the need for new construction.

There is also a lack of awareness of circular and innovative approaches amongst the different actors of the construction sector, and it is challenging for public institutions to widely apply more sustainable and climate-resilient practices, in line with the EU Adaptation Strategy⁵⁷⁰. There are not enough incentives for such practices, in a market that remains very attached to low costs in the short term. Consequently, sustainable, circular and innovative construction materials and design solutions are rarely widely available, accessible or affordable. Yet, circular economy approaches could lead to reductions of waste and of up to 60 % in the materials-related GHG emitted⁵⁷¹.

On the supply-side, the EU Emissions Trading System carbon price and carbon cap, combined with the Carbon Border Adjustment Mechanism, will lead to a strong reduction of the embodied carbon in key construction materials. And on the demand side, designs and construction of buildings with very low life cycle GHG emissions, including through sustainably sourced materials that store carbon during the life span of the building, can make a strong contribution to reaching EU-wide climate neutrality⁵⁷². As the built environment is an integral part of people's daily lives, this reality affects many citizens who live in buildings that may be old, non-resilient, non-sustainable, polluting (e.g. due to outdated solid fuel (coal, wood) heating), and excessively energy and resource consuming, with consequences on the health and well-being of occupants and others. This affects particularly the less wealthy, especially in absence of targeted public support to restore buildings. The built environment thus has a huge potential when it comes to the reduction of GHG and air pollutant emissions, saving of resources, sufficiency⁵⁷³, climate adaptation, disaster resilience, and improved health and well-being. This while also embedding culture and arts in the solutions being developed. Last but not least, the transformation of our built environment should address questions of affordability, power and responsibility: the determining factor for many households is the short-term economic cost of the transition.

The Destination New European Bauhaus would operate at the level of neighbourhoods and communities for three reasons.

⁵⁶⁹ Eurostat (2018), [Overcrowded and under-occupied dwellings - Products Eurostat News - Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

⁵⁷⁰ COM(2021) 82 final

⁵⁷¹ <https://www.eea.europa.eu/themes/climate/cutting-greenhouse-gas-emissions-through/cutting-greenhouse-gas-emissions-through>

⁵⁷² The EU's 2050 Roadmap for whole life carbon of buildings is planned for the first quarter of 2024.

⁵⁷³ The Intergovernmental Panel on Climate Change (IPCC) defines sufficiency as 'a set of measures and daily practices that avoid demand for energy, materials, land, and water while delivering human well-being for all within planetary boundaries.'

Sufficiency interventions in buildings include the optimisation of the use of building space, repurposing unused existing buildings, prioritising multi-family homes over single-family buildings, and adjusting the size of buildings to the evolving needs of households.

First of all, because some results can immediately be implemented, seen and felt at the neighbourhood and community level. Neighbourhoods are understood here as the comprehensive residential systems, in rural, peri-urban or urban areas, where people live, socialize, and find services to meet some – or most – of their daily needs. Neighbourhoods offer a territorial fragment, a community at the level of which different policy areas can be merged using a holistic approach⁵⁷⁴. Solutions to make neighbourhoods more beautiful, inclusive, sustainable, circular, secure and climate resilient can be used as proof of concept and later scaled up or replicated in other contexts. Over the past three years, the NEB has functioned as a living laboratory developing new methods and approaches thanks to research and innovation to drive concrete transformations and accompany both targeted local actions and a wider, radical change of mind-sets.

Second, in line with the Renovation Wave⁵⁷⁵, the NEB reflects the close link between, on the one hand the circularity and renovation of the built environment, and on the other hand, with the social and cultural dimension of places. The way we shape our environment is an expression of culture, cultural heritage, arts, identity and diversity. The NEB takes into consideration those social and cultural dimensions.

Third, neighbourhoods and communities are the first to feel the quick impact of change and the urgent need for action. The experience of the COVID-19 pandemic profoundly changed working, consumption and social habits and, consequently, people's interaction in the built environment. The pandemic also boosted practices of solidarity, reciprocity and cooperation, especially in neighbourhoods with greater social vulnerability. The rise in global temperature levels, increasing frequency and scale of extreme weather events, such as heat waves and droughts, floods, forest fires, and tempests impact and destroy people's homes. At the same time, ageing societies represent a demographic trend that is likely to shape neighbourhood and community patterns in the future. These challenges underscore the need for responsive and adaptive infrastructures that address the new situation and reflect the specificities of the place/territory/community. They also underline the importance of supporting a strong social fabric that helps society to face those challenges and highlight the importance of spaces for sociability and interaction that strengthen community bonds and strategies for coping with emerging challenges. For instance, innovative infrastructure and public spaces should be envisioned to be inclusive of and accessible to people of all ages, commensurate with their specific needs and capacities, including through the integration of technology and smart environments. The need to pay greater attention to the built environment and its social impact and relevance for the community is evident. Yet, there has been scarce research on the new

⁵⁷⁴ The NEB Compass provides guidance on the NEB holistic approach (https://new-european-bauhaus.europa.eu/system/files/2023-01/NEB_Compass_V_4.pdf). A range of EU-funded projects are implementing this approach. For instance, two on-going waves of NEB lighthouse demonstrators are expected to illustrate how the NEB holistic approach can deliver the deep transformation needed to accelerate the green transition on the ground. Other EU-projects are working on operational impact models to support the implementation of NEB principles on the ground (e.g. CrAFt –(<https://craft-cities.eu/>)) as well as for holistic urban planning and for assessing the (co-) benefits of it (e.g. Re-Value (<https://re-value-cities.eu/>))

⁵⁷⁵ [COM\(2020\) 662 final](#)

dynamics affecting the relationship between sustainable transformation, the built environment and the society.

All topics of the Destination New European Bauhaus aim to make the European construction sector more climate friendly and climate-resilient – through circularity and regenerative approaches for sustainability – as well as more competitive while also ensuring that the built environment contributes to restoring natural ecosystems and improving social cohesion, as well as people’s health and well-being. By adopting the New European Bauhaus’ integrated approach that brings together sustainability, inclusion, and aesthetics through the active participation of citizens and the integration of arts and cultures in transformation processes, the Destination will contribute to developing a new generation of solutions, closer to people and their needs.

By involving people from diverse backgrounds with different needs through accessible participatory practices, topics will also aim to connect the green transformation with local democracies. This can help restore citizens’ solidarity and trust in democracy and avoid a “geography of discontent”, a phenomenon showing that places stuck in a development trap and where citizens feel left behind are faced with disengagement and discontent in the long term⁵⁷⁶. This can also contribute to address some of the negative effects of digitalisation on society such as fake news and disinformation.

Proposals for topics under this Destination should set out a credible pathway contributing to the NEB, and more specifically to one or more of the following impacts:

- **The construction ecosystem is more sustainable, less polluting and more circular** through the development of innovative and regenerative designs, architecture, bio-based materials and approaches that are adopted across the construction value chain and included into public and business decision-making. The construction ecosystem also becomes more climate-friendly and climate-resilient through the development of solutions for faster, cheaper and better renovation for zero-emission and energy-positive buildings, for more efficient use of buildings, designs using low-carbon and carbon-storing materials, and solutions. Cutting-edge technologies, including Artificial Intelligence (AI), are integrated and applied with arts, architectural and design sciences at the service of a more regenerative and circular construction ecosystem.
- **The trust of citizens in the green transition and democracy is increased** through participatory processes and governance models that balance public and private interests. This is achieved by using insights from Social Sciences and Humanities (SSH), social innovation, and by looking at how arts, culture and design can further amplify the transformative potential of those practices and models.
- **Innovative funding and financing models** are developed and applied to increase investments in the revitalisation of neighbourhoods. This would involve exploring tailored and innovative funding and financing models that mitigate the perceived risk of

⁵⁷⁶ For more details, see [‘The geography of EU discontent and the regional development trap in Europe’](#)

solutions for the built environment that combine environmental sustainability (towards climate neutrality, zero pollution and circular economy) with other aspects that increase their acceptance, such as accessibility, affordability, aesthetics and cultural relevance (e.g. identity, cultural heritage, sense of belonging) with the final goal to increase well-being in a cooperative society.

- Wider social acceptance of the green transition and related solutions is supported by **the creation of meaning through the contribution of the creative, arts and cultural heritage sector**. The expertise of stakeholders from the cultural and creative sectors assists companies and policy makers in addressing challenges associated with the green, digital, and social transitions.

These research components will also be supported by transversal actions to connect them, build synergies, and foster knowledge sharing and learning as well as to support monitoring and evaluation of progress.

R&I activities under this Destination will complement and ensure synergies with activities supported under several Horizon Europe partnerships, in particular: Built4People, Circular Bio-based Europe and Driving Urban Transition. Synergies will also be ensured with the Horizon Europe Missions, in particular the Climate-neutral and smart cities Mission and the Adaptation to climate change Mission. Opportunities for collaboration and synergies should also be explored and, as appropriate, pursued with other relevant initiatives such as the European Urban Initiative of Cohesion Policy, the Covenant of Mayors and past and ongoing relevant projects funded by Horizon 2020 and Horizon Europe, such as STARTS, as well as with other EU programmes such as LIFE-CET, LIFE-Circular Economy, URBACT, Green City Accord and European Green Capital/Leaf awards.

Call - Transforming neighbourhoods, making them beautiful, sustainable, and inclusive

HORIZON-MISS-2024-NEB-01

Conditions for the Call

Indicative budget(s)⁵⁷⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR	Indicative number of

⁵⁷⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities

		2024	million) ⁵⁷⁸	projects expected to be funded
Opening: 07 May 2024 Deadline(s): 19 Sep 2024				
HORIZON-MISS-2024-NEB-01-01	RIA	8.00 ⁵⁷⁹	Around 4.00	2
HORIZON-MISS-2024-NEB-01-02	IA	8.00 ⁵⁸⁰	Around 4.00	2
HORIZON-MISS-2024-NEB-01-03	CSA	1.80 ⁵⁸¹	Around 1.80	1
Overall indicative budget		17.80		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.

⁵⁷⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁵⁷⁹ Of which EUR 1.93 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.18 million from the 'Digital, Industry and Space' budget and EUR 1.57 million from the 'Health' budget and EUR 0.13 million from the 'Civil Security for Society' budget and EUR 3.00 million from the 'Climate, Energy and Mobility' budget and EUR 0.20 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁸⁰ Of which EUR 1.93 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.18 million from the 'Digital, Industry and Space' budget and EUR 1.57 million from the 'Health' budget and EUR 0.13 million from the 'Civil Security for Society' budget and EUR 3.00 million from the 'Climate, Energy and Mobility' budget and EUR 0.20 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁸¹ Of which EUR 0.43 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.27 million from the 'Digital, Industry and Space' budget and EUR 0.35 million from the 'Health' budget and EUR 0.03 million from the 'Civil Security for Society' budget and EUR 0.67 million from the 'Climate, Energy and Mobility' budget and EUR 0.04 million from the 'Culture, Creativity and Inclusive Society' budget.

<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-NEB-01-01: Exploiting the potential of secondary bio-based products

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL5 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Better understanding of the properties of products using bio-based material(s) derived from secondary sources by the construction sector stakeholders;
- Roadmaps for the industrial scale production or re-use (beyond the established state-of-the-art recycling and down-cycling) of at least four different types of products using secondary bio-based materials unlocking and demonstrating the full potential and benefits of the circular bio-based economy;
- Enhanced environmental performance of the construction products, including enhanced resource efficiency and potential long-term carbon removal.

Scope: Although the NEB has been championing bio-based materials for the built environment, more research is needed on products that make use of secondary bio-based construction materials, such as from by-products or waste from other industries or processes, including bio-based composites and residues/by-products from agriculture or from fishing, aquaculture and agro-food industries, in line with the cascading principles⁵⁸². Using such

⁵⁸² Guidance on cascading principles is available at: <https://op.europa.eu/en/publication-detail/-/publication/9b823034-ebad-11e8-b690-01aa75ed71a1/language-en/format-PDF/source-80148793>

products in the construction sector will reduce reliance on primary resources, hence minimising the environmental impact associated with their extraction and processing.

Proposals should increase the potential of innovative bio-based products making use of materials from secondary sources for construction applications, thereby enhancing the circular bio-based economy in the construction sector, in line with the NEB values and the cascading principles. Project results will allow to inform the construction sector's supply chain, including architects, developers and other construction sector stakeholders, about the availability, potential, and added-value of bio-based materials from secondary sources for new construction and renovation projects.

Proposals are expected to, for each secondary bio-based product covered:

- Assess its properties, benefits, design and construction possibilities and aesthetic⁵⁸³. This should cover at least the structural, thermal, acoustic, health-related and durability properties as well as the life cycle performance and environmental impact. This should also include the potential for deconstruction, re-use and recycling when buildings/public spaces undergo changes;
- Validate it in a relevant environment;
- Identify the sectors and applications where the chosen secondary bio-based material(s) could be embedded in construction processes and practices;
- Evaluate its economic scalability, including pathways for setting up efficient circular value chain to collect the secondary source.
- Contribute to the development of relevant European standards.

Cross-sectoral and cross-disciplinary collaboration is encouraged between profiles such as architects, artists, designers, engineers, biologists, urban planners, environmentalists, social scientists, and by extension the broader cultural and creative sector.

Actions are strongly recommended to collaborate with and build on the work of relevant research, including national or European funded research⁵⁸⁴. Actions are also encouraged to take into account and contribute with their results to future work in the field of regenerative design applied to architecture.

⁵⁸³ Guidance on the three NEB values is provided in the NEB Compass, available at: https://new-european-bauhaus.europa.eu/system/files/2023-01/NEB_Compass_V_4.pdf

⁵⁸⁴ Some indicative examples could be: HORIZON-CL4-2022-TWIN-TRANSITION-01-10: Circular flows for solid waste in urban environment; HORIZON-CL6-2022-CIRCBIO-01-05: EU-China international cooperation on unlocking the potential of agricultural residues and wastes for circular and sustainable bio-based solutions; HORIZON-CL6-2022-CIRCBIO-02-01-two-stage: Integrated solutions for circularity in buildings and the construction sector; HORIZON-CL5-2022-D4-02-05: More sustainable buildings with reduced embodied energy / carbon, high life-cycle performance and reduced life-cycle costs; HORIZON-CL6-2023-CIRCBIO-01-2: One hundred circular model households: making European households sustainable through inclusive circular practices; HORIZON-CL6-2023-CircBio-01-7: Symbiosis in the bio-based industrial ecosystems; HORIZON-CL4-2024-TWIN-TRANSITION-01-38: Hubs for circularity for industrialised urban peripheral areas.

Projects shall share their intermediate and final results and findings with the 'New European Bauhaus hub for results and impacts' that will be established⁵⁸⁵. It will also cooperate, interact and take part in its activities when relevant to support the achievement of its objectives. Resources should be dedicated to engage with this Coordination and Support Action.

HORIZON-MISS-2024-NEB-01-02: New governance models for the co-design and co-construction of public spaces in neighbourhoods by communities

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Improved understanding by public authorities of how innovative engagement approaches can foster openness, social cohesion, trust and acceptance within communities and promote the inclusion of marginalised communities and/or vulnerable groups.
- Tested and validated engagement approach(es) are made available to public authorities to involve citizens in the co-design and co-development of public spaces in their neighbourhoods.
- Better public acceptance of change thanks to the meaningful and continuous engagement of all relevant end-users and local communities in the design, construction and maintenance of public spaces.
- Improved cooperation mechanisms between citizens and project developers.

Scope: Addressing societal challenges such as climate change, energy poverty, the pandemic, ageing population or the increased societal divide will require to rethink the way we develop and live in our neighbourhoods. Current ways of planning, designing and building often overlook the importance of continuously engaging end-users or local communities. Yet, incorporating community knowledge and efforts can lead to more liveable neighbourhoods that reflect local needs and contexts and empower current and future residents. Moreover, the way public spaces are designed can have an important impact on the way people interact with each other, the kind of activities that take place in such spaces, and the trust of people towards

⁵⁸⁵ See HORIZ-MISS-2024-NEB-01-03

their local authority and thus democracy. Therefore, it is key to empower people to take an active role in co-designing those spaces. This can lead to greater acceptance, enhanced sense of belonging, social trust and an increased willingness to further engage with the community, and thus promote a global positive social impact on people's well-being and the neighbourhood as a whole.

Building on work carried out in previous projects, proposals will study, refine and validate existing engagement approaches, that allow residents, businesses, cultural organisations and local governments to co-design and co-create public spaces in neighbourhoods. For instance, this should include how to involve citizens in the development and maintenance of public spaces and neighbourhoods; or flexible designs allowing communities to re-create or re-furbish spaces according to evolving needs. Special attention should be paid to involve diverse groups and citizens at risk of exclusion.

Proposals are expected to address all of the following:

- Study and refine engagement model(s) and methodology(ies) that enables the meaningful participation of concerned stakeholders and citizens in the co-design, refurbishment and development of public spaces in their neighbourhoods. The model and methodology should:
 - o Be inclusive and accessible, and ensure that citizens are empowered to contribute to the decision-making processes;
 - o Use innovative digital tools, platforms and technologies such as augmented reality or virtual reality, to facilitate virtual and physical collaboration between citizens, designers, urban planners, policymakers and the construction ecosystem to enhance citizen engagement in the planning, design and construction process while ensuring that digital solutions remain inclusive and accessible, and assessing their added value compared to 'traditional' in-person methods.
- Demonstrate that the chosen engagement approach(es) (e.g. model, methodology, digital tools) can effectively and measurably foster openness, social cohesion, trust and acceptance within communities as well as promote the inclusion of marginalised communities and/or vulnerable groups in public space redevelopment projects. Proposals should demonstrate this in at least three neighbourhoods with differing local environmental, social and economic conditions, and each one located in a different Member State or Associated Country.
- Monitor and evaluate all stages of the chosen engagement approach(es), using an appropriate methodology, and measure the success of projects in fostering openness, social cohesion, acceptance within communities as well as the inclusion of marginalised communities and vulnerable groups.
- Assess how the above may impact future project design and decision-making in the construction of neighbourhoods as well as in the construction ecosystem.

Cross-sectoral and cross-disciplinary collaboration between architects, engineers, designers, creative sectors, natural and social scientists, urban planners, environmentalists, and by extension the broader cultural and creative sector is encouraged. The involvement of relevant stakeholders such as local small organizations, communities' representatives, end-users, and local authorities in the design and implementation of the project is also encouraged.

Actions are strongly recommended to collaborate with and build on the work of relevant research⁵⁸⁶. Actions are also encouraged to take into account and contribute with their results to future work on the impact of public spaces on social relations in neighbourhood communities.

Projects shall share their intermediate and final results and findings with the 'New European Bauhaus hub for results and impacts' that will be established⁵⁸⁷. It will also cooperate, interact and take part in its activities when relevant to support the achievement of its objectives. Resources should be dedicated to engage with this Coordination and Support Action.

HORIZON-MISS-2024-NEB-01-03: Setting up a New European Bauhaus hub for results and impact

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.80 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.80 million.
<i>Type of Action</i>	Coordination and Support Actions

⁵⁸⁶ Such as: HORIZON-CL2-2022-DEMOCRACY-01-01: Artificial intelligence, big data and democracy; HORIZON-CL2-2022-DEMOCRACY-01-02: The future of democracy and civic participation; HORIZON-CL6-2021-GOVERNANCE-01-09: Revitalisation of European local communities with innovative bio-based business models and social innovation; HORIZON-CL6-2021-GOVERNANCE-01-07: Regional governance models in the bioeconomy; HORIZON-CL5-2023-D4-02-05: Supporting the creation of an accessible and inclusive built environment; HORIZON-CL5-2021-D4-02-03: Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the New European Bauhaus; HORIZON-CL4-2021-RESILIENCE-02-32: Social and affordable housing district demonstrator; HORIZON-CL4-2023-HUMAN-01-82: Art-driven digital innovation: Towards human compatible and ecologically conscious technology; HORIZON-MISS-2021-CIT-01-02: Collaborative local governance models to accelerate the emblematic transformation of urban environment and contribute to the New European Bauhaus initiative and the objectives of the European Green Deal; HORIZON-MISS-2021-CIT-02-01: Urban planning and design for just, sustainable, resilient and climate-neutral cities by 2030; HORIZON-MISS-2021-NEB-01-01 Support the deployment of lighthouse demonstrators for the New European Bauhaus initiative in the context of Horizon Europe missions; HORIZON-MISS-2021-CLIMA-02-05: Local engagement of citizens in the co-creation of societal transformational change for climate resilience It should also collaborate with ongoing related projects such as HORIZON-CL5-2024-D4-02-05: Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts.

⁵⁸⁷ See HORIZ-MISS-2024-NEB-01-03

Expected Outcome: Proposals are expected to contribute to all of the following expected outcomes:

1. The NEB Facility is based on robust information from ongoing and completed NEB activities and projects, ensuring its high quality and impact.
2. Policy-makers as well as professionals in public administrations and the construction ecosystem can access new knowledge and apply new products, standards, approaches and tools to the regeneration of neighbourhoods in alignment with the NEB values and principles;
3. The NEB Community, projects and stakeholders develop a sense of belonging to the NEB initiative and the findings and results of their projects contribute to setting the direction of the NEB Facility.

Scope: A ‘New European Bauhaus hub for results and impacts’ is required to collect, centralise, manage, monitor and exploit the knowledge produced by the NEB projects, the NEB Community and other relevant NEB actions (e.g. projects resulting from EU-funded calls dedicated to NEB across the different EU programmes, NEB Lab) while also ensuring cooperation and collaboration between them. By having an overview of all the knowledge produced, the progress made, the challenges faced and the research gaps yet to overcome, the hub will be an agile instrument that will contribute to informing the implementation of the NEB Facility and will help to increase its impact. Ultimately, it will contribute to advancing the objectives of the NEB in a coherent manner.

It will cover all the disciplines relevant for NEB and reflect the transversal, holistic nature of the initiative.

Proposals are expected to address all of the following:

1. Collection of knowledge
 1. Develop and implement a methodology and working methods to collect the knowledge, results, processes and solutions resulting from NEB projects, the NEB Community and other relevant NEB actions (e.g. projects resulting from EU-funded calls dedicated or relevant to NEB across the different EU programmes, NEB Lab, etc.) and other relevant initiatives (e.g. EU Missions and their platforms, Built4People innovation clusters, EUI Portico, URBACT Knowledge Hub, etc.);
 2. Conduct and set standards for comparative analysis and presentation of knowledge, results, approaches and solutions resulting from NEB projects, the NEB Community and other relevant NEB actions;
2. Knowledge Management
 1. Consult the stakeholders inside and outside of the NEB Community that will benefit of the New European Bauhaus Hub for results and impacts and tailor the hub and its actions to their needs;

2. Set up a hub that will centralise, store, process and make publicly available in a user-friendly, tailored and effective way the relevant knowledge produced by NEB projects and NEB relevant actions as well as by the NEB Community;
 3. Based on initial information sources and guidance to be provided by the Commission, analyse and develop a consolidated list of EU-funded projects that the Commission will use to build and update a thematic portfolio of projects relevant for the implementation of the NEB initiative in general and for the NEB Facility in particular ⁵⁸⁸.
3. Monitoring and analysis
1. Analyse and summarise the results of NEB projects and relevant actions to turn them into actionable knowledge for all different stakeholders (e.g. for urban design, for the revision of spatial development plans, etc.). Ensure its accessibility and attractiveness;
 2. Taking 2024 as baseline, develop a monitoring system to measure the impact of future projects funded by the NEB Facility (including their contributions to climate change mitigation and adaptation) as well as the progress with the uptake and deployment of their results, approaches and solutions. Links and synergies with existing assessment systems (e.g. Level(s), NEB Labelling Strategy) and relevant tools (notably the NEB Compass) are encouraged;
 3. Learning from the results and achievements of all NEB activities, identify the R&I gaps, bottlenecks, and future needs that could be addressed to facilitate the implementation of the NEB Facility.

The consortium is expected to develop and provide a method and plan detailing how the New European Bauhaus Hub for results and impacts will be operated, kept up-to-date and adapted to emerging needs. It will also ensure that the hub developed uses European Commission's IT tools such as the Open EUROPA Drupal platform ⁵⁸⁹ and complies with the Europa Component Library ⁵⁹⁰, the NEB visual identity and the Commission's accessibility and usability rules. The consortium will also ensure that the Commission can access the back office of the hub's system and that the latter can be transferred to another consortium or the Commission at the end of the project. The project is expected to last at least two years.

Proposals should demonstrate how they will secure the necessary knowledge and expertise in areas relevant for the NEB ⁵⁹¹.

⁵⁸⁸ The project portfolio will be an interactive tool to be developed by the Commission. It will take inspiration in the NEB Dashboard (https://new-european-bauhaus.europa.eu/about/dashboard_en) as well as in other thematic project portfolios developed by the Commission.

⁵⁸⁹ <https://github.com/openeuropa>

⁵⁹⁰ [Europa Component Library](#)

⁵⁹¹ Such as architecture and civil engineering (incl. sustainable and green architecture, adaptive reuse and historic preservation, smart buildings and home automation); spatial planning (incl. landscape architecture) governance and development; entrepreneurship and venture capital; social sciences;

Other Actions (for the New European Bauhaus) not subject to calls for proposals

1. Expert group for advice on the NEB Facility

Objective and scope:

The experts appointed following the call for applications published in 2023⁵⁹², provide advice to support the work of the European Commission in the setting up and implementation of the NEB Facility.

The members of the expert group are required to provide advice based on deep knowledge on fields corresponding to the implementation of the NEB Facility such as business, public administration, science, climate change mitigation and adaptation, research and innovation, arts, culture, citizen engagement and expertise in cross-sector/cross-border collaboration, governance, etc. It includes advice on achieving synergies between Horizon Europe and other EU programmes and policy areas.

The advisory role of the expert group is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and prevent conflict of interest and respect confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The expert group provides high-level advice to the Commission of such a nature that without their input the implementation the NEB Facility would not achieve the desired large scale and breadth of impact. In light of this, and as highly qualified, specialised, independent experts who were selected following a public call for applications, on the basis of objective criteria, it is justified that the members of the expert groups are remunerated for the services they offer pursuant to Article 21 of the Commission's horizontal rules on expert groups ('the horizontal rules').⁵⁹³

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: 2nd Quarter 2024

Indicative budget: EUR 0.40 million from the 2024 budget⁵⁹⁴

culture and creative industries and sectors; emerging industries; research & innovation; climate, energy and natural resources, urban circularity and regeneration; ecosystem services and nature-based solutions; public health and well-being in cities; urban resilience; social impacts of climate change. Additional transversal areas would also be relevant: research and innovation, monitoring & evaluation; (innovation) procurement; advocacy, communications & citizen engagement; digital services, artificial intelligence, machine learning and use of data; knowledge translation, innovation and evidence-informed policymaking.

⁵⁹² <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3913&fromCallsApplication=true>

⁵⁹³ [C\(2016\) 3301](#)

⁵⁹⁴ Of which EUR 0.10 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.06 million from the 'Digital, Industry and Space' budget, EUR 0.08 million

2. Supporting the preparation and implementation of the NEB Facility with the support of Horizon Europe and New European Bauhaus National Contact Points

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

1. Enhanced collaboration and coordination on the NEB Facility between the Horizon Europe National Contact Points for the R&I component of the NEB Facility and New European Bauhaus National Contact Point networks.
2. Enhanced capacity of Horizon Europe National Contact Points for the R&I component of the NEB Facility and New European Bauhaus National Contact Points to contribute to the implementation of the NEB Facility.
3. Enhanced visibility of the NEB Facility at European and national levels, better informed prospective applicants as well as higher quality and quantity of applications.
4. Coordinated feedback from the Horizon Europe National Contact Points for the R&I component of the NEB Facility and New European Bauhaus National Contact Points to the European Commission on the implementation of the NEB Facility.

Expected Impact:

Proposals should set out a credible pathway to contributing to all of the following impacts:

1. New European Bauhaus efforts and activities at the national and European levels are better coordinated to leverage synergies between the R&I and roll-out components of the NEB Facility.
2. New European Bauhaus efforts and activities at the national and European levels are better coordinated to leverage synergies between the NEB Facility and the broader New European Bauhaus initiative.

Scope:

The New European Bauhaus (NEB) is a transversal initiative, supported since its launch by nine EU programmes⁵⁹⁵. Although this approach provided good results during the initial stages of the New European Bauhaus, the success and increased size that the initiative has reached in three years demand to adapt the approach to its implementation.

As the NEB Facility will be supported by Horizon Europe and other EU programmes, the resulting constellation of calls may be difficult to communicate to interested stakeholders.

NEB National Contact Points act as contact points for the EU Institutions, other Member States and national stakeholders. NEB National Contact Points promote the NEB agenda and

from the 'Health' budget, EUR 0.15 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

⁵⁹⁵ Horizon Europe, European Regional Development Fund, LIFE, Digital Europe, Single Market Programme, COSME, Erasmus+, Creative Europe, European Solidarity Corps.

coordinate efforts to implement the NEB initiative at the national level. Their mandate thus goes beyond promoting and supporting the NEB Facility and the various other tools used by the NEB. The National Contact Points of Horizon Europe are support structures established by Member States and Associated Countries in order to help participants to access to Horizon Europe, in alignment with the Council Decision establishing the Specific Programme implementing Horizon Europe ⁵⁹⁶. They can play a role in contributing to an effective communication of the Horizon Europe calls of the NEB Facility.

These two networks of National Contact Points will thus be key in the preparation and implementation of the NEB Facility, as follows: Horizon Europe National Contact Points for the R&I component of the NEB Facility will cover the Horizon Europe calls of the NEB Facility while NEB National Contact Points will cover the roll-out component of the NEB Facility. Together, they will promote the calls of the NEB Facility among interested stakeholders and support them at application stage while also supporting the Commission in ensuring the synergies and coherence of all the NEB activities at European and national level.

Moreover, the New European Bauhaus is based on co-creation to best answer the needs of citizens. The design, setting up and implementation of the NEB Facility has to be done in collaboration with all relevant representatives of the Member States and Associated Countries as well as relevant stakeholders, including the members of the NEB Community. Therefore, under the guidance of the Commission, NEB National Contact Points are also expected to consult interested stakeholders from their respective Member State to identify emerging needs and gaps related to the implementation of the NEB Facility.

The proposal is expected to address all the following aspects:

1. Horizon Europe National Contact Points for the R&I component of the NEB Facility and New European Bauhaus National Contact Points raise awareness at national level about the New European Bauhaus and the NEB Facility through events, workshops and other communication activities.
2. Horizon Europe National Contact Points for the R&I component of the NEB Facility and New European Bauhaus National Contact Points cooperate, exchange, share experiences and best practices to better promote the NEB Facility, support its implementation and ensure the coherence between its R&I and roll-out components.
3. Horizon Europe National Contact Points for the R&I component of the NEB Facility enhance their capacity to promote the Horizon Europe's calls related to the NEB Facility, to support prospective applicants and/or to direct them towards NEB National Contact Points for NEB-related funding opportunities in other EU programmes supporting the NEB Facility.
4. New European Bauhaus National Contact Points organise activities to consult the relevant stakeholders within their respective country to identify emerging needs and gaps related to the implementation of the NEB Facility.

⁵⁹⁶ [Council Decision \(EU\) 2021/764](#)

The proposal for this topic is encouraged to include as many Horizon Europe and NEB National Contact Points as possible and foresee mechanisms to adapt to emerging needs (e.g. association of additional third countries to Horizon Europe, appointment of new NEB National Contact Points).

The proposal is also encouraged to foresee that NCPs that are not part of the consortium are nevertheless invited and encouraged to participate in the project transnational activities (e.g. workshops). The costs incurred by the consortium for such participation (e.g. travel costs paid by the consortium) may be included in the estimated budget and be eligible for funding by the Commission.

This grant will be awarded without a call for proposals according to Article 195 (f) of the Financial Regulation as this topic concerns National Contact Points for Horizon Europe and the NEB, both of which are linked to specific legal entities nominated to the Commission by the Member States. Horizon Europe National Contact Points are more specialised in European level research and innovation funding. New European Bauhaus National Contact Points promote the New European Bauhaus agenda and coordinate efforts to implement the initiative at the national level.

Legal entities: Horizon Europe National Contact Points legal entities designated to be responsible in respect of the R&I component of the NEB Facility and NEB National Contact Points legal entities.

Form of funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 195 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in part A to G of the General Annexes.

Specific conditions:

Eligibility: Only NCP legal entities established in Member States or Horizon Europe associated countries are eligible to participate.

Legal and financial set-up of the Grant Agreement: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁵⁹⁷

⁵⁹⁷ This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lis-decision_he_en.pdf

*Horizon Europe - Work Programme 2023-2025
Missions and Cross-cutting Activities*

Procedure: The evaluation committee will be composed fully by representatives of EU institutions.

Indicative timetable: Second quarter of 2024

Indicative budget: EUR 1.80 million from the 2024 budget

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 195 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: 2nd Quarter 2024

Indicative budget: EUR 1.80 million from the 2024 budget⁵⁹⁸

⁵⁹⁸ Of which EUR 0.43 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.27 million from the 'Digital, Industry and Space' budget, EUR 0.35 million from the 'Health' budget, EUR 0.67 million from the 'Climate, Energy and Mobility' budget, EUR 0.03 million from the 'Civil Security for Society' budget, EUR 0.04 million from the 'Culture, Creativity and Inclusive Society' budget.

Cross-cutting activities

The cross-cutting activities in this work programme part include actions of a horizontal nature that are not directly attributable to a single cluster, mission or the missions as strategic approach. They are formulated in response to new needs or opportunities and aim to experiment with new approaches. These cross-cutting activities address two distinct priorities.

First, a set of three actions in support of the five EU Missions, aiming to mobilise the power of social innovation⁵⁹⁹ actors and processes. They complement existing actions by focusing on scaling up existing successful social innovations, attracting additional funding from non-EU sources including philanthropy, and developing synergies between missions around social innovation. Despite significant interest in the call topic HORIZON-MISS-2022-SOCIALCAT-01 in the Work Programme 2021-2022, for technical reasons it was not ultimately possible to award a grant under that topic. The objectives of this earlier call are largely maintained: the prime objective is to enhance the funding and financing environment for social innovation for the benefit of the EU Missions. The implementation is however redesigned and uses three distinct actions to establish a networked advisory and finance structure for social innovation ('EU social innovation catalyst fund'):

1. A Coordination and Support Action (CSA) will set up an advisory network that bridges between EU Missions and socially oriented entrepreneurs in the missions' context on the one side and impact investors on the other. Activities are expected to include capacity building in the missions' contexts, networking among impact investors, supported by actions described below, and matchmaking between the groups with the objective of enhancing the financing environment for social innovation across Europe.
2. A Framework Partnership Agreement (FPA) action invites impact investors to engage in a long-term partnership with the EU to realise a better funding environment for social innovation, notably in the context of missions. Individually or in consortia, impact investors are invited to propose their contribution to the objectives. A concluded FPA is a precondition for participation in the call for specific grant agreements as described below and an invitation to collaborate with the above-mentioned coordination and support action (CSA).

⁵⁹⁹ Social innovation refers to "innovations that are social in both their ends and their means. Specifically, [...] social innovations [are] new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. They are innovations that are not only good for society but also enhance society's capacity to act." according to the European Commission Bureau of European Policy Advisors (BEPA, 2011, p. 9; see also Regulation (EU) 1296/2013 of the European Parliament and of the Council of 20 December 2013 establishing a European Union Programme for Employment and Social Innovation ("EaSI") and Regulation (EU) 2021/1057 of the European Parliament and of the Council of 24 June 2021 establishing the European Social Fund Plus (ESF+))." Moreover, in the specific context of the cross-cutting activities, social innovation refers to "existing, demonstrably successful social innovations, as established by qualitative and quantitative data, that enjoy a real potential for scaling, as attested by credible scaling plans."

3. Following the conclusion of FPAs, a call for specific grant agreements is addressed to the holders of FPAs, on a competitive basis, to co-finance a concrete workplan to invest in social innovation activities in the context of missions.

Second, an experimental action that address needs expressed by important stakeholder groups in the context of Horizon 2020 and Horizon Europe evaluations. The action aims to explore the role of universities, research institutes and higher education establishments as organisers and launch pads of local collaborative, transdisciplinary research and innovation activities for the benefit of the missions and as contribution to the missions' European-wide learning environment. If successful, such an approach may accelerate the realisation of the missions' objectives, mobilise regional and national funding and engage more locations and communities in the missions.

These cross-cutting activities are complemented by other actions not subject to calls for proposals that engage experts in the monitoring of horizontal and cross-cutting policy priorities in Horizon Europe.

Destination: Cross-cutting activities

This cross-cutting action advances the EU Mission objectives by setting up a European social innovation network. It leverages three different instruments:

1. A Coordination and Support Action (CSA) will set up a network to build the capacity of social innovators and entrepreneurs, and impact investors;
2. A Framework Partnership Agreement (FPA) action will set up a framework to increase the impact of EU funding by attracting additional, non-EU funds in the form of private and public contributions and scale up social innovation projects thanks to a networked fund holding EU and non-EU contributions;
3. One or several Specific Grant Agreements (SGAs) will implement the above budget-less FPA action.

Notably:

- concerning the CSA and the FPA, applicants are free to apply to the CSA, the FPA, or both. The reason for this freedom resides with entities not needing to be part of the consortium managing the CSA to be part of the network that the CSA will set up;
- concerning the SGAs, applicants will have to have applied for the FPA and been selected to be eligible for an SGA.

Expected impacts:

Proposals for topics should set out a credible approach to creating a social innovation network and more specifically to the following impacts:

- the integration of social innovation in the EU Missions;

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- the identification of existing, demonstrably successful social innovations, as established by qualitative and quantitative data, that enjoy a real potential for scaling, as attested by credible scaling plans, in support of the EU Missions;
- a network composed of entities interested in scaling up social innovation projects as well as entities interested in investing in such social innovation ventures;
- an interface between the EU Missions and the network to match the demand for and supply of social innovation solutions as well as social innovation investment;
- the foundation for a financial Framework Partnership Agreement to create a networked catalytic fund to scale up social innovations;
- a stronger social innovation funding environment;
- the engagement of social innovation actors including philanthropy;
- the identification of social innovation projects relevant to the EU Missions. Note: “social innovation” refers to “existing, demonstrably successful social innovations, as established by qualitative and quantitative data, that enjoy a real potential for scaling, as attested by credible scaling plans” in the remainder of the document, specifically, in the descriptions of the CSA, the FPA, and the SGA that follow.

Call - Cross-cutting actions

HORIZON-MISS-2024-CROSS-01

Conditions for the Call

Indicative budget(s)⁶⁰⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁶⁰¹	Indicative number of projects expected to be funded
		2024		
Opening: 18 Apr 2024				

⁶⁰⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁶⁰¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Deadline(s): 25 Sep 2024				
HORIZON-MISS-2024-CROSS-01-01	CSA	2.50 ⁶⁰²	Around 2.50	1
HORIZON-MISS-2024-CROSS-01-02	FPA			5
Overall indicative budget		2.50		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CROSS-01-01: A European Social Innovation Advisory Network in support of EU Mission Objectives

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁶⁰² Of which EUR 0.60 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.37 million from the 'Digital, Industry and Space' budget and EUR 0.49 million from the 'Health' budget and EUR 0.94 million from the 'Climate, Energy and Mobility' budget and EUR 0.04 million from the 'Civil Security for Society' budget and EUR 0.06 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Project results are expected to contribute to the following outcomes:

- Social innovation advances the EU Mission societal and environmental transition objectives;
- The EU Missions embrace the potential of social innovation as means of achieving their objectives;
- Social innovators and social entrepreneurs and funders of social innovation benefit from moderated learning and experience sharing and liaise better with projects and support activities in the EU Missions environment;
- The project establishes the foundation for a networked fund targeting the scaling up of existing, demonstrably successful social innovations to advance the EU Missions.

Scope: This coordination and support action serves the EU Missions by

- supporting the recognition of social innovation in the EU Missions;
- identifying social innovations with the potential to advance the EU Missions;
- identifying the social innovators and entrepreneurs to carry out the upscaling;
- setting up a network and build the capacity of social innovators and entrepreneurs, and impact investors to advance the EU Missions by scaling up social innovations;
- establishing a community of practice;
- providing an interface between the EU Missions and the network to match the demand for and supply of social innovation solutions as well as social innovation investment;
- enabling social innovators and social entrepreneurs to navigate the complex challenges of scaling up across complex public systems and markets better;
- expanding the range of financial instruments and sources of support so that the innovations continue to scale, after the support provided;
- establishing a framework for the implementation of a future research agenda to ensure that experience is gathered and learning, shared, building the profile of social innovation within and across the EU Mission fields;
- identifying the most favourable national legal entity to support social innovation projects on a case-by-case basis.

Leveraging social innovation gives rise to solutions that prove more adapted to society, locally and regionally, as well as more robust. In a nutshell, social innovations are “innovations that are social in ends and means.” They materialize as new products, services, and models that simultaneously meet social needs more effectively than alternatives and create new social relationships or collaborations. Social innovation involves not only citizens, but also public authorities, business and industry, as well as academia in the design, development, and execution of innovations. It connects society and innovation. Social innovation is not only good for society, but also enhances society’s capacity to act. Social innovation engages and empowers citizens, results in a greater sense of agency, i.e. their ability to take action or to choose what action to take, and greater buy-in by citizens, industrialists, and public authorities, elicits active, democratic participation, enhances the resilience of communities, increases the relevance, acceptance, and uptake of innovation, and helps foster lasting changes in individual behaviours, social practices, and governance models. In short, social innovation acts as a system changer.

As such, social innovation processes are relevant to all EU Missions mobilising additional stakeholders and stakeholder communities (like philanthropic funders and for- and with-impact investors) for the benefit of the Missions.

Applicants are also encouraged to build on relevant ongoing activities undertaken by the EU Missions such as Mission Platforms.

To help EU Missions achieve their objectives, the action should undertake the following activities:

1. create and animate a network of entities interested in scaling up social innovations to advance the EU Missions as well as entities interested in investing in social innovation ventures, for the purpose of raising awareness and facilitating information exchange;
2. create a favourable environment to upscale social innovation with the financial support of beneficiaries like entities interested in investing in such social innovation ventures;
3. offer advisory services and mentoring for ‘social innovators’ wishing to expand the geographic scope of their activities within the EU and countries associated to Horizon Europe or interested in taking up social innovation from abroad. Advisory and mentoring may go as far as assisting the preparation of upscaling plans and investment proposals, and matchmaking with social innovation funders.

Applicants should propose convincing cooperation models with the relevant Commission services such as the EU Mission Secretariats to ensure that the project contributes to the objectives of the EU Missions. Applicants should ensure that they contribute comparable added-value to all EU Missions including through synergies between them. The project will have to document that it has done so.

Actions should envisage, as appropriate, cooperation with other ongoing and future social innovation projects funded under Horizon 2020 or Horizon Europe projects such as the ones related to the HORIZON-EIE-2022-CONNECT-01 Call entitled “Integration of social

innovation actors in innovation ecosystems. For, inter-alia, cross-project co-operation, consultations and knowledge exchange, joint activities on crosscutting issues as well as participating in joint meetings and communication events, especially where they relate to Missions.

Applicants are encouraged to seek additional resources from public and private sources to ensure the continuation of the network beyond the project duration.

The Commission invites applicants to consult the [Horizon 2020 European Social Catalyst Fund pilot](#)

HORIZON-MISS-2024-CROSS-01-02: Framework Partnership Agreement for a European Networked Catalyst Fund for Social Innovation in Support of the Missions

Specific conditions	
<i>Type of Action</i>	Framework Partnership Agreement
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 70 pages.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To maximise impact for enhancing access to scale up funding for social innovation, a balanced portfolio of framework partnership agreements will be concluded, not only in order of ranking, but also with the ambition to maximise geographic coverage of EU Member States and associated countries by the portfolio of FPAs, provided that the applications attain all thresholds.

Expected Outcome: The action aims at putting the EU Missions in a better position to achieve their societal and environmental transition objectives by improving the funding environment for the upscaling social innovation in the EU and associated countries.

The action shall strengthen the engagement of social innovation actors including philanthropy in the missions.

Successful social innovation projects with a real potential for scaling to advance the EU Missions will benefit from structured and networked funding environment.

Scope: Leveraging social innovation yields solutions that prove more adapted to society, locally and regionally, as well as more robust. In short, social innovations are “innovations that are social in ends and means.” They materialize as new products, services, and models that simultaneously meet social needs more effectively than alternatives and create new social relationships or collaborations. Social innovation involves not only citizens, but also public authorities, business and industry, and academia in the design, development, and execution of

innovations. Social innovation is not only good for society, but also enhances society's capacity to act. Social innovation engages and empowers citizens, results in a greater sense of agency and greater buy-in by citizens, industrialists, and public authorities, democratic participation, enhances the resilience of communities, increases the relevance, acceptance, and uptake of innovation, and helps foster lasting changes in individual behaviours, social practices, as well as governance models. In short, social innovation acts as a system changer.

As such, social innovation processes are relevant to all EU Missions. The Commission expects social innovation to mobilise additional stakeholders and stakeholder communities such as philanthropic funders at European level for the benefit of the EU Missions.

The availability of philanthropic and other funding for social innovation is highly skewed within EU Member States and Countries associated to Horizon Europe⁶⁰³ and philanthropic and charitable funders face particular challenges to invest 'cross-border'. The EU wants to contribute to establishing a better funding environment for social innovation in the context of missions across the EU and associated countries by enhancing the networking and experience sharing of funders (notably by the action described in topic HORIZON-MISS-2024-CROSS-01-01) and aims at collaborating to that end with interested funders by establishing long-term partnerships (framework partnership agreement / FPA).

Article 130(2) of EU Financial regulation provides: "The purpose of a financial framework partnership agreement shall be to facilitate the achievement of policy objectives of the Union by stabilising the contractual terms of the cooperation. The financial framework partnership agreement shall specify the forms of financial cooperation and shall include an obligation to set out, in the specific agreements signed under the financial framework partnership agreement, arrangements for monitoring the achievement of specific objectives."

Framework partnership agreements (FPAs) are implemented through Specific Grant Agreements (SGAs). Based upon an FPA, a procedure to award a SGA (included in this work programme part as "Specific Grant Agreements for a European Networked Catalyst Fund for Social Innovation in Support of the Missions") provides an EU grant in line with the presented action plan to realise the joint objectives. This EU grant of EUR 2 million shall top-up the own means at least EUR 4 million of the individual or group of funders. The FPA award procedure as presented here has no budget. The budget and rules on funding are set out in each SGA and depend on the specific type of action.

The Commission plans to establish 5 FPAs to ensure widest possible geographic coverage and make social innovation funding more prominent and more accessible across the EU and associated countries.

The expected duration of the FPA is of four years. Having concluded an FPA does not entitle entities to be awarded an SGA.

⁶⁰³ See for example reports by Philea, The Philanthropy Europe Association (www.philea.eu).

The call targets funders of social innovation. Funders of social innovation may include foundations, philanthropists, national research and innovation funding agencies, other public bodies, or private investors.

To apply for the action, interested individual eligible entities or groups thereof should demonstrate that they have a **track record as social innovation investors/financiers or that they have funded social innovation projects**. Applicants do not need to be involved in the CSA HORIZON-MISS-2024-CROSS-01-01.

To apply for the action interested individual eligible entities or groups thereof shall describe the unique contribution the partnership would make towards (1) the outcomes specified in this topic, and (2) the wider impacts, in the longer term, specified in the respective destinations in the work programme and submit an action plan serving the above-mentioned objectives - namely advancing the EU Missions by financing the scaling up social innovation projects and increasing the impact of Horizon Europe funding by attracting additional non-EU funds in the form of private and public contributions - for the use of the grant that the Commission could award them via an SGA. The action plan should include the following:

1. prospect identification and selection, and investment decisions: how they plan to identify promising projects and select the ones that they invest in; the Commission invites applicants to refer to the [Mission Implementation Plans](#) when developing prospect identification and selection, and investment decision criteria;
2. funding strategies and practices including selection and award procedures in place or to be put in place to award grants to final beneficiaries that scale-up social innovations: how they plan to finance social innovation. The funding strategy presented shall be based on **an exemplary EU grant of up to EUR 2 million complementary to own and other funds** (see below) primarily to be granted to third parties over a period of up to 4 years (the maximum duration of the FPA). The amount here describes shall serve only as justification of the strategy, it does not constitute a formal financial proposal.
3. financial architecture: how they plan to finance the upscaling of social innovations including the leverage that they can secure with the grant awarded by Horizon Europe through the SGA; the Commission expects applicants to match each EUR 1 granted by the EU with EUR 2 by non-EU sources as a minimum.
4. monitoring and reporting: how they plan to monitor and report on the upscaling of social innovation projects;
5. measuring and communicating impact: how they plan to measure and communicate on the impact achieved.

The Commission invites applicants to consult the [Horizon 2020 European Social Catalyst Fund pilot](#). Entities that are awarded an FPA could foresee collaborating with the networking, capacity building, and learning structure established by the HORIZON-MISS-2024-CROSS-01-01 CSA: “A European Social Innovation Networking and Capacity Building Action for a European Social Innovation Networked Fund.”

Blending Horizon Europe and non-EU resources would constitute a meaningful innovation in terms of EU co-investment schemes for social and environmental good.

Call - Cross-cutting actions (2)

HORIZON-MISS-2024-CROSS-02

Conditions for the Call

Indicative budget(s)⁶⁰⁴

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁶⁰⁵	Indicative number of projects expected to be funded
		2024		
Opening: 15 May 2024 Deadline(s): 25 Sep 2024				
HORIZON-MISS-2024-CROSS-02-01	RIA	15.00 ⁶⁰⁶	Around 2.00	6
Overall indicative budget		15.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.

⁶⁰⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁶⁰⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁶⁰⁶ Of which EUR 3.61 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.21 million from the 'Digital, Industry and Space' budget and EUR 2.93 million from the 'Health' budget and EUR 0.25 million from the 'Civil Security for Society' budget and EUR 5.62 million from the 'Climate, Energy and Mobility' budget and EUR 0.37 million from the 'Culture, Creativity and Inclusive Society' budget.

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<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MISS-2024-CROSS-02-01: Experimental local action for EU missions: knowledge institutions as focal points of transdisciplinary research and innovation activities with European outreach

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>The consortium may exceptionally be composed of at least three legal entities established in at least one Member State or Associated Country as the nature of the action aims to support collaborative research and innovation activities in a local setting as contribution to an EU Mission.</p> <p>The coordinator of the project proposed must be a secondary or higher education establishment or a research organisation⁶⁰⁷.</p> <p>.</p>

⁶⁰⁷ As demonstrated by the specific legal status as ‘secondary or higher education establishment’ or ‘research organisation’ in the participant register. For definitions see: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/rules-lev-lear-fca_en.pdf

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<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications in order of ranking but no more than two grants will be awarded related to each of the five missions, provided that the applications attain all thresholds.</p> <p>Seals of Excellence will be awarded to applications exceeding all of the evaluation thresholds set out in this work programme, but cannot be funded due to lack of budget available to the call.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Research outputs are taken up in the context of an EU Mission and contribute to the achievement of the Mission’s objectives.
- Universities, other higher education institutions and research institutes – including those not participating in the actions – develop their roles as designers and managers of transdisciplinary⁶⁰⁸ research and innovation projects, knowledge transfer hubs and enablers of just transitions in the context of the EU Missions.
- The strategies of universities, other higher education institutions and research institutes to contribute to EU Missions developed along the axes of ‘research and innovation’, ‘education, training and skills’ and ‘public engagement and societal impact’.

Scope: The EU Missions on cancer, climate adaptation, climate neutral cities, oceans and soil pursue objectives agreed between Member States and the European Commission in the context of the European Green Deal and health policies. Sustainably managing common-pool resources and the provision of public goods (here taken together ‘the Commons’) are an important dimension in the EU Missions. Unlike technology development or scientific progress, for societal transitions and missions that relate to environmental and social

⁶⁰⁸ The term ‘transdisciplinary research’ is used in the sense of ‘an approach that integrates knowledge across academic disciplines and involves collaboration with non-academic stakeholders to address societal challenges.’ (Utrecht University, ‘Transdisciplinary field guide’). For a wider ranging discussion, see Lawrence M et.al; (2022) Characteristics, potentials, and challenges of transdisciplinary research. One Earth Volume 5, Issue 1, pp. 44-61, <https://doi.org/10.1016/j.oneear.2021.12.010>.

Commons, scholars consider small-scale multistakeholder activities within a local or regional innovation ecosystem to be crucial for the non-technological innovation processes⁶⁰⁹.

Such innovation ecosystems for transformative change include non-commercial stakeholders like civil society and administrations.

Such intensive transdisciplinary interactions are required, for example, for effective spatial planning and community action for increasing resilience to climate change, or for better services of prevention, early detection and care for cancer in vulnerable groups of society. To be effective such transdisciplinary research and innovation actions need a strong scientific lead in its design and operations in order to draw scientifically sound conclusions. The experience gathered and conclusions drawn must be taken up locally to create impact, for example in training courses, in by-laws for land management or in targeted support to entrepreneurship. The topic acknowledges the potential of local and regional collaborative, transdisciplinary action in research and innovation for the EU Missions and the value of sharing of data, innovative approaches, and experience in designing and managing local transdisciplinary research and innovation actions with other regions engaging in the Missions.

Higher education institutions, universities and research institutes are key players for these actions. They already provide diverse services to stakeholders in their local region, including: lifelong learning courses and applied research that take account of the specific needs and opportunities of businesses and industries; research activities in the social sciences and humanities investigate cultural preferences; start-up ecosystems build around them, complemented by citizens' science; and science outreach activities engage citizens of all ages. At the same time, students and researchers participate in international networks and transfer knowledge to and from the region.

For these reasons, universities, other higher education institutions and research institutes receive recognition and trust from public administration and public services, civil society, education, the private sector and other diverse stakeholders in their home region for their role as impartial, competent and knowledge-based actors for the co-creation of fair and inclusive innovation processes. This puts them in a good position to undertake collaborative, transdisciplinary research and innovation activities in their local context and enables them to play multiple, important roles in the realisation of the objectives of the Green Deal and the EU Missions.

Proposals should therefore support transdisciplinary research and innovation activities by one or more higher education institution(s), university(-ies) or research institute(s) together with regional stakeholders in support of the objectives of one of the EU Missions.

⁶⁰⁹ For an overview on the relevant theories and developments see: Mariana Mazzucato (04 Dec 2023): Governing the economics of the common good: from correcting market failures to shaping collective goals, Journal of Economic Policy Reform, DOI: 10.1080/17487870.2023.2280969
Climate Mission: [Climate ADAPT \(https://climate-adapt.eea.europa.eu/en/mission\)](https://climate-adapt.eea.europa.eu/en/mission); Cities Mission: [Net Zero Cities \(https://netzerocities.eu\)](https://netzerocities.eu); Ocean & waters Mission: [Mission Ocean and Waters service portal | Research and Innovation \(europa.eu\)](https://mission-ocean-and-waters-service-portal-research-and-innovation.europa.eu) Soil Mission: [Mission Soil Platform \(https://mission-soil-platform.ec.europa.eu/home\)](https://mission-soil-platform.ec.europa.eu/home); CancerMission – [EChoS - Cancer Missions Hubs \(cancermissionhubs.eu\)](https://echos-cancer-missions-hubs.cancermissionhubs.eu)

The proposal should aim to implement, for the benefit of a specific location or region in an EU Member States or countries associated to Horizon Europe, a research and innovation action that:

1. concretely contributes to the achievement of the objectives of one of the EU Missions, by creating new knowledge and/or developing and testing innovative approaches in co-creation with regional stakeholders, while not replicating the scientific/technological approach of projects already funded by Horizon Europe in support of the EU Missions Projects funded by Horizon Europe in support of the five EU Missions are documented either on the Missions' platforms and/or on Cordis (<https://cordis.europa.eu>), the platform for EU research results, using the search via "Call ID" search string *MISS*.
and
2. engages in concrete transdisciplinary research and innovation activities **and** in strategy development to bring the Mission to the regional or local level stakeholders that traditionally have more difficulties accessing European level research and innovation support and/or the EU Missions (notably: small and medium sized enterprises; communal, municipal or other public services; citizens, civil society or philanthropy).

The action provides the opportunity to integrate as partners in the project non-local entities that contribute to the project with special knowledge or capacities otherwise absent in the region. To increase the European added value, projects have to foresee activities active engagement in the learning environments created by the relevant Mission platforms⁶¹⁰. This should be reflected in the projects' communication and dissemination activities and is considered an integral part of the expected impact of the project.

Activities should aim to have tangible local or regional impact for one of the EU Missions, arising from the full integration of different academic disciplines in interaction with local stakeholders in the activities on the ground, for example in moderated or supervised experimentation and citizens' science activities in communities, in living labs or in regulatory testbeds.

Insights created from these experimental activities should be taken up locally by stakeholders, for example in teaching and training activities, or in specific funding schemes for deployment and replication of innovations implemented by philanthropic funders, or commercial or development banks. Methods and results of the projects should be propagated in the wider Mission context to academic and non-academic stakeholders.

Financial support to third parties may be provided, for example to cover the costs of experimental actions conducted by civil organisations or neighbourhoods, or for a local start-up support centre to provide seed funding for an innovative commercial activity that directly

⁶¹⁰ Climate Mission: [Climate ADAPT \(https://climate-adapt.eea.europa.eu/en/mission\)](https://climate-adapt.eea.europa.eu/en/mission); Cities Mission: [Net Zero Cities \(https://netzerocities.eu\)](https://netzerocities.eu); Ocean & waters Mission: [Mission Ocean and Waters service portal | Research and Innovation \(europa.eu\)](https://mission-ocean-and-waters-service-portal-research-and-innovation.europa.eu) Soil Mission: [Mission Soil Platform \(https://mission-soil-platform.ec.europa.eu/home\)](https://mission-soil-platform.ec.europa.eu/home); CancerMission – [ECHO S - Cancer Missions Hubs \(cancermissionhubs.eu\)](https://echos-cancer-missions-hubs.cancermissionhubs.eu)

supports the objectives of the Mission. In order to achieve a close interaction of the regional and European dimension in the EU Missions, cooperation with relevant Horizon Europe [National Contact Points](#) is encouraged.

Other Actions (cross-cutting) not subject to calls for proposals

1. Specific Grant Agreements for a European Networked Catalyst Fund for Social Innovation in Support of the Missions

Objectives and scope:

Objective:

The action aims at advancing the EU Missions by funding the upscaling of social innovation projects.

Specific Grant Agreements shall support funders to extend the geographic range and thematic scope of their funding activities to make social innovation funding more prominent and more accessible across the EU and associated countries.

Existing, demonstrably successful social innovations, as established by qualitative and quantitative data, that enjoy a real potential for scaling, as attested by credible scaling plans, that can advance the EU Missions will benefit from a structured and networked funding environment.

Scope:

Within the Framework Partnership Agreements (FPAs) awarded under topic HORIZON-MISS-2024-CROSS-01-02, the selected partners (individuals or consortia) will be invited to submit a proposal that will implement the action plan.

In applications for an SGA, holders of the FPA shall demonstrate how to implement the action plan presented in the FPA. Deviations from the action plan presented in the FPA can only be non-substantial. The proposal shall describe all the foreseen activities and associated costs, in particular those relating to identifying, preparing social innovators and entrepreneurs for “investment readiness,” and investing in the scale-up of social innovations through grants.

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and G of the General Annexes.

Beneficiaries must provide financial support to third parties in the form of grants. The maximum amount to be granted to each third party must be necessary to meet the objectives of scaling-up successful social innovation. This maximum amount can exceed the 60 000 euro

maximum but is not expected to be higher than 300 000 euro⁶¹¹, and must be provided in accordance with General Annex B of the General Annexes (Financial support to third parties).

Beneficiaries of an SGA could foresee collaborating with the networking, capacity building, and learning structure established by the HORIZON-MISS-2024-CROSS-01-01 CSA.

The proposal for the SGA should put into practice the action plan described in the FPA (HORIZON-MISS-2024-CROSS-01-02), which shall include:

1. prospect identification and selection, and investment decisions: how they plan to identify promising projects and select the ones that they invest in; the Commission invites applicants to refer to the [Mission Implementation Plans](#) when developing prospect identification and selection, and investment decision criteria;
2. funding strategies and practices including selection and award procedures in place or to be put in place to award grants to final beneficiaries that scale-up social innovations: how they plan to finance social innovation. The funding strategy presented shall be based on **an amount that cannot deviate from the one proposed for the FPA (EU grant of up to EUR 2 million complementary to own and other funds), eventually adjusted downward to take account of short duration of the SGA (the maximum duration of SGA is 3 years).**
3. financial architecture: how they plan to finance the upscaling of social innovations including the leverage that they can secure with the grant awarded by Horizon Europe through the SGA; the Commission expects applicants to match each EUR 1 granted by the EU with EUR 2 by non-EU sources as a minimum;
4. monitoring and reporting: how they plan to monitor and report on the upscaling of social innovation projects;
5. measuring and communicating impact: how they plan to measure and communicate on the impact achieved.

Page limit: The page limit of the application is 70 pages.

Funding rate: The funding rate is **33% of total eligible costs.**

Additional information: Beneficiaries should match each EUR 1 that Horizon Europe awards with at least EUR 2 from other sources. Financial Support to Third Party (FSTP) grants shall provide 100% funding to the recipients of the grant. The provision of other forms of financial support (equity, loans) is NOT possible.

Number of SGAs to be funded: The maximum number of awarded FPAs is 5. No more than one SGA per FPA can be accepted (for work programme 2023-2025).

Form of Funding: Grants not subject to calls for proposals

⁶¹¹ The amount refers to the amount awarded out of the Horizon Europe grant, it does not include amounts from own or other resources.

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Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative timetable: 1st - 2nd quarter 2025

Indicative budget: EUR 10.00 million from the 2024 budget⁶¹²

⁶¹² Of which EUR 2.41 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 1.48 million from the 'Digital, Industry and Space' budget, EUR 1.96 million from the 'Health' budget, EUR 3.75 million from the 'Climate, Energy and Mobility' budget, EUR 0.17 million from the 'Civil Security for Society' budget, EUR 0.25 million from the 'Culture, Creativity and Inclusive Society' budget.

Other actions addressing this work programme part not subject to calls for proposals

1. Experts assisting with the monitoring of actions (grant agreement, grant decision, public procurement, financial instruments)

This action will support the use of appointed independent experts for the monitoring of running actions (grant agreement, grant decision, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation, and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.36 million from the 2023 budget⁶¹³

2. Experts assisting with the monitoring of actions (grant agreement, grant decision, public procurement, financial instruments)

This action will support the use of appointed independent experts for the monitoring of running actions (grant agreement, grant decision, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation, and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.40 million from the 2024 budget⁶¹⁴

3. Experts assisting with the monitoring of actions (grant agreement, grant decision, public procurement, financial instruments)

This action will support the use of appointed independent experts for the monitoring of running actions (grant agreement, grant decision, public procurement actions, financial

⁶¹³ Of which EUR 0.09 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.04 million from the 'Digital, Industry and Space' budget, EUR 0.07 million from the 'Health' budget, EUR 0.15 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Civil Security for Society' budget, EUR 0.00 million from the 'Culture, Creativity and Inclusive Society' budget.

⁶¹⁴ Of which EUR 0.10 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.06 million from the 'Digital, Industry and Space' budget, EUR 0.08 million from the 'Health' budget, EUR 0.15 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

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instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation, and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.40 million from the 2025 budget⁶¹⁵

⁶¹⁵ Of which EUR 0.10 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget, EUR 0.06 million from the 'Digital, Industry and Space' budget, EUR 0.08 million from the 'Health' budget, EUR 0.15 million from the 'Climate, Energy and Mobility' budget, EUR 0.01 million from the 'Civil Security for Society' budget, EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget.

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Budget⁶¹⁶

	Budget line(s)	2023 Budget (EUR million)	2024 Budget (EUR million)	2025 Budget (EUR million)
Calls				
HORIZON-MISS-2023-CLIMA-01		82.81		
	<i>from</i> 01.020220	1.89		
	<i>from</i> 01.020230	1.81		
	<i>from</i> 01.020240	15.42		
	<i>from</i> 01.020250	54.82		
	<i>from</i> 01.020260	8.87		
HORIZON-MISS-2024-CLIMA-01			123.97	
	<i>from</i> 01.020220		3.12	
	<i>from</i> 01.020230		2.67	
	<i>from</i> 01.020240		20.52	
	<i>from</i> 01.020250		79.10	
	<i>from</i> 01.020260		18.55	
HORIZON-MISS-2023-CANCER-01		110.68		
	<i>from</i>	104.82		

⁶¹⁶ The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

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	<i>01.020210</i>			
	<i>from 01.020220</i>	<i>2.46</i>		
	<i>from 01.020240</i>	<i>3.40</i>		
HORIZON-MISS-2024- CANCER-01			119.00	
	<i>from 01.020210</i>		<i>105.10</i>	
	<i>from 01.020220</i>		<i>3.00</i>	
	<i>from 01.020240</i>		<i>10.90</i>	
HORIZON-MISS-2023- OCEAN-01		87.70		
	<i>from 01.020220</i>	<i>2.14</i>		
	<i>from 01.020230</i>	<i>2.05</i>		
	<i>from 01.020240</i>	<i>17.47</i>		
	<i>from 01.020250</i>	<i>62.14</i>		
	<i>from 01.020260</i>	<i>3.89</i>		
HORIZON-MISS-2024- OCEAN-01			55.70	
	<i>from 01.020220</i>		<i>1.37</i>	
	<i>from 01.020230</i>		<i>1.17</i>	
	<i>from 01.020240</i>		<i>9.00</i>	
	<i>from 01.020250</i>		<i>34.69</i>	

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	<i>from</i> 01.020260		9.47	
HORIZON-MISS-2024-OCEAN-02			54.00	
	<i>from</i> 01.020220		1.33	
	<i>from</i> 01.020230		1.13	
	<i>from</i> 01.020240		8.73	
	<i>from</i> 01.020250		33.63	
	<i>from</i> 01.020260		9.18	
HORIZON-MISS-2023-CIT-01		70.00		
	<i>from</i> 01.020220	0.94		
	<i>from</i> 01.020230	0.90		
	<i>from</i> 01.020240	7.63		
	<i>from</i> 01.020250	57.15		
	<i>from</i> 01.020260	3.38		
HORIZON-MISS-2023-CIT-02		5.00		
	<i>from</i> 01.020220	0.12		
	<i>from</i> 01.020230	0.11		
	<i>from</i> 01.020240	0.95		
	<i>from</i> 01.020250	3.39		

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	<i>from</i> 01.020260	0.42		
HORIZON-MISS-2024-CIT-01			98.00	
	<i>from</i> 01.020220		2.47	
	<i>from</i> 01.020230		2.11	
	<i>from</i> 01.020240		16.23	
	<i>from</i> 01.020250		62.53	
	<i>from</i> 01.020260		14.66	
HORIZON-MISS-2024-CIT-02			3.00	
	<i>from</i> 01.020220		0.08	
	<i>from</i> 01.020230		0.06	
	<i>from</i> 01.020240		0.50	
	<i>from</i> 01.020250		1.91	
	<i>from</i> 01.020260		0.45	
HORIZON-MISS-2023-SOIL-01		126.00		
	<i>from</i> 01.020220	2.18		
	<i>from</i> 01.020230	2.09		
	<i>from</i> 01.020240	17.78		
	<i>from</i> 01.020260	103.95		

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HORIZON-MISS-2024-SOIL-01			134.50	
	<i>from</i> 01.020210		14.44	
	<i>from</i> 01.020220		3.12	
	<i>from</i> 01.020230		2.67	
	<i>from</i> 01.020240		20.52	
	<i>from</i> 01.020260		93.75	
HORIZON-MISS-2023-CLIMA-CITIES-01		40.00		
	<i>from</i> 01.020220	0.92		
	<i>from</i> 01.020230	0.88		
	<i>from</i> 01.020240	7.54		
	<i>from</i> 01.020250	26.82		
	<i>from</i> 01.020260	3.83		
HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01		15.00		
	<i>from</i> 01.020220	0.32		
	<i>from</i> 01.020230	0.31		
	<i>from</i> 01.020240	2.63		
	<i>from</i> 01.020250	6.85		
	<i>from</i> 01.020260	4.88		

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HORIZON-MISS-2023- OCEAN-SOIL-01		16.00		
	<i>from</i> 01.020220	0.33		
	<i>from</i> 01.020230	0.32		
	<i>from</i> 01.020240	2.72		
	<i>from</i> 01.020250	5.67		
	<i>from</i> 01.020260	6.95		
HORIZON-MISS-2024- NEB-01			17.80	
	<i>from</i> 01.020210		3.48	
	<i>from</i> 01.020220		0.44	
	<i>from</i> 01.020230		0.30	
	<i>from</i> 01.020240		2.63	
	<i>from</i> 01.020250		6.67	
	<i>from</i> 01.020260		4.28	
HORIZON-MISS-2024- CROSS-01			2.50	
	<i>from</i> 01.020210		0.49	
	<i>from</i> 01.020220		0.06	
	<i>from</i> 01.020230		0.04	
	<i>from</i> 01.020240		0.37	

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	<i>from</i> 01.020250		0.94	
	<i>from</i> 01.020260		0.60	
HORIZON-MISS-2024-CROSS-02			15.00	
	<i>from</i> 01.020210		2.93	
	<i>from</i> 01.020220		0.37	
	<i>from</i> 01.020230		0.25	
	<i>from</i> 01.020240		2.21	
	<i>from</i> 01.020250		5.62	
	<i>from</i> 01.020260		3.61	
Other actions				
Public procurement			See footnote ⁶¹⁷	
	<i>from</i> 01.020210		4.39	
	<i>from</i> 01.020220		0.14	
	<i>from</i> 01.020230		0.01	
	<i>from</i> 01.020240		0.55	
	<i>from</i>		0.38	

⁶¹⁷ To which EUR 0.10 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.55 million from the 'Digital, Industry and Space' budget and EUR 4.39 million from the 'Health' budget and EUR 0.38 million from the 'Climate, Energy and Mobility' budget and EUR 0.01 million from the 'Civil Security for Society' budget and EUR 0.14 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 5.58 million for these actions.

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	<i>01.020250</i>			
	<i>from 01.020260</i>			<i>0.10</i>
Grant awarded without a call for proposals according to Financial Regulation Article 195				See footnote ⁶¹⁸
	<i>from 01.020210</i>			<i>0.35</i>
	<i>from 01.020220</i>			<i>0.41</i>
	<i>from 01.020230</i>			<i>0.35</i>
	<i>from 01.020240</i>			<i>2.69</i>
	<i>from 01.020250</i>			<i>10.03</i>
	<i>from 01.020260</i>			<i>2.96</i>
Service Level Agreement				See footnote ⁶¹⁹
	<i>from 01.020220</i>			<i>0.06</i>
	<i>from 01.020230</i>			<i>0.05</i>
	<i>from 01.020240</i>			<i>0.40</i>
	<i>from</i>			<i>1.56</i>

⁶¹⁸ To which EUR 2.96 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 2.69 million from the 'Digital, Industry and Space' budget and EUR 0.35 million from the 'Health' budget and EUR 10.03 million from the 'Climate, Energy and Mobility' budget and EUR 0.35 million from the 'Civil Security for Society' budget and EUR 0.41 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 16.80 million for these actions.

⁶¹⁹ To which EUR 0.43 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.40 million from the 'Digital, Industry and Space' budget and EUR 0.05 million from the 'Civil Security for Society' budget and EUR 1.56 million from the 'Climate, Energy and Mobility' budget and EUR 0.06 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 2.50 million for these actions.

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	01.020250			
	from 01.020260		0.43	
Expert contract action		See footnote ⁶²⁰	See footnote ⁶²¹	See footnote ⁶²²
	from 01.020210	0.24	0.47	0.08
	from 01.020220	0.02	0.06	0.01
	from 01.020230	0.02	0.05	0.01
	from 01.020240	0.15	0.39	0.06
	from 01.020250	0.57	1.04	0.15
	from 01.020260	0.34	0.62	0.10
Specific grant agreement		See footnote ⁶²³	See footnote ⁶²⁴	

⁶²⁰ To which EUR 0.34 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.15 million from the 'Digital, Industry and Space' budget and EUR 0.24 million from the 'Health' budget and EUR 0.02 million from the 'Civil Security for Society' budget and EUR 0.57 million from the 'Climate, Energy and Mobility' budget and EUR 0.02 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 1.34 million for these actions.

⁶²¹ To which EUR 0.62 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.39 million from the 'Digital, Industry and Space' budget and EUR 0.47 million from the 'Health' budget and EUR 1.04 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Civil Security for Society' budget and EUR 0.06 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 2.63 million for these actions.

⁶²² To which EUR 0.10 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.06 million from the 'Digital, Industry and Space' budget and EUR 0.08 million from the 'Health' budget and EUR 0.15 million from the 'Climate, Energy and Mobility' budget and EUR 0.01 million from the 'Civil Security for Society' budget and EUR 0.01 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 0.40 million for these actions.

⁶²³ To which EUR 6.02 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 8.09 million from the 'Digital, Industry and Space' budget and EUR 0.95 million from the 'Civil Security for Society' budget and EUR 27.15 million from the 'Climate, Energy and Mobility' budget and EUR 0.99 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 43.20 million for these actions.

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	<i>from</i> 01.020210		1.96	
	<i>from</i> 01.020220	0.99	0.25	
	<i>from</i> 01.020230	0.95	0.17	
	<i>from</i> 01.020240	8.09	1.48	
	<i>from</i> 01.020250	27.15	3.75	
	<i>from</i> 01.020260	6.02	2.41	
Provision of technical/scientific services by the Joint Research Centre			See footnote ⁶²⁵	
	<i>from</i> 01.020220		0.05	
	<i>from</i> 01.020230		0.04	
	<i>from</i> 01.020240		0.33	
	<i>from</i> 01.020250		1.28	
	<i>from</i> 01.020260		0.30	
Indirectly managed action		See footnote ⁶²⁶	See footnote ⁶²⁷	

⁶²⁴ To which EUR 2.41 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.48 million from the 'Digital, Industry and Space' budget and EUR 1.96 million from the 'Health' budget and EUR 3.75 million from the 'Climate, Energy and Mobility' budget and EUR 0.17 million from the 'Civil Security for Society' budget and EUR 0.25 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 10.00 million for these actions.

⁶²⁵ To which EUR 0.30 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 0.33 million from the 'Digital, Industry and Space' budget and EUR 0.04 million from the 'Civil Security for Society' budget and EUR 1.28 million from the 'Climate, Energy and Mobility' budget and EUR 0.05 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 2.00 million for these actions.

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	<i>from</i> <i>01.020210</i>	<i>3.00</i>	<i>2.49</i>	
	<i>from</i> <i>01.020220</i>	<i>0.21</i>	<i>0.82</i>	
	<i>from</i> <i>01.020230</i>	<i>0.28</i>	<i>0.64</i>	
	<i>from</i> <i>01.020240</i>	<i>1.89</i>	<i>5.18</i>	
	<i>from</i> <i>01.020250</i>	<i>7.00</i>	<i>17.50</i>	
	<i>from</i> <i>01.020260</i>	<i>4.15</i>	<i>6.05</i>	
Estimated total budget		614.26	695.64	0.40

⁶²⁶ To which EUR 4.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 1.89 million from the 'Digital, Industry and Space' budget and EUR 3.00 million from the 'Health' budget and EUR 0.28 million from the 'Civil Security for Society' budget and EUR 7.00 million from the 'Climate, Energy and Mobility' budget and EUR 0.21 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 16.53 million for these actions.

⁶²⁷ To which EUR 6.05 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 5.18 million from the 'Digital, Industry and Space' budget and EUR 2.49 million from the 'Health' budget and EUR 17.50 million from the 'Climate, Energy and Mobility' budget and EUR 0.64 million from the 'Civil Security for Society' budget and EUR 0.82 million from the 'Culture, Creativity and Inclusive Society' budget will be added making a total of EUR 32.67 million for these actions.