EN

Horizon Europe

Work Programme 2025

12. Missions

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Introduction

The mission-driven approach is a new trend in R&I policy making and was one of the key novelties brought by Horizon Europe Regulation[1] to address global challenges facing our society.

Horizon Europe identified five Mission Areas where challenges could be effectively addressed in a mission-based approach. The following five EU Missions were formally launched through a Commission Communication in September 2021[2], based on reports from dedicated Mission Boards that assessed the maturity of technological and social innovation in these areas:

- 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.

For each EU Mission, detailed Mission Implementation Plans were drafted, using the Mission criteria of the Horizon Europe legal base as starting point.

The five EU Missions focus on systemic societal transformation, requiring inclusivity, co-design, scaling up, deployment and societal involvement in generating solutions for major societal challenges driven by EU policy considerations. The five EU Missions work by setting clear, measurable, and time-bound targets, thus focusing and integrating actions towards common goals. These actions are clearly presented in the HE Work Programmes 2021-2022 and 2023-2024.

Building on the previous HE Work Programmes, the EU Missions 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.

The Missions Work Programme 2025 part contains actions for all the five EU Missions as well as further actions to support the full implementation of EU Missions according to their implementation plans, including synergistic actions between the Missions and other Horizon Europe instruments. The work programme includes activities for the Mission Boards, monitoring, portfolio and an OECD action for evidence-based policy making. In addition, the

[1] Regulation (EU) 2021/695
[2] COM(2021) 609 final

EU 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. Furthermore, the EU Missions Work Programme 2025 is also focusing on the challenges highlighted in the 2023 Commission Communication[3] and includes notably public awareness and governance actions as well as actions, which help to leverage other sources of funding.

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

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.

[3] COM(2023) 457 final

Calls for proposals

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

HORIZON-MISS-2025-01

Overview of this call[4]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)[5]	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 24 Sep 2025				
Adaptation to Climate Change: Supporting the implementation of the EU Mission Adaptation to Climate Change				
HORIZON-MISS-2025-01-CLIMA-01: Supporting regions and local authorities in assessing climate risks	RIA	17.40 [6]	Around 17.40	1
HORIZON-MISS-2025-01-CLIMA-02: Supporting regional and local authorities in developing their Action Plans towards climate resilience	RIA	25.00 [7]	Around 25.00	1
HORIZON-MISS-2025-01-CLIMA-03: Demonstrating solutions to help hotspots in coastal regions to adapt to climate change	IA	30.00 [8]	Around 10.00	3

4 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 2025.

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

6 Of which EUR 17.40 million from the 'Climate, Energy and Mobility' budget.

7 Of which EUR 25.00 million from the 'Climate, Energy and Mobility' budget.

8 Of which EUR 30.00 million from the 'Climate, Energy and Mobility' budget.

9 Of which EUR 30.00 million from the 'Climate, Energy and Mobility' budget.

HORIZON-MISS-2025-01-CLIMA-04: Testing and demonstrating innovative solutions to improve resilience to extreme heat, including addressing health impacts	IA	30.00 [9]	Around 10.00	3
HORIZON-MISS-2025-01-CLIMA-05: Better understanding incentives for private sector financing of adaptation solutions	RIA	6.00 [10]	Around 3.00	2
HORIZON-MISS-2025-01-CLIMA-06: Pre-commercial procurement of breakthrough solutions for climate proofing of public buildings	PCP	5.00 [11]	Around 5.00	1
Overall indicative budget		113.40		

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

Call - Supporting the implementation of the Cancer Mission

HORIZON-MISS-2025-02

Overview of this call[12]

[10] Of which EUR 6.00 million from the 'Climate, Energy and Mobility' budget.
[11] Of which EUR 5.00 million from the 'Climate, Energy and Mobility' budget.

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[13]	Indicative number of projects expected to be funded
Opening: 06 May 2025 Deadline(s): 18 Sep 2025				
Cancer: Supporting the implementation of the Cancer Mission				
HORIZON-MISS-2025-02-CANCER-01: Sustained collaboration of national and regional cancer funders to support the Cancer Mission through translational research	CSA	5.00 [14]	Around 5.00	1
HORIZON-MISS-2025-02-CANCER-02: Understanding the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers	RIA	30.00 [15]	6.00 to 7.00	5
HORIZON-MISS-2025-02-CANCER-03: Innovative surgery as the cornerstone of affordable multi-modal therapeutic interventions benefitting cancer patients with locally advanced or metastatic disease	RIA	31.00 [16]	7.00 to 10.00	4
HORIZON-MISS-2025-02-CANCER-04: Investigator-initiated multinational early-stage innovative clinical trials for paediatric cancer	RIA	25.00 [17]	6.00 to 8.00	4

[12] 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 2025.

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

[14] Of which EUR 5.00 million from the 'Health' budget.

[15] Of which EUR 30.00 million from the 'Health' budget.

[16] Of which EUR 31.00 million from the 'Health' budget.

[17] Of which EUR 25.00 million from the 'Health' budget.

[18] Of which EUR 15.00 million from the 'Health' budget.

HORIZON-MISS-2025-02-CANCER-05: Pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and older) through nutrition	RIA	15.00 [18]	3.00 to 5.00	4
HORIZON-MISS-2025-02-CANCER-06: Support to the network of National Cancer Mission Hubs (NCMHs)	CSA	10.00 [19]	Around 9.00	1
Overall indicative budget		116.00		

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

Call - Supporting the implementation of the Restore our Ocean and Waters Mission

HORIZON-MISS-2025-03

Overview of this call[20]

Proposals are invited against the following Destinations and topic(s):

[19] Of which EUR 10.00 million from the 'Health' budget.

[20] 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 2025.

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[21]	Indicative number of projects expected to be funded
Opening: 07 May 2025 Deadline(s): 24 Sep 2025				
Supporting the implementation of the Restore our Ocean and Waters Mission				
HORIZON-MISS-2025-03-OCEAN-01: Blue Parks - Towards a coherent European network of strictly protected areas for restoring healthy and productive marine ecosystems	RIA	5.00 [22]	4.00 to 5.00	1
HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean	IA	22.00 [23]	4.50 to 5.50	4
HORIZON-MISS-2025-03-OCEAN-03: Digital technologies and energy transition in fisheries and/or aquaculture	IA	23.30 [24]	5.00 to 5.825	4
HORIZON-MISS-2025-03-OCEAN-04: Restoring Ocean and Waters in Regions	IA	15.00 [25]	Around 15.00	1
HORIZON-MISS-2025-03-OCEAN-05: Restoring Ocean and Waters in waterfront Cities and their Ports	IA	15.00 [26]	Around 15.00	1
HORIZON-MISS-2025-03-OCEAN-06: Restoring Ocean and Waters on Islands	IA	13.50 [27]	Around 13.50	1
~~HORIZON-MISS-2025-03-O~~CEAN-07: Mission Lighthouses coordination and support activities	CSA	13.00 [28]		

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

[22] Of which EUR 5.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[23] Of which EUR 22.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[24] Of which EUR 23.30 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[25] Of which EUR 15.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[26] Of which EUR 15.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[27] Of which EUR 13.50 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

General conditions relating to this call

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

Call - Supporting the implementation of the Climate-Neutral and Smart Cities Mission

HORIZON-MISS-2025-04

Overview of this call[30]

HORIZON-MISS-2025-03-OCEAN-08: EU Digital Twin Ocean: Contribution to the EU DTO core infrastructure through applications for sustainable ocean management	IA	12.00 [29]	Around 6.00	2
Overall indicative budget		118.80	3.00 to 3.25	4

[28] Of which EUR 13.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[29] Of which EUR 12.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[30] 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.

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[31]	Indicative number of projects expected to be funded
Opening: 06 May 2025 Deadline(s): 04 Sep 2025				
100 Climate-Neutral and Smart Cities by 2030				
HORIZON-MISS-2025-04-CIT-01: Coupling circularity and climate mitigation in industrial sites and their cities and regions	IA	17.00 [32]	Around 8.50	2
HORIZON-MISS-2025-04-CIT-02: Innovative, AI-based solutions for urban planning and management	IA	24.00 [33]	Around 6.00	4
HORIZON-MISS-2025-04-CIT-03: Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP)	PCP	37.00 [34]	7.00 to 12.00	4
Overall indicative budget		78.00		

General conditions relating to this call	
Admissibility conditions	The conditions are described in General Annex A.
Eligibility conditions	The conditions are described in General Annex B.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

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

32 Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 11.00 million from the 'Climate, Energy and Mobility' budget.

33 Of which EUR 12.00 million from the 'Digital, Industry and Space' budget and EUR 12.00 million from the 'Climate, Energy and Mobility' budget.

34 Of which EUR 37.00 million from the 'Climate, Energy and Mobility' budget.

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

Call - Supporting the implementation of the Soil Deal for Europe Mission

HORIZON-MISS-2025-05

Overview of this call[35]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[36]	Indicative number of projects expected to be funded
Opening: 06 May 2025 Deadline(s): 24 Sep 2025				
A Soil Deal for Europe: Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'				
HORIZON-MISS-2025-05-SOIL-01: Co-	RIA	36.00 [37]	Around	3

[35] 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 2025.

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

[37] Of which EUR 36.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

creating solutions for soil health in Living Labs			12.00	
HORIZON-MISS-2025-05-SOIL-02: Living Labs for soil remediation and green redevelopment of brownfields	RIA	12.00 [38]	Around 12.00	1
HORIZON-MISS-2025-05-SOIL-03: Social, economic and cultural drivers, and costs of land degradation	RIA	11.00 [39]	Around 5.50	2
HORIZON-MISS-2025-05-SOIL-04: Increasing environmental resilience through a better knowledge and management of the soil-water nexus	RIA	6.00 [40]	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-05: Developing transfer functions for the Soil Monitoring Law	RIA	6.00 [41]	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-06: EU global footprint on soils	RIA	6.00 [42]	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-07: Quantifying the impact of farming practices on soil health in arable lands	RIA	6.00 [43]	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-08: Improved land suitability for soil health and sustainable biomass production	RIA	6.00 [44]	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-09: Broadening the living labs approach for soil health in Africa and Latin America and the Caribbean (LAC)	RIA	12.00 [45]	Around 6.00	2
HORIZON-MISS-2025-05-SOIL-10: Support to the operation and further development of soil-health science-policy interfaces and national soil health hubs	CSA	5.00 [46]		

[38] Of which EUR 12.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[39] Of which EUR 11.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[40] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[41] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[42] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[43] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[44] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[45] Of which EUR 12.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

General conditions relating to this call				
Admissibility conditions	The conditions are described in General Annex A.			
Eligibility conditions	The conditions are described in General Annex B.			
Financial and operational capacity and exclusion	The criteria are described in General Annex C.			
Award criteria	The criteria are described in General Annex D.			
Documents	The documents are described in General Annex E.			
Procedure	The procedure is described in General Annex F.			
Legal and financial set-up of the Grant	The rules are described in General Annex G.			
HORIZON-MISS-2025-05-SOIL-11: Citizen engagement for sustainable land management through local and regional authorities	CSA	5.00 [47]	Around 5.00	1
HORIZON-MISS-2025-05-SOIL-12: Network on carbon farming and emissions reductions for agricultural and forest lands	CSA	3.00 [48]	Around 3.00	1
HORIZON-MISS-2025-05-SOIL-13: Soil Salinity in Europe: Drivers, indicators, current levels and temporal changes	RIA	6.00 [49]	Around 6.00	1
Overall indicative budget		120.00		

[47] Of which EUR 5.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[48] Of which EUR 3.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[49] Of which EUR 6.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

Agreements	

Call - Joint Call between the Climate-Neutral and Smart Cities Mission and the Cancer Mission

HORIZON-MISS-2025-06

Overview of this call[50]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[51]	Indicative number of projects expected to be funded
Opening: 06 May 2025 Deadline(s): 04 Sep 2025				
EU Missions' Joint Calls				
HORIZON-MISS-2025-06-CIT-CANCER-01: Increasing walking and cycling: to reap health benefits, emission reductions and integrate active mobility and micro-mobility devices, with smart technologies and infrastructure	IA	12.00 [52]	Around 6.00	2
Overall indicative budget		12.00		

General conditions relating to this call	
Admissibility conditions	The conditions are described in General Annex A.
Eligibility conditions	The conditions are described in General

[50] 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 2025.

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

[52] Of which EUR 2.00 million from the 'Health' budget and EUR 10.00 million from the 'Climate, Energy and Mobility' budget.

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

EU Missions

Adaptation to Climate Change: Supporting the implementation of the EU 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, in the same year, the **EU Mission on Adaptation to Climate Change to support at least 150 regions and local authorities to become climate-resilient by 2030**.

Since the start of the Mission, the European Commission confirmed its strategic importance and the strength of its approach to accelerate the transformation to a climate-resilient Europe[53] . It has also acknowledged that the Mission can serve as a best practice for all interested parties, and that it will be further leveraged[54].

In March 2024, the European Climate Risk Assessment (EUCRA), published by the European Environment Agency, has further stressed the need to ramp up adaptation efforts in Europe. The importance of stepping up preparedness and adaptation is also well reflected in the Political Guidelines for the next European Commission[55] which call the European Commission to develop a European Climate Adaptation Plan in the coming years.

In this context, the Mission appears to be the perfect vehicle to support climate adaptation at the regional and local levels and to develop and facilitate the take-up of ready-to-use knowledge and tools for climate action.

A regional approach

Regional and local authorities are the end-users of the Mission. By signing the Mission Charter, more than 300 regional and local authorities have committed to working together to transition faster to a climate resilient Europe.

Some regional and local authorities in Europe are well prepared to climate change, others are striving for solutions to address their climate risks. The Mission aims to support as priority less developed regional 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.

In line with Horizon Europe, all the actions supported by this call are open to actors from EU Member States and Horizon Europe Associated Countries. However, regional and local

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53 see Commission Communication on the EU Missions, adopted in July 2023

54 see Commission Communication on Managing Climate Risks – protecting people and prosperity, adopted in March 2024)

55 See POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION 2024-2029

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 ideal sites where the testing and demonstration of innovative approaches could take place.

In the context of this Mission's call, the term "*regional and local authorities*" refers to *legal entities responsible for climate adaptation in a specific and well-defined territory at the subnational level.* Those can be territories at NUTS 1, 2 or 3 levels following the definition of Regions in the Nomenclature of Territorial Units for Statistics (NUTS) classification, cities or municipalities. But the term is not exclusively limited to those and, for example, (Mountain) Communities defined under a special national law and empowered to act on climate adaptation are also included in this concept.

Research and innovation

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 impacts by 2030.

The R&I support is provided in different ways:

1. Further support European regional and local authorities to better understand, prepare for and manage climate risks and opportunities, especially in view the large need demonstrated in the early phase of the Mission ;

2. Step up support towards at least 150 regional and local authorities 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 contributing to deliver at least 75 large-scale demonstrations of systemic transformations to climate resilience across European regional and local authorities.

To be successful, the Mission needs to mobilise all relevant actors -- research institutes, industry, investors and citizens -- to create real and lasting impact and to accelerate their transformation to become climate resilient. In the spirit of the Mission, all proposals should also adopt a participatory approach that fully considers the local dimension of climate change and entails collaboration and engagement with the local communities that are affected by climate impacts. Therefore, engagement of citizens should be embedded in the design and/or implementation of the Mission's solutions.

Strategic direction for 2025

As laid out in its implementation plan, the Mission has moved from its initial build-up phase, where it put in motion all its different streams of actions and is now in full deployment.

The goal of the 2025 call is to consolidate the building blocks of the mission, address challenges identified[56] and increase concrete support to regions and local authorities, to match the oversubscription to the Mission by the Charter signatories and interested parties.

The actions presented in this call are going to:

- Provide support to regional and local authorities for them to understand better their current and future climate risks and to design more robust adaptation plans.
- Test and demonstrate innovative climate adaptation solutions that will be made available for regional and local authorities, especially for those in hotspots regions. This will enlarge the portfolio of solutions already made available by the previous Mission's calls.
- Develop new knowledge on how to unlock investment from the private sector in adaptation solutions.

Finally, in 2025, the Adaptation Mission is also co-financing the Climate City Capital Hub, which is listed under "Specific Grant Agreement to the FPA to reinforce the operations of the Climate-Neutral and Smart Cities Mission Platform" in the Work Programme Part of the Cities Mission. This action will reinforce synergies between the Adaptation and Cities Missions supporting cities in finding financing solutions for both mitigation as well as adaptation projects.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-01-CLIMA-01: Supporting regions and local authorities in assessing climate risks

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 17.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 17.40 million.
Type of Action	Research and Innovation Actions
Eligibility conditions	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

[56] Some of those challenges have been identified the evaluation of the mission conducted in 2023 and are referred to in the Communication on Missions in July 2023

	must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
Award criteria	The criteria are described in General Annex D. The following exceptions apply: The following additions to the general award criteria apply: The quality criterion shall in addition assess the proposed approach to provide financial support to third parties.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries must provide financial support to third parties. The support to third parties (i.e. cascade funding) can only be provided in the form of sub-grants. The minimum amount allocated to financial support to third parties must be at least 60 % of the requested EU contribution. The maximum amount to be granted to each third party is EUR 200,000, to allow the sub-projects to engage regional and local authorities to conduct a comprehensive climate risk assessment.
Exceptional page limits to proposals/applications	The page limit of the application is 70 pages.
Other requirement	The multi-risk and multi-sector assessment framework used to conduct the climate risk assessments must be open source. The project must ensure that the data will comply with the FAIR[57] principles for data producers and publishers.

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy, the EU Mission on Adaptation to Climate Change and the EU Disaster Resilience Goals, the successful proposal will accelerate adaptation efforts of regional and local authorities. The project is expected to contribute to **all of** the following outcomes:

- The regional multi-risk assessment framework and the supporting toolbox already developed in the context of the Mission are further improved and their use is mainstreamed. As a result, scientific knowledge on climate risk assessments at the regional and local levels is strengthened.

[57] FAIR founding principles for data producers and publishers- Findability, Accessibility, Interoperability, and Reusability

- At least 50 regions and/or local authorities[58] (in the EU Member States and Associated countries and not previously supported by the project CLIMAAX) have received financial support from the EC-funded action to understand better their current and future climate risks. They are therefore better equipped to reduce their vulnerability and exposure to climate change and to improve their climate resilience.

- Closer links between climate adaptation and disaster risk management policy actors, communities, scientists and civil society are established.

- Current and future climate risks are communicated more clearly to non-specialist audiences, boosting the buy-in and support for a wide range of actions for climate resilience at the regional and local levels and fighting climate disinformation.

Scope: The first European Climate Risk Assessment (EUCRA) concluded that Europe is not prepared for rapidly growing climate risks. Assessing climate risks is one the first steps that regional and local authorities need to undertake in the adaptation planning[59]. This step is key to provide robust adaptation plans that respond to the needs of the regional and local authorities.

From the survey conducted by the Mission with its Charter signatories, it emerged clearly that only 66% of the regional and local authorities had already assessed their climate risks and, in some cases, their climate risk assessments require update and further work to increase their robustness. Using these results as proxy for all regional and local authorities, there is an evident need for more robust regional and local climate risk assessments in Europe.

With its call HORIZON-MISS-2021-CLIMA-02-01, the Mission on Adaptation to Climate Change mandated the development of a methodological framework and toolbox for climate risk assessments at the regional and local levels and to provide direct support to regional and local authorities to use those tools. This topic aims to build upon the achievements of the project CLIMAAX, funded HORIZON-MISS-2021-CLIMA-02-01 :

1)by consolidating and further mainstreaming its regional climate risk assessment framework and supporting toolbox (1st action thereafter)

2) by financially supporting additional regional and local authorities (not supported by CLIMAAX) to conduct regional climate risk assessments and to develop or revise community-based emergency and risk management plans (2nd action thereafter).

Both actions detailed below should be addressed by the proposals. By doing so, this topic directly contributes to the follow-up of the Commission Communication on managing climate

[58] For the scope of the Adaptation Mission, "regional and local authorities" refers to legal entities responsible for climate adaptation in a specific and well-defined territory at the subnational level. Those can be territories at NUTS 1, 2 or 3 levels following the definition of Regions in the Nomenclature of Territorial Units for Statistics (NUTS) classification, cities or municipalities. But the term is not exclusively limited to those, as for example, (mountain) Communities defined under a special national law and empowered to act on climate adaptation are also included in this concept.

[59] See step 2 'Step 2 Assessing climate risks and vulnerabilities' of the regional adaptation support tool

risks, where, in its response to EUCRA, the European Commission committed to improving tools that support regions and local authorities better prepare for climate risks.

1st Action- Consolidating and further mainstreaming the framework and toolbox for climate risk assessments.

Further developments of the framework and toolbox for regional climate risk assessment should keep their initial requirements, namely:

- The improved toolbox and framework should be for multi-risk and multi-sector and include exposure and vulnerability.
- The improved toolbox should be broadly applicable in EU Member States (including Outermost Regions) and Associated Countries of Horizon Europe.
- The improved toolbox and related IT tools should be made open source, free and open licensed.

Further refinements of the methodological framework and supporting toolbox should aim to address emerging knowledge and data gaps and could reflect but are not limited to the following elements:

- Incorporating tailored 'responses' as a key part of the risk framework, as introduced in the sixth assessment report of the Intergovernmental Panel on Climate Change;
- Considering, cascading and compounding risks and/or risks from other crises such as biodiversity loss and pollution;
- Accounting for the dynamic nature of climate risk that changes with time;
- Exploring how to translate future scenarios, designed at the global scale, into local risks;
- Incorporating supporting tools for regional climate risk management planning to effectively use the results of the climate risk assessments as basis for community-based emergency and risk management plans.
- Exploring ways to integrate the developments for multi-risk by previous and ongoing Horizon 2020 and Horizon Europe projects[60]

Those refinements to the framework and supporting toolbox should be co-designed and co-produced with regional/local authorities and practitioners from several EU Member States/Associated Countries, to ensure that their needs and constraints are addressed in a practical way. The improved framework and associated toolbox should benefit from a built-in mechanism for continuous feedback and iterative improvements, ensuring that the tools and assessments remain relevant as climate science and policy evolve.

[60] This includes but is not limited to MYRIAD-EU projects funded under the topics HORIZON-MISS-2021-CLIMA-02-03 , HORIZON-CL3-2021-DRS-01-02, HORIZON-CL5-2022-D1-01-02-two-stage and HORIZON-CL3-2021-DRS-01-03, GOBEYOND, ANYWHERE, C2IMPRESS

The consolidated version of the toolbox should strive to include newly produced datasets, in particular those coming from other EU programmes and initiatives such as Copernicus and Destination Earth or from EURO-CORDEX. Exploiting digital technologies such as artificial intelligence (AI) in the tool to better quantify and assess climate risks is encouraged. Proposals are also encouraged to consider -- where relevant -- the services offered by European research infrastructures[61] as well as related projects such as IRISCC.

An effective, timely and targeted communication of climate risks is key to drive climate action. The proposals should dedicate efforts to make the improved toolbox and its results more accessible and understandable by non-experts and to combat climate disinformation. This toolbox should include a simple Graphical User Interface to facilitate the dissemination of risk information across the European Union and Associated countries. These efforts to increase accessibility should occur in parallel to the developments of the toolbox for more advanced/expert users.

2nd Action- Using the improved framework and toolbox to support regional and local authorities in assessing their climate risks, as a basis for development or revision of local adaptation, risk management, disaster prevention plans (cascade funding).

The proposals should provide financial support to third parties in the form of sub-grants to engage **at least 50 regional and local authorities** to conduct a comprehensive climate risk assessment. The following conditions should apply:

- The sub-grants are to be used for conducting multi-risk assessments or upgrading and refining existing ones, using the framework and toolbox developed under the 1st Action of this topic.
- Regions and local authorities already financially supported by CLIMAAX[62] are not eligible to receive funding from this 2nd action.
- Eligible sub-grant beneficiaries are public bodies with a legal mandate for climate risk assessments/climate adaptation or risk management planning at the regional or local levels (e.g. regional or local authorities, association of municipalities) or non-profit legal entities that are representing them.

At least 60% of the total amount of the EU requested contribution must be made available for the cascade funding call(s). The (first) cascade call should be launched in the first 12 months of the project.

Demand could be higher than what can be supplied within the limits of this action, therefore the proposals should already describe the process and criteria to award the sub-grants. While remaining as simple as possible, those criteria should ensure geographical balance and inclusivity/equity (by for instance giving a bonus point to regions facing higher vulnerability[63]

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61 The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

62 This information is publicly available on the website of CLIMAAX. For instance here are the beneficiaries of the first call: https://www.climaax.eu/results-of-the-first-open-call/

). These criteria will ensure that a variety of locations are represented. To this purpose, learning from the experience of projects with financial support to third parties/cascading funding could be relevant: on top of consulting publicly available information on lessons learnt, the project retained for granting is expected to hold dedicated exchanges with the projects CLIMAAX, Pathways2Resilience and the Mission Secretariat during the preparation of the cascade funding call.

General considerations

During its duration, the project should include an open support line or helpdesk to assist European regional and local authorities that are not financially supported by the project (2nd action) but are nevertheless interested in using the toolbox to assess their climate risks.

The project will also have to identify and support ways by which the framework and toolbox may be applied more widely, including by the disaster risk management community (e.g. emergency responders, national civil protection agencies, disaster risk planners, Union Civil Protection Knowledge Network). To this end, the awarded project should collaborate with the Mission National Adaptation Hubs[64] to share best practices from regional and local authorities receiving the sub-grants and foster replicability at the national level. These could entail co-design, co-production, stakeholder involvement or similar activities so that the results of the project are beneficial for the mentioned policy-makers or operational/rescue bodies.

The proposals should explore ways to harvest the data generated as part of the project to increase the resolution and quality of European-wide climate risk datasets, assessments and responses. The assessments conducted under the project shall be made available for any future reference and use through the Joint Research Center's Risk Data Hub[65], the recognized Hub of climate risk knowledge as indicated by the EU Adaptation Strategy.

As an important contributor to the Adaptation Mission, the project awarded will have an obligation to closely cooperate with the Mission Implementation Platform[66], including (but not limited to) actively inform and engage with the regions and local authorities already involved in the Mission (e.g. Charter Signatories, Community of Practice), as those have shown their commitment to accelerate action on climate resilience. The project is also expected to contribute to the monitoring of the Mission.

Finally, operational links and collaboration should be established with the Climate-ADAPT platform; the relevant projects from the Mission[67]; or other parts of Horizon Europe such as clusters 3 and 5 or other relevant EU programmes such as LIFE or the Technical Support Instrument.

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64 Established by the project funded under topic HORIZON-MISS-2024-CLIMA-01-02

65 https://drmkc.jrc.ec.europa.eu/risk-data-hub#/

66 Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. About MIP4Adapt (europa.eu)

67 e.g. the projects from topics HORIZON-MISS-2021-CLIMA-02-03, HORIZON-MISS-2025-01-CLIMA-02

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.

HORIZON-MISS-2025-01-CLIMA-02: Supporting regional and local authorities in developing their Action Plans towards climate resilience

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 25.00 million.
Type of Action	Research and Innovation Actions
Eligibility conditions	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).
Award criteria	The criteria are described in General Annex D. The following exceptions apply: The following additions to the general award criteria apply: The quality criterion shall in addition assess the proposed approach to provide financial support to third parties.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries must provide financial support to third parties. The support to third parties (i.e. cascade funding) can only be provided in the form of sub-grants. The minimum amount allocated to financial support to third parties must be at least 70 % of the requested EU contribution. The maximum amount to be granted to each third party is EUR 250,000, to allow the sub-projects to engage regional and local authorities to develop their action plans to address the locally relevant climate risks.

Exceptional page limits to proposals/applications	The page limit of the application is 70 pages.
Other requirement	The project must ensure that the data will comply with the FAIR[68] principles for data producers and publishers.

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the EU Mission on Adaptation to climate change, the successful proposal will accelerate adaptation efforts of regions and local authorities.

The project is expected to contribute to **all of** the following outcomes:

- Each of the Action Plans that regional and local authorities have developed sets in motion the implementation of a concrete list of actions to advance towards climate resilience.
- The implementation of the developed Action Plans is ensured thanks to the fact that each Action Plan includes a tailored analysis (or options list) of how the costs of each action can be addressed.
- The relevant government departments, citizens, academia, social partners, the private sector and other stakeholders are mobilised to contribute to local climate adaptation.

Scope: This topic relates to the Mission's first and second objectives[69] and aims to have **at least 70 regional and local authorities that will have formulated their climate adaptation Action Plans**.

As described by the first European Climate Risk assessment and addressed by the Commission's Communication on Managing Climate Risks, asymmetrical exposure to climate impacts exacerbates the already existing disparities between regions in terms of need for climate adaptation, risk prevention and preparedness.

This action supports the very heart of Mission Adaptation: since climate impacts and adaptive capacities differ greatly across regions, tailor-made responses and measures, at the regional or local levels, are required for positive and just transitions towards climate resilience. This action will provide the necessary tailored knowledge, expertise, and services to support regions and local authorities in the formulation of such Action Plans, as well as preparing the ground for the swift implementation needed to accelerate the transition.

Description of the Action Plans

The Action Plans should include:

[68] FAIR founding principles for data producers and publishers- Findability, Accessibility, Interoperability, and Reusability

[69] Specific objective 1: Preparing and planning for climate resilience; Specific objective 2: Accelerating transformations to climate resilience. Link to the Mission Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/climat_mission_implementation_plan_final_for_publication.pdf

- The analysis of different possible future scenarios and probabilities of impacts, including different solutions and innovations for relevant sectors, that are robust and cost-effective across these possible futures.

- A set of concrete actions to be implemented at the regional/local level (identifying the regional/local actors in charge of their implementation), including innovation activities and their quantified effects wherever possible.

- A timeline of implementation, including possible intermediate milestones.

- An indication of the expected costs for the region/local authority related to each action put forward by the Action Plan and for the entire Plan, and the estimated avoided losses.

- An analysis on how such costs can be addressed in particular by leveraging additional funding at regional, national, European levels[70] (including via private funding sources) and -where appropriate- other relevant non-financial considerations to facilitate implementation.

- A framework to monitor the implementation of the actions, based on the common framework developed by the project while facilitating synergies between such framework and the one created to monitor the implementation of Mission Adaptation.

The Action Plans should also include innovative solutions developed and tested in the context of Mission Adaptation, in view of enabling further replication: to do so, collaboration with the project stemming from HORIZON-MISS-2024-CLIMA--01-01 will be key.

While remaining fully centered around climate adaptation, the Action Plans – where appropriate and depending on the regional/local needs – are encouraged to address the nexus mitigation/adaptation by looking at co-benefits, including the interlinkage with other crisis (pollution and biodiversity loss). To avoid maladaptive practice, regions and local authorities are encouraged to conduct ex-ante evaluation of the actions planned.

The Action Plans should take into account the findings of the European Environment Agency's European Climate Risk Assessment Report, as well as the information, outcomes and priorities identified in the national climate change adaptation strategies and in other relevant programmes or legal frameworks[71].

The Action Plans should also include considerations on their social impacts and ways to overcome them, including by considering the 2030 Agenda for Sustainable Development.

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70 Such as the CAP, Horizon Europe, LIFE, ERDF and Cohesion Funds, ESF+, Digital Europe Programme, Technical Support Instrument, InvestEU, Just Transition Fund, Erasmus+ programme.

71 Such as the information provided by the European Climate and Health Observatory, the Copernicus Climate Change Service (C3S) National Collaboration Programme, as well as the outcomes and priorities of regional smart specialisation strategies established under Cohesion Policy, the Common Agricultural Policy, the Common Fisheries Policy, and the revised TEN-T Regulation (to be published). Moreover, the body of environmental law under the European Green Deal should be considered (including but not limited to the Nature Restauration Law under the Biodiversity Strategy).

To do so, the process of developing the Action Plans should be inclusive and participatory, engaging all relevant stakeholders, including public authorities from different levels of government, private sector, universities, civil society, social partners, and in particular citizens and vulnerable groups.

Financial support to third parties/cascade funding

Regional and local authorities[72] will lead the development of their respective Action Plans.

The overall consortium selected under this topic will develop a common framework of intervention, setting-up the blueprint for the modular Action Plans that will need to be subsequently tailored to each beneficiary's context. Such general framework also includes the analysis of the possible additional sources of income that can be further leveraged in individual Action Plans.

The proposals should provide financial support to third parties in the form of sub-grants to engage **at least 70 regional and local authorities** to develop their action plans to address the locally relevant climate risks**.** The following conditions should apply:

- As the Mission has already mandated the project Pathways2Resilience to support regional and local authorities in developing "pathways towards climate resilience" and corresponding "innovation agendas", regional and local authorities already supported by the project Pathways2Resilience[73] are not eligible to receive funding from this action, in order to ensure that more regions and local authorities can benefit from Mission's services.

- Eligible sub-grant beneficiaries are public bodies with a legal mandate for climate adaptation or risk management planning at the regional or local levels (e.g. regional or local authorities, association of municipalities) or non-profit legal entities that are representing them.

- At least 70% of the total amount of the EU requested contribution must be made available for the cascade funding call(s). The (first) cascade call should be launched in the first 12 months of the project. The application procedure to the open calls for regions and local authorities to receive financial support should be designed in a way to reduce as much as possible the administrative burden for the applicants.

Demand could be higher than what can be supplied within the limits of this action, therefore the proposals should already describe the process and criteria to award the sub-grants. While

[72] For the scope of the Adaptation Mission, "regional and local authorities" refers to legal entities responsible for climate adaptation in a specific and well-defined territory at the subnational level. Those can be territories at NUTS 1, 2 or 3 levels following the definition of Regions in the Nomenclature of Territorial Units for Statistics (NUTS) classification, cities or municipalities. But the term is not exclusively limited to those, as for example, (mountain) Communities defined under a special national law and empowered to act on climate adaptation are also included in this concept.

[73] This information is or will be publicly available on the website of Pathways2Resilience. For instance, here are the beneficiaries of the first call: https://www.pathways2resilience.eu/40-regions-unite-to-build-climate-resilience-for-53-million-europeans/

remaining as simple as possible, those criteria should ensure geographical balance and inclusivity/equity (by for instance giving a bonus point to regions facing higher vulnerability[74]).

Learning from the experience of projects with financial support to third parties/cascade funding could be relevant on top of consulting the publicly available information on lessons learnt, the project retained is also expected to hold dedicated exchanges with the projects Pathways2Resilience, CLIMAAX and the Mission Secretariat during the preparation of the call. Moreover, the project should collaborate with the Mission National Hubs[75] also in view of facilitating good practice sharing and replicability at National level.

Proposals & general considerations

Proposals should describe how the consortium would:

- Define and adopt a common framework guiding the assistance to the regional and local authorities.
- Structure and organise the selection of regional and local authorities and their local partner organisations.
- Support the regional and local authorities in the various steps of the process developing their Action Plans.
- Describe how it intends to integrate its work into the Mission and its activities so that knowledge and good practices can inspire others and be further replicated.

In fact, as an important contributor to the Adaptation Mission, the project awarded will have an obligation to closely cooperate with the Mission Implementation Platform[76], including (but not limited to) actively inform and engage with the regions and local authorities already involved in the Mission (e.g. Charter Signatories, Community of Practice), as those have shown their commitment to accelerate action on climate resilience. The project is also expected to contribute to the monitoring of the Mission.

Finally, operational links and collaboration should be established with the Climate-ADAPT platform, and the relevant projects from the Mission, other parts of Horizon Europe or other relevant EU programmes[77] and initiatives[78].

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.

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75 Established under topic HORIZON-MISS-2024-CLIMA-01-02

76 Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. About MIP4Adapt (europa.eu)

77 Such as Destination Earth.

78 For example, the project could look at lessons learnt from the Technical Support Instrument, which could provide support in the implementation of the Action Plans, while ensuring there are no overlaps or double funding.

HORIZON-MISS-2025-01-CLIMA-03: Demonstrating solutions to help hotspots in coastal regions to adapt to climate change

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 30.00 million.
Type of Action	Innovation Actions
Eligibility conditions	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). Demonstration activities must take place in at least 3 different coastal regional/local authorities, in 3 different Member States or Associated Countries and at least one of those 3 regional/local authorities should be located in a hotspot area (Southern Europe, low-lying coastal regions and EU outermost regions).
Technology Readiness Level	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B.

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy and the EU Mission on Adaptation to Climate Change, successful proposals will support adaptation efforts in regional and local authorities located in coastal areas and identified as hotspot to climate change.

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

- Climate resilience solutions to protect citizens and activities in coastal regions have been demonstrated and are made largely available for upscaling. This includes social, governance, nature-based and digital solutions.
- Coastal regions, cities and local authorities (in the projects and beyond) have increased their climate resilience and are better prepared to adapt to climate change.

Scope: **Rationale**

As highlighted in the first European Climate Risk assessment by the European Environment Agency, Southern Europe, low-lying coastal regions (including many densely populated cities) and EU outermost regions are geographical hotspots concentrating climate risks with high severity and demanding urgent action. On the other hand, the IPCC sixth assessment report recognised sea level rise as an "existential threat for coastal communities and their heritage, particularly beyond 2100"[79], also highlighting the urgency for increasing adaptation efforts. This is why **this topic specifically addresses coastal resilience in hotspot regions.**

Solutions sought

Proposals should identify approaches and demonstrate innovative solutions to increase climate resilience in coastal areas. They should explore, in a systemic way, how to best adapt to different pressures -- ranging from sea level rise (e.g., coastal floods, coastal erosion, saltwater intrusion) and invasive species to changing physical and chemical properties of the waters. Proposals should outline how the innovative solutions they put forward avoid maladaptation, consider equity and inclusivity and address long-term climate impacts (i.e. 2100 and beyond).

Nature-based solutions and ecosystem-based adaptation should be explored as a priority, in line with the Mission Implementation Plan and the Nature Restoration Law recently adopted. Blue-green infrastructures (as opposed to grey) may represent multipurpose, "no regret" solutions, which simultaneously provide environmental, social and economic benefits and help build climate resilience.

As coastal areas will likely need to undergo significant transformations to become climate-resilient (i.e. transformational adaptation is needed), proposals should integrate stakeholder and citizen engagement. In other words, the solutions put forward in the proposals need to be co-designed with regional and local stakeholders and tailored to their needs. To achieve this, the proposals will need to consider socio-economic impacts (including on vulnerable groups), social acceptability and expected population response to the proposed coastal adaptation measures and solutions. When assessing socio-economic impacts, trade-offs and co-benefits should be considered to ensure coherent and systemic approaches. Thus, 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.

Looking into the potential of digital solutions for adaptation could be part of the proposals and would support the digital transition. This includes connecting climate adaptation measures to early-warning systems to limit the effects of extreme-weather events in near-real time.

[79] See Bednar-Friedl et al, 2022: Europe. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change
Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1817–1927, doi:10.1017/9781009325844.015.

Requirements for the demonstration sites

The Mission encourages collaborations between coastal regional and local authorities facing similar challenges and considers this to be a very efficient approach to secure a large impact. Therefore, the demonstration activities of the proposals should:

- Take place in at least **3 different coastal regional/ local authorities**[80]**, in 3 different Member States or Associated Countries** and at least one of those 3 regional/local authorities should be located in a hotspot area (Southern Europe, low-lying coastal areas and EU outermost regions).

- Include at least **3 "replicating" regional/local authorities from 3 different Member States or Associated Countries**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories. For the replication, the consortium could include one or more partners that would provide support for the technical exchanges and the knowledge uptake in the "replicating" regions or local authorities. Replicating regions are not expected to conduct a demonstration or carry out on the ground activities already in the course of the project. However, replicating regions should at least prepare the theoretical framework for replicating the successful solutions (through exchanges with the demonstration regions), and explore means to fund the implementation of those solutions.

Links to the Mission and to other projects and initiatives

Proposals should build (when relevant) on existing knowledge and adaptation solutions, developed by previous projects and explore synergies with ongoing projects funded by EU and National programmes. The most relevant EU programmes and initiatives include: Horizon 2020, Horizon Europe[81], Interreg, LIFE, and Copernicus[82] and the EU Mission Restore our Oceans and Waters. Additionally, if any part of the proposal involves assessing climate risks, then the risk assessment module should be fully compatible with the developments of the CLIMAAX framework (and, if applicable, its possible updates under topic 'HORIZON-MISS-2025-01-CLIMA-01').

Synergies with other funding sources (EU and national) should be sought to support the transfer of knowledge and innovative solutions to other regional and local authorities. This

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[80] **For the scope of the Adaptation Mission, "regional and local authorities" refers to legal entities responsible for climate adaptation in a specific and well-defined territory at the subnational level. Those can be territories at NUTS 1, 2 or 3 levels following the definition of Regions in the Nomenclature of Territorial Units for Statistics (NUTS) classification, cities or municipalities. But the term is not exclusively limited to those, as for example, (mountain) Communities defined under a special national law and empowered to act on climate adaptation are also included in this concept.**

[81] Projects that could be particularly relevant include R4C, RESIST, NBRACER, TransformAr, CLIMAREST, the Adapt4Coast cluster - SCORE , CoCliCo, PROTECT, REST-COAST, other nature-based solutions projects , and projects funded under the topics HORIZON-CL6-2025-02-COMMUNITIES-03, HORIZON-MISS-2025-03-OCEAN-04, HORIZON-MISS-2025-03-OCEAN-05, HORIZON-MISS-2025-03-OCEAN-06.

[82] Within the Copernicus Programme, particularly relevant to the proposals are the Copernicus Marine Service and Coastal Thematic Hub.

ranges from identifying opportunities to scaling up the solutions demonstrated and fostering their broad deployment across Europe. These funding sources could be public, private or a mix of both. Relevant public funding includes the LIFE programme, and its integrated projects in particular, the European Regional Development and European Maritime, Fisheries and Aquaculture Funds.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform[83] , and other relevant knowledge platforms such as Climate-ADAPT. Projects funded under this topic will get direct access to and will be required to participate in the exchanges of the Mission's Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. 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.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe.

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.

HORIZON-MISS-2025-01-CLIMA-04: Testing and demonstrating innovative solutions to improve resilience to extreme heat, including addressing health impacts

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 30.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation

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

	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). The following additional eligibility criteria apply: demonstration activities must take place in at least 3 different regional/local authorities, in 3 different Member States or Associated Countries.
Technology Readiness Level	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B.
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). [84].

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy, the EU Mission on Adaptation to Climate Change and the EU Disaster Resilience Goals, project results are expected to improve adaptative capacities of European regional and local authorities to extreme heat and reduce the impacts on human health and well-being.

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

- Regional and local authorities are better prepared to withstand the impacts of extreme heat, therefore protecting their citizens (in particular, vulnerable groups), their health and well-being.
- Regional and local authorities are taking a leading role and actively involved in the development and testing of innovative solutions to deal with extreme heat.
- Regional and local authorities are actively exploring funding opportunities beyond Horizon Europe for the deployment of adaptation measures.

Scope: **Rationale**

With more frequent and intense heatwaves, extreme heat is the deadliest manifestation of climate change in Europe. It is estimated that, in the summer of 2022, heat was responsible for 60,000-70,000 premature deaths in Europe.

[84] 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

In fact, the European Climate Risk Assessment identifies heat as the largest and most urgent climate hazard for human health. Heat risks to the general population are already at critical levels in Southern Europe. More and urgent action is needed to reduce health risks, both from heat indoors and outdoors.

Extreme heat does not strike all the locations and all the population groups in the same way. For instance, Southern and Western-Central Europe and urban areas are more exposed to heatwaves. Areas away from the sea are also more exposed, as they are lacking any mitigation effect from the water. Similarly, extreme heat does not affect all groups in a specific location equally and this needs to be considered in the adaptation policies. Extreme heat is especially impacting the most vulnerable people due to a range of socio-economic and physiological factors, such as income (less capacity to invest in heat mitigating solutions), social exclusion, gender, age, disability, health conditions. As many vulnerable people spend a large part of their time indoors, ensuring heat resistant housing becomes of even more critical importance.

The goal of this topic is to accelerate the implementation of solutions that increase resilience to extreme heat and protect the health and well-being of the citizens, particularly in the built environment.

Solutions sought

Proposals should test and demonstrate effective solutions against the effects of extreme heat in regional / local authorities by addressing **all of** the following areas:

- Develop, demonstrate and evaluate **systemic** measures to **reduce and manage heat stresses in public and private spaces and in the built environment** and while avoiding maladaptation. This could include, but is not limited to, renovating/improving the design of buildings, redesigning the public spaces and/or implementing nature-based solutions (in line with the Nature Restoration Law).

- Develop and demonstrate **ready-to-go actions** for emergency services, public transport and utilities (water and energy) in case of extreme heat events, as well as support disaster preparedness and prevention planning (e.g., civil protection agencies).

- Explore and evaluate options for **innovative funding schemes** to implement the proposed heat resilience solutions for regions/local authorities, which are all operating in different contexts (e.g. jurisdiction, governance and local stakeholders).

Associated challenges, such as institutional and political bottlenecks, multi-level governance challenges, and the politics and justice dimensions of implementing innovative solutions all fall within the remit of this topic. As a result, 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.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the development and testing of the proposed solutions should be

embedded, as much as possible in the adaptation planning of the regional or local authority participating in the project and/or in national plans.

Requirements for the demonstration sites

The Mission encourages collaborations between regional and local authorities facing similar challenges and considers this to be a very efficient approach to secure a large impact. Therefore, the demonstration activities of the proposals should:

- Take place in at **least 3 different regional/local authorities**[85] located **in 3 different Member States or Associated Countries**
- Include at least **3 "replicating" regional/local authorities from 3 different Member States or Associated Countries**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories. For the replication, the consortium could include one or more partners that would provide support for the technical exchanges and the knowledge uptake in the "replicating" regions or local authorities. Replicating regions are not expected to conduct a demonstration or carry out on the ground activities already in the course of the project. However, replicating regions should at least prepare the theoretical framework for replicating (through exchanges with the demonstration regions) and explore means to fund the implementation of those solutions.

Links to the Mission and to other projects and initiatives

Proposals should build (when relevant) on existing knowledge and adaptation solutions developed by previous projects and explore synergies with ongoing projects funded by EU and national programmes. The most relevant EU programmes and initiatives include: Horizon 2020, Horizon Europe[86], Interreg, LIFE programmes, the EU Mission Climate-Neutral and Smart Cities, Copernicus, Destination Earth and the New European Bauhaus.

Synergies with other funding sources (EU and national) should be sought, to support common approach towards climate adaptation, carbon neutrality, sustainability, transfer of knowledge and innovative solutions. This will also allow 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 Social Climate Fund, the European Regional Development Funds or the Just Transition Fund.

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85 **For the scope of the Adaptation Mission, "regional and local authorities" refers to legal entities responsible for climate adaptation in a specific and well-defined territory at the subnational level. Those can be territories at NUTS 1, 2 or 3 levels following the definition of Regions in the Nomenclature of Territorial Units for Statistics (NUTS) classification, cities or municipalities. But the term is not exclusively limited to those, as for example, (mountain) Communities defined under a special national law and empowered to act on climate adaptation are also included in this concept.**

86 This includes but is not limited to projects funded by under the following topics LC-GD-9-2-2020; HORIZON-MISS-2023-CLIMA-01-03; HORIZON-MISS-2024-CLIMA-01-08; HORIZON-CL3-2024-DRS-01-03

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform[87] , and other relevant knowledge platforms such as Climate-ADAPT ,the European Climate and Health Observatory and the Copernicus Health Hub Projects funded under this topic will get direct access and will be required to participate in the exchanges of the Mission Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. 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.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe. 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.

HORIZON-MISS-2025-01-CLIMA-05: Better understanding incentives for private sector financing of adaptation solutions

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	Research and Innovation Actions
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

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

[88] 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

	Community (2021-2025). [88].

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the EU Mission on Adaptation to Climate Change, project results are expected to pioneer ways to mobilise the private sector to finance adaptation solutions.

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

- The private sector (in the broadest sense, including the business or financial sector, private investors, those that have available corporate social responsibility budget to invest, etc) is increasingly financing adaptation solutions. This can be for instance thanks to increased and improved range of investment concepts, financing mechanisms and/or business models.

- The private sector engagement with the Adaptation Mission is stepped up, from a few businesses having signed the Mission Charter as Mission's friends to businesses and the financial sector taking an active role in accelerating climate adaptation, including feeding knowledge to the Mission Community of Practice on best approaches.

Scope: Financing was highlighted by 93% of the Mission Charter signatories as the biggest challenge their region or local authority face[89]. This was not unexpected and financing for adaptation is also one of the key enabling conditions identified by the Mission Implementation Plan.

Adapting to the impacts of climate change requires mobilising significant resources, which can only be achieved by mobilising private and public funding alike. So far, the private sector involvement in financing implementation of adaptation measures and solutions has been quite limited. At this stage, climate adaptation generally relies to a large extent on some kind of public support.

As the impacts of climate change are expected to trigger significant economic losses and damages, which will affect the private sector in terms of increased financial strains and considerable risk (short-term and long-term), it is imperative that the private sector, including the financial sector, are part of the mind shift into acting for and funding climate preparedness. In this, the private sector needs to invest much more actively in climate adaptation efforts. This new mindset should include rethinking and redefining risk and responsibility for adverse effects, considering risk allocation and obligations across public and private actors.

The proposal should identify economic (non-financial) incentives for the private sector to finance adaptation solutions. The proposal should address **all of** the following aspects:

1. **Developing calculations and the most appropriate methodologies for calculating the economic rationale** for financing adaptation solutions, aimed at convincing the

[89] Analysis of information provided by the signatories of the charter of the Mission Adaptation to Climate Change, 70488a33-37b9-40f6-8b74-daca0f048f47_en (europa.eu)

private sector to finance it. This could include, but is not limited to, the following: (i) calculations of the risks/losses caused by climate change; (ii) calculations of the economic benefits of the adaptation solutions across different time horizons (e.g. with new or retained revenues/contributions that the implementation of the adaptation solution could generate, avoided costs/losses, cost of inaction, lower insurance costs, attribution and monetisation of co-benefits (including social and environmental co-benefits)); and (iii) calculations of the overall cost/benefit. Ideally, if all benefits are calculated, they can outweigh the costs. Such calculations and economic rationales may need to be different for the different climate risks and key community systems.

2. **Identifying how to overcome in innovative ways the main barriers** to the financing of climate adaptation solutions by the private sector (both from the investor and investee point of view) and how to improve the economic rationale, and **developing and test innovative ways to economically incentivise (in non-financial ways)** the private sector to finance them. This could include an increased and improved range of investment concepts or strategies, financing mechanisms and/or business models, etc. These innovative ways may need to be different for the different climate risks and key community systems.

3. **Testing the above by developing minimum 8 case studies, in 3 different Member States / Associated Countries.** The case studies should work on adaptation solutions that require financing but have not yet found financing. Each case study should explicitly encompass a calculation of the economic rationale for financing (as per above) and, where in this calculation all benefits taken together do not exceed the cost and hence this is not a sufficient incentive, propose and **test** innovative ways to economically incentivise (in non-financial ways) the private sector to finance the proposed adaptation solutions. The cases should include at least one case in each of the key community systems identified in the Mission Implementation Plan, namely critical infrastructure, health & well-being, water management, land use & food systems, ecosystems. In at least 3 of the cases the adaptation solutions should be nature-based adaptation solutions. It will be considered as a positive element if the case studies cover a variety of climate hazards.

To reasonably achieve the expected outcomes, the project consortia should include participation of relevant private sector actors from the business and financial sectors and their commitment to further contribute to the deployment of the solutions identified in the cases studies or to support the development of the business plan for the climate resilience investments beyond the duration of the project.

Due to its nature, 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.

In addition to the standard dissemination obligations, the results of this action should be promoted towards the Mission's Community of Practice, to allow broad replication. The

format should be adapted to the target audience being the private sector, so presenting the case studies and the lessons learnt in a practical and attractive manner.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform[90], and other relevant knowledge platforms such as Climate-ADAPT. Projects funded under this topic will get direct access to and will be required to participate in the exchanges of the Mission's Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. 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.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe.

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.

Finally, proposals should, also through the Mission Implementation Platform, build on knowledge from and connect to the other relevant projects funded by Horizon Europe[91], LIFE and Technical Support Instrument (TSI) and other EU and national funding programmes.

HORIZON-MISS-2025-01-CLIMA-06: Pre-commercial procurement of breakthrough solutions for climate proofing of public buildings

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.
Type of Action	Pre-commercial Procurement
Eligibility	The conditions are described in General Annex B. The following

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

[91] The projects CLIMATEFIT, P2R , FARCLIMATE, PIISA, SOTERIA, NATURE DEMO, e.g. BIOFIN and GoNaturePositive and EuropaBON and projects funded under HORIZON-MISS-2024-CLIMA-01-06 could particularly relevant

conditions	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). The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.

Expected Outcome: The successful proposal will contribute to the implementation of the EU Mission on Adaptation to Climate Change, allowing local and regional authorities to address their climate risks and accelerate preparedness and resilience to the changing climate.

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

- Customisation/pre-operationalisation of customer-tailored solutions in the area of climate adaptation of **public buildings**, that respond to the common needs and beyond state-of-the-art performance targets of the buyers group.
- Reduction of fragmentation of demand for innovative solutions by enabling public procurers to collectively implement a Pre-Commercial Procurement (PCP) in the area of climate proofing of buildings, aggregating demand in an area subject to legislation and procedures that, due to its nature, is better/more efficiently addressed jointly, or which they would not have been able to tackle independently.
- New opportunities for wide market uptake and economies of scale for the supply side through the use of joint specifications, wide publication of results and – where relevant – contribution to standardization, regulation or certification to remove barriers for introduction of innovations into the market and creation of new products, processes and/or services ready for market uptake, leading to viable new businesses, jobs and sustainable economic growth.

Scope: **Rationale and background**

Buildings are vulnerable to climate change in different ways. For example, climate change can increase their risk of collapse, damage their construction materials, and even threaten their structural integrity. It can also cause significant loss of value because of more storms, snow or subsidence damage, water encroachment, deteriorating indoor climate and reduced building lifetime.

Besides impacting the structural features of a building, climate change can influence the conditions under which people live, work and interact indoors. An inability to properly regulate indoor temperatures may lead to thermal discomfort for users, potentially negatively impacting health, well-being, and productivity. In most places, users need to use heating and cooling systems to cope with thermal discomfort brought about by temperature extremes.

The EU Strategy on Adaptation to Climate Change includes several actions tackling the climate risk of the built environment, while being mindful of the cross-cutting relevance of buildings within the European climate policy. The Strategy flags the need to improve the preparedness of buildings to climate change. Furthermore, the Strategy is mindful of buildings' role in large-scale adaptation, for instance in curbing the urban heat island effect by means of green roofs and walls, and of the need for more accurate predictions of climate change stresses on the built environment. At the building level, investment policy decisions need to be underpinned with solid climate data - including household-scale decisions on whether to renovate. In terms of buildings' insurance, a key priority of the Strategy is to close the climate protection gap for infrastructure and for the built environment. The water-energy nexus is also crucial, and the building sector can help tackling the related vulnerabilities.

The Strategy, and the Adaptation Mission which is a key implementing vehicle of the Strategy at the local level, gives priority to **nature-based solutions** such as green roofs and walls. In buildings, for instance, nature-based solutions can be a sustainable alternative to the sole use of air conditioning for cooling. Green infrastructure measures (green corridors, green urban areas, trees in cities as well as green roofs and walls) can increase resilience of the built environment particularly when integrated in urban planning and coupled with nature-based solutions. The PCP should look at nature-based solutions as priority; other approaches or combination with those are not excluded, when duly justified.

The 2020 Renovation Wave Communication explicitly envisaged at doubling renovation rates in the European building stock, ensuring higher energy and resource efficiency. It also pointed to the importance of standards for heating and cooling in buildings, while considering vulnerable people and improving society's readiness towards heatwaves. The revision of the Green Public Procurement criteria for office buildings has covered climate resilience criteria, based on indicators developed within the new European framework for sustainable buildings.

The Directive on Energy Performance of Buildings and the Energy Efficiency Directive provide guidance on how buildings should be taking into account climate related considerations. In addition, the European Commission has also produced EU-level guidance on the climate resilience of buildings in March 2023.

The EU has been supporting the advancement of knowledge on how to increase the resilience of the built environment regularly, supporting through various research programmes the development of innovative ideas. This is also an area of potential synergies with Mission Cities and the New European Bauhaus initiative.

Supported Activities

This PCP – i.e. a joint procurement of research and development services - is launched to **reinforce public demand-driven innovation in developing solutions to climate proof public buildings.** PCP has the potential to be an effective demand side action and a useful tool to close the gap between supply and demand for innovative solutions.

The PCP should deliver successful innovative and fully tested product(s) and/or service(s) that meet the common needs of the buyers' group (consortium of procurers) to procure research, develop innovative marketable solutions, speed up the time-to-market and provide best value for money.

This action supports the follow up to the July 2023 Communication[92] on EU Missions assessment and utilizes the budget reserved from the EU Missions part of the Horizon Europe work programme 2023.

Activities shall include:

- Preparation of the relevant documentation needed to launch and implement the procurement procedure;
- Joint research activities relating to the customisation/pre-operationalisation of prototypes end-user services in the area of climate change adaptation and mitigation validating the PCP strategy;
- Activities for the follow-up of the joint procurement, such as activities for awareness raising, networking, training, evaluation, validation and dissemination of results.

The core of the consortium should be a qualified 'buyers group' (public procurement consortium), able to implement the action. Additional partners such as business/SME support organisations, innovation agencies or sectoral organisations may be included to assist procurers in knowing what is available on the market through market consultations. The project is expected to have a maximum estimated duration of 3 years.

The proposal should describe the jointly identified challenge, indicating how it fits into the mid-to-long-term plans of the consortium partners to improve climate resilience in their territories, why solutions currently available on the market or under development are not meeting their needs, and put forward concrete targets for the desired functionality/performance improvement in the quality and efficiency of the required solutions.

The proposal should also explain clearly how the creation of jobs, sustainable economic growth and new businesses will be assessed as an integral part of the successful application.

Links to the Mission

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform[93], the Mission's Community of Practice, and other relevant knowledge platforms such as Climate-ADAPT.

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92 Comission Communication: EU Missions two years on: assessment of progress and way forward COM(2023) 457 final and Commission Staff Working Document: COMMISSION STAFF WORKING DOCUMENT EU Missions two years on: An assessment of progress in shaping the future we want and reporting on the review of Mission Areas and areas for institutionalised partnerships based on Articles 185 and 187 TFEU SWD(2023) 260 final

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

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.

Adaptation to Climate Change: Other Actions

1. Sustaining the Mission Implementation Platform for the Adaptation to Climate Change Mission

Under this public procurement, the following services are expected to be provided:

- Well-coordinated support to the general operation and activities of the Adaptation to Climate Change Mission, as valid service to the European Commission in the broad range of activities involved with the implementation of the Mission;
- Coordination and facilitation of the Mission Community of Practice, in all its articulations (such as virtual and physical events, thematic working groups etc.), proving engaging involvement and opportunities for exchanges for all involved actors and regions, in relation to the actions they are undertaking in the field of climate resilience building;
- Continuous and ad hoc monitoring and assistance to the European Commission in relation to any Mission evaluation, by maintaining and improving the current monitoring framework, further refining monitoring tools and KPI for the Mission, producing timely reporting on progress.
- Assistance to the Commission with the overall communication on the Mission, through the different relevant channels including the Mission Portal, broadly towards citizens and also specific target audiences, helping to identify and create synergies and add value to communication, dissemination and exploitation activities of individual projects of the Mission's portfolio, and boost scientific, societal and economic impacts.
- Organisation of the annual forum, catering for all related logistics and communication
- On the ground support to regions and local authorities participating in the Mission in organising regional and local events involving citizens and stakeholders.

This action supports the follow-up to the July 2023 Communication[94] on EU Missions assessment and utilizes the budget reserved from the EU Missions part of the Horizon Europe work programme 2023.

Form of Funding: Procurement

Type of Action: Public procurement

[94] Comission Communication: "EU Missions two years on: assessment of progress and way forward" COM(2023) 457 final and Commission Staff Working Document: "EU Missions two years on: An assessment of progress in shaping the future we want and reporting on the review of Mission Areas and areas for institutionalised partnerships based on Articles 185 and 187 TFEU" SWD(2023) 260 final

Indicative timetable: Q2 of 2025

Indicative budget: EUR 6.00 million from the 2025 budget[95]

2. Studies, conferences, events and outreach activities

Subject matter of the contracts envisaged: studies, conferences, events and outreach activities within the scope of the EU Mission on Adaptation to Climate Change.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2025

Indicative budget: EUR 0.14 million from the 2025 budget[96]

3. Support regional and local authorities in their efforts to conduct climate risks assessments

Provide guidance and support to EU regions and local authorities that have engaged with the Mission on Adaptation to Climate Change and beyond, by the provision of authoritative climate data at different granularity scale, including the local one.

Make available to EU regions and local authorities that have engaged with the Mission on Adaptation to Climate Change and beyond the Risk Data Hub entire potential, by creation of ad-hoc and plug in modules, users guidelines and digital interfaces designed for the target audience, to allow easy and user-friendly access to the entire realm of the Risk Data Hub functionalities.

Facilitate the development of specific synergetic actions in relation to data management and data reporting in the area of climate adaptation among the Mission on Adaptation to Climate Change and other Horizon Europe, EU and national programmes and policies implementation (such as on risk reduction and management).

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: Q2 of 2025

Indicative budget: EUR 0.50 million from the 2025 budget[97]

[95] Of which EUR 6.00 million from the 'Climate, Energy and Mobility' budget.
[96] Of which EUR 0.14 million from the 'Climate, Energy and Mobility' budget.
[97] Of which EUR 0.50 million from the 'Climate, Energy and Mobility' budget.

Cancer: Supporting the implementation of the Cancer Mission

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 four Cancer Mission objectives are: Understand; Prevent what is preventable; Optimise diagnosis and treatment; Support quality of life. Its five transversal priorities are: ensure equitable access in all aforementioned areas, innovation, childhood cancer, personalised medicine and citizen engagement. The Mission on Cancer will address all cancers including poorly-understood cancers[98] 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 approach;[99] 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 EU programmes including EU4HEALTH, EURATOM, Digital Europe (for example the Genomics Data Infrastructure[100] and the Cancer Image Europe initiative[101]), Erasmus+, the EU Strategic Framework on Health and Safety at Work 2021-2027, and other initiatives related to health and cancer.

It also relates to the European Green Deal, including the Zero Pollution Action Plan[102] and the Farm to Fork strategy[103]. The mission proposes research, innovation 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 carcinogens, air pollution, unhealthy diet, nutrition, and low physical activity).

Furthermore, it is also in line with the industrial[104] and digitalisation strategy[105]. 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, and smart apps/sensors. The Mission also supports the integration of AI, machine learning and deep learning approaches to

98 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.

99 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

100 https://gdi.onemilliongenomes.eu/

101 https://cancerimage.eu/

102 Particularly the Flagship 1 of the Zero Pollution Action Plan: "Reducing health inequalities through zero pollution"

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

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

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

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.

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.

Successful proposals under this Mission should set out a credible pathway to contribute to improving cancer control, and more specifically to all of the following impacts:

- Improve understanding of cancer in the context of the environment, work, and lifestyle in the broadest possible sense;
- Enhance cross-policy cancer prevention, screening and early detection strategies;
- Optimise the diagnosis 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 Cancer[106].

In the call for proposals described below, the Commission envisages several actions[107]:

Work programme 2025

For 2025, on the Cancer Mission objective *Understanding*, the Commission envisages to foster collaboration of national and regional funders on translational cancer research and will support an action to better understand the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers.

On the Cancer Mission objective *Prevention and early detection*, the Commission envisages - in collaboration with the Cities Mission – to boost prevention through cycling and walking while reducing greenhouse gas emissions from transport.

On the Cancer Mission objective *Diagnosis and treatment*, the Commission will support actions to innovative surgery, targeting cancer patients with metastatic disease and investigator-initiated multinational early-stage clinical trials for paediatric cancer.

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

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

On the Cancer Mission objective *Quality of life*, the Commission envisages to support pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and older) through nutrition.

Lastly, the Commission will support the network of National Cancer Mission Hubs (NCMHs).

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-02-CANCER-01: Sustained collaboration of national and regional cancer funders to support the Cancer Mission through translational research

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.
Type of Action	Coordination and Support Actions
Award criteria	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 is 12.
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) [108].

Expected Outcome: Common challenges in translational cancer research require effective transnational cooperation on prioritised efforts, using national, regional and charity-based resources and appropriate funding schemes. Important achievements and leverage of translational cancer research funding have been obtained by TRANSCAN, TRANSCAN-2

[108] 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

and TRANSCAN-3 ERA-Net projects under the Seventh Framework Programme for Research and Innovation (2007-2013) and Horizon 2020 (2014-2020)[109]

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

- National and regional cancer funders across Europe (i.e. representing Northern, Southern, Central, Eastern and Western Europe), based on a common strategic research and innovation agenda, deliver:

1. At least four transnational calls for proposals addressing translational cancer research, resulting in collaborative grants to academic investigator-led third parties;

2. Streamlined national, regional and foundation-based or charity-based practices in organising peer-reviewed translational cancer research and innovation funding between the partners, with attention to exploring novel funding schemes and initiatives as well as sustainability of a network of funders where appropriate;

Scope: More efforts are warranted to address the potential for sustainable coordination, the access to and sharing of research data to enhance the understanding of cancer as well as to further the alignment of national, regional and foundation or charity-based cancer research and innovation programmes and activities in Member States and Associated Countries. The EU contribution will **not** be used to co-fund the grants to third parties described hereunder.

The proposal should address all the following:

- Align national and regional public and private research funding programmes on translational cancer research to support at least four joint transnational calls to academic investigator-led third parties that support the Cancer Mission and the Europe's Beating Cancer Plan;

- Pool the necessary financial resources from the participating national and regional research programmes as well as, where appropriate, leverage resources from pertinent foundations, charities and transnational initiatives, to issue at least four joint transnational calls for proposals resulting in collaborative grants to academic investigator-led third parties that support the Cancer Mission and the Europe's Beating Cancer Plan, while avoiding overlaps with EU-funded research under Horizon Europe;

- Demonstrate the potential impact of collaboration between national and regional transnational research and innovation programmes, as well as demonstrate a leverage effect on European and national research and competitiveness using key indicators;

- Consider novel funding schemes and joint activities such as analyses of research and innovation funding programmes, impact, dissemination, citizen –including cancer patients- engagement, and training;

[109] https://transcan.eu/

- Datasets produced by collaborative grants to academic investigator-led third parties should be made FAIR whenever possible, while tools and models should follow the principles of open science, supporting the future UNCAN.eu research data platform.

HORIZON-MISS-2025-02-CANCER-02: Understanding the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 30.00 million.
Type of Action	Research and Innovation Actions
Award criteria	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 is 12.

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

- Researchers and health professionals will advance our understanding on how environmental, genetic and epigenetic, omics and other factors interact in determining the onset and development of cancers in children, adolescents and young adults and how they impact health outcomes in young cancer patients.
- Policymakers and public health authorities have scientific evidence to improve prevention strategies to minimise the impacts of environmental factors on the development and progression of paediatric, adolescent and young adult cancers.
- Researchers, innovators, and professionals from across different disciplines and sectors will support and contribute to the future UNCAN.eu research data platform by ensuring interoperability of data, new digital tools and models.

Scope: The proposed topic will contribute to the Cancer Mission objectives by improving the understanding of the impact of environmental exposures[110] including, their interaction with other relevant factors on cancer onset and progression and/or other relevant health outcomes

[110] The exposure to potentially harmful chemical, physical or biological agents in the environment

along the cancer patient journey. The age group of interest for this topic includes children, adolescents and young adults (less than 40 years of age at first cancer diagnosis).

Applicants should take advantage of technological advances which have opened up new opportunities to collect, combine and analyse large datasets of diverse types, offering new possibilities to design epidemiological studies to understand the mechanistic contribution of environmental factors, in combination with other individual and contextual factors[111] as appropriate. Innovative and data intensive approaches are expected for the identification of time windows of susceptibility[112] and of robust biomarkers of cumulative environmental exposure.

Proposals may envisage the creation of large cohort(s) by pooling and integrating existing retrospective studies in the areas of clinical research, exposome research, cancer registries and complementing with the new collection of other relevant data where needed (other omics data, digital pathology, behavioural and socio-economic data, clinical records etc.). Sex and gender differences should be duly considered. The use of causal interference, computational modelling and/or artificial intelligence tools are encouraged for the analysis and management of big, complex and heterogeneous data sets. All datasets produced should be made described with metadata records in the EU dataset catalogue of the future European Health Data Space[113] while all tools and models should follow the principles of open science and be made available through the future UNCAN.eu platform.

The applicants should address several of the following activities:

- Identify, validate and document different types (and/or combinations) of biomarkers for the development of robust quantitative measures of the effects of cumulative environmental exposures associated with cancer onset;
- Elaborate and test cost effective approaches for measuring biomarkers of cumulative environmental exposure in large paediatric, adolescent and young adult populations, also by applying new analytical tools and novel methods of analysis;
- Identify individual signatures (e.g. based on genetic, epigenetic, multi-omic characteristics), and time windows conferring susceptibility to environmental hazards associated with cancer onset and progression in children, adolescent and young adults at different stages of the life course;
- Identify clinical states, lifestyle and socio-economic factors and circumstances that increase the risk of adverse health outcomes associated with exposure to environmental hazards in different time windows in young cancer patients;

[111] Examples are genetic, epigenetic and -omic characteristics, lifestyle, socio-economic factors, clinical status and clinical circumstances

[112] In utero exposures might be included if relevant

[113] https://healthdcat-ap.github.io/

- Develop new tools and methods to combine and analyse multimodal data, including the application of novel data-intensive methods of analysis, while ensuring interoperability with the future UNCAN.eu research platform.

Advantage should be taken to the extent possible of data and experience gained under current large-scale initiatives such as: the European Human Exposome Network (EHEN)[114]; the European Partnership for the Assessment of Risks from Chemicals (PARC)[115], the clusters of projects under the environment, climate and health research portfolio[116] and the projects under the 'Understanding' project cluster of the Cancer Mission[117] The relevant EU research and health infrastructures should be exploited for available digital tools and services for dataset creation, standardisation, data discovery, secure access, management, visualization, harmonization, analysis and other functions as appropriate. Successful proposals are expected to establish appropriate collaborations with HORIZON-MISS-2024-CANCER-01-01 'Use cases for the UNCAN.eu research data platform'.

The Commission will facilitate coordination with other EU initiatives. Therefore, successful proposals will be asked to join the 'Understanding' project cluster of the Cancer Mission[118] and should include a budget for networking, attendance at meetings and joint activities[119]

Applicants envisaging to include clinical studies should provide details in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-03: Innovative surgery as the cornerstone of affordable multi-modal therapeutic interventions benefitting cancer patients with locally advanced or metastatic disease

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 7.00 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.

[114] https://www.humanexposome.eu/

[115] https://www.eu-parc.eu/

[116] https://research-and-innovation.ec.europa.eu/research-area/health/environment-and-health_en

[117] https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/eu-mission-cancer/implementation-page/cancer-mission-objectives_en#understanding-of-cancer.

[118] In order to address the objectives of the Cancer Mission, 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.

[119] Examples of these activities are research or research capacity, 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. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

Indicative budget	The total indicative budget for the topic is EUR 31.00 million.
Type of Action	Research and Innovation Actions
Award criteria	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 is 12.
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) [120].

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:

- Patients have access to tailored, affordable, effective and –when appropriate - minimally-invasive surgery-centred, multi-modal treatment interventions targeting locally advanced or metastatic disease;
- Researchers, innovators[121], SMEs and other professionals from different disciplines and sectors have access to innovative surgery-centred treatment technology and medical devices for further improvements and validation;
- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the evidence to implement affordable surgery-centred treatment solutions that benefit cancer patients with locally advanced or metastatic disease in their healthcare systems;

Scope: Cancer surgery[122] represents the main first line treatment for solid tumours. While cancer patients with locally advanced or metastatic disease across Europe are often excluded from clinical studies, they would benefit from access to tailored, affordable, innovative,

[120] 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

[121] Innovators turn research results into new and better services and products, to remain competitive in a global marketplace and to improve the quality of life of Europe's citizens

[122] A non-exhaustive list of types of surgeries: open surgery, minimally-invasive surgery using laparoscopy or endoscopy, robotic surgery, laser surgery, cryosurgery, radiosurgery also known as 'gammaknife'.

surgery-centred interventions, which are adapted to an increasingly precision oncology healthcare landscape.

Proposals should address all of the following:

- Validate innovative surgery-centred, multi-modal interventions to treat cancer patients with locally advanced or metastatic disease. When appropriate, investigators should consider minimally-invasive surgical interventions combined with either relevant medical devices or other multimodal treatment interventions[123];
- The chosen surgery-centred intervention(s) should be validated through academic investigator-initiated Phase 2 or Phase 3 clinical trials. Translational research is limited to supporting the conduct and analyses of the proposed clinical trial(s);
- The chosen surgery-centred intervention(s) should be adapted to the needs of the target population and the specificities of healthcare provision at local, regional, or national level, duly reflecting the (cultural) diversity and available resources across Member States and Associated Countries. Data should be disaggregated by sex, gender, age and other relevant variables, such as by measures of socio-economic status or ethnicity;
- The primary and secondary endpoints of the clinical trial(s) should support overall survival, patient-reported outcomes and quality of life issues. Such endpoints should be defined together with patients and their caregivers through research that stimulates social innovation and supports end-user engagement using participative research models;
- Affordability of the chosen surgery-centred intervention(s) should be demonstrated via a cost-effectiveness analysis.
- Include an appropriate mix of stakeholders from various disciplines and sectors, such as physicians, academia, patients and their caregivers, patient representatives, SMEs, insurance companies, engineers, physicists, charities, foundations, research and innovation organisations, civil society, regional as well as national health authorities;
- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space while all tools and models should follow the principles of open science and made available through the future UNCAN.eu platform[124].

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 the successful proposal, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

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[123] A non-exhaustive list of other treatment interventions to combine with innovative surgery may include: intra-operative radiotherapy, chemotherapy, electro-chemotherapy, photodynamic therapy, radiotherapy, targeted therapy, immunotherapy, hyperthermia or thermal ablation, transplantation or any other combination

[124] https://healthdcat-ap.github.io/

The successful proposals are expected to build on resources made available by the Knowledge Centre on Cancer (KCC)[125] to foster EU alignment and coordination.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Diagnosis and Treatment' cluster for the Cancer Mission[126] and should include a budget for networking, attendance at meetings, and joint activities[127].

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-04: Investigator-initiated multinational early-stage innovative clinical trials for paediatric cancer

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 25.00 million.
Type of Action	Research and Innovation Actions
Award criteria	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 is 12.
Procedure	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 expected outcomes of this topic, grants will be awarded not only in order of ranking but also to ensure that at least two applications that fully address children and adolescents (age group 0-19 y at time of

[125] 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

[126] In order to address the objectives of the Cancer Mission, 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.

[127] Examples of those activities are research or research capacity, 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. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

	first cancer diagnosis) are funded provided that these applications attain all thresholds 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: • at least one application that fully addresses the age group 0-14 (children) or both age groups (0-14 and 15-19); • at least one application that fully addresses the age group 15-19 (adolescents) or both age groups (0-14 and 15-19) are funded provided that these applications attain all thresholds.
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) [128].

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:

- Children and adolescents with cancer have access to innovative, more effective, less toxic treatments - both in terms of acute toxicity and long-term late effects- and care solutions.
- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the scientific evidence to accelerate the implementation of affordable and accessible treatment and care solutions in their healthcare systems.
- Researchers, innovators, and professionals from different disciplines and sectors ensure accessibility and re-usability of relevant trial data, to support the future UNCAN.eu research data platform, which is currently in preparation.

[128] 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

Scope: This topic will contribute to the achievement of the Mission's objective to provide better treatments for cancer. The focus is on children and adolescent (up to 19 years of age, e.g. age of first cancer diagnosis) cancer patients.

Paediatric oncology has made considerable progress, increasing patient survival rates up to 80%; yet cancer remains the leading cause of death in children and adolescents. Progress in R&I to support the development of targeted cancer treatments for children has been rather limited. Over the past 20 years, less than 10% of new anti-cancer drugs have received marketing authorization for paediatric use, resulting in limited availability of innovative therapies to treat paediatric cancers. This is even more striking when cancers with poor prognosis are considered.

Most of the treatments currently used for paediatric cancers have been developed to treat adult cancers; consequently, young cancer patients and survivors very often experience adverse late-effects[129] due to the high toxicity of treatments. In addition, clinical tools used to evaluate treatment outcomes (e.g. tools to assess toxicity, radiological response, quality of life etc.), are also derived from adult oncology and therefore suboptimal.

This situation mostly reflects the fact that paediatric cancers are rare, and their biology is different to adult cancers. The relatively low number of cases warrants the implementation of multinational academic-initiated clinical trials to accelerate the development of innovative, more effective and less toxic treatments.

Proposals should address all of the following:

- Design and conduct innovative investigator-initiated multinational early-stage clinical trials, (phase 1 and 1/2) to accelerate the development of safe, effective, targeted cancer treatments[130] for children and/or adolescents with cancer. Focus should be on cancers with poor prognosis (e.g. with a 5-year overall survival less than 50% from time of diagnosis) at any stage of the disease and for any type. Trials should take into account socio-economic and biological stratification. All data should be disaggregated by sex, gender, age and other relevant variables.

- Develop innovative clinical tools (companion diagnostics) to assess tumour response, tailored to childhood and adolescent cancers, enabling an accurate evaluation of treatment outcomes, monitoring of long-term effects of treatment, and identification of potential risks such as second cancers, thereby improving overall patient care.

[129] Late-effects range from cardiovascular disease, organ and skin alterations, fertility problems, cognitive impairment, and mental health issues such as depression and anxiety etc. The 2024 Cancer Mission annual work programme includes a topic (HORIZON-MISS-2024-CANCER-01-05) to improve the understanding and management of late-effects in Adolescent and Young Adults, cancer patients and survivors

[130] Including but not limited to new and repurposed drugs, innovative radiation and immunotherapy approaches, advanced therapies, combination of treatments and/or with other interventions etc

- Ultimately, provide scientific evidence to deliver affordable and accessible treatments for children and adolescents with cancer to be implemented by healthcare systems at the level of local communities, European regions, Member States and Associated Countries.

- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space, while all tools and models should follow the principles of open science and be made available through the future UNCAN.eu platform.[131]

The topic is designed to fill a gap in terms of knowledge, expertise, tools, data and resources in paediatric oncology, to be achieved through multinational, cross-sectoral and multidisciplinary cooperation.

For that purpose, projects should bring together a diverse range of stakeholders and organizations from across Europe and beyond, including academia, data scientists, paediatric oncology centers, hospitals, healthcare practitioners, liquid biopsy companion diagnostics experts, cancer patients and survivors, caregivers, patients and survivors organisations, regulators, and industry etc., to foster collaboration and accelerate the development of innovative cancer treatments and therapeutic approaches including companion diagnostics. Timely contact with regulatory authorities should be foreseen to inform the trial design and feasibility. Use of artificial intelligence tools is encouraged, whenever relevant. Existing resources such as paediatric cancer registries should be appropriately exploited.

This topic requires the effective contribution of Social Science and Humanities (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.

Successful proposals are expected to build on the support of the Knowledge Centre on Cancer (KCC)[132] to foster EU alignment and coordination. Due consideration should be given to existing EU-funded initiatives (and if relevant other initiatives), including PedCRIN/ECRIN[133] relevant initiatives supported by the Innovative Health Initiative, such as ITCC4[134], c4c[135], EU PEARL[136] or the European Reference Network for Paediatric Oncology, ERN PaedCan[137]

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Diagnosis and Treatment' cluster for the Cancer Mission[138] and should include a

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131 https://healthdcat-ap.github.io/

132 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

133 PedCRIN | Ecrin

134 ITCC-P4 GmbH Paediatric Preclinical Proof of Concept Platform (itccp4.com)

135 conect4children is a pan-European clinical trial network

136 https://eu-pearl.eu/

137 Home - ERN PaedCan (ern-net.eu)

budget for networking, attendance at meetings, and potential joint activities[139]

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-05: Pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and older) through nutrition

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 3.00 and 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.
Indicative budget	The total indicative budget for the topic is EUR 15.00 million.
Type of Action	Research and Innovation Actions
Award criteria	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 is 12.
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) [140].

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:

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138 In order to address the objectives of the Cancer Mission, 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.

139 Examples of these activities are research or research capacity, 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. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation phase and during the life of the project.

140 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

- Older cancer patients have access to and benefit from tailored nutritional care-oriented interventions as part of routine treatment or care interventions, which improves treatment outcomes, alleviates disease symptoms and side effects and enhances their survival and quality of life;

- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the evidence to implement tailored nutritional care as part of routine cancer treatment or care interventions in their healthcare systems, including in everyday medical practice.

Scope: Nutrition is of particular concern in older cancer patients due to issues like malabsorption, which is linked to adverse outcomes (such as mortality and decreased quality of life). Moreover, cancer incidence and mortality and prevalence predictions[141] suggest a considerable increase of older cancer patients, who are also underrepresented in clinical studies. Hence, older cancer patients across Europe would benefit from access to optimised nutritional care-oriented interventions, to improve treatment outcomes, alleviate disease symptoms and side effects[142], thereby enhancing their survival and quality of life.

Pragmatic clinical trials address treatment optimisation by evaluating treatment effectiveness, i.e. the effect of treatment in routine (real-world) clinical practice[143]

Proposals should address all of the following:

- Conduct randomised or cluster-randomised academic investigator-initiated pragmatic clinical trials to validate tailored nutritional care-oriented interventions as part of routine cancer treatment or care, which could include physical activity or psychosocial support, **for older cancer patients (65 years and older);**

- Translational research is limited to supporting the conduct and analyses of the proposed clinical trial(s). Trials should consider biological stratification of the patient population to be enrolled. All data should be disaggregated by sex, gender, age, and other relevant variables, such as by measures of socio-economic status or ethnicity;

- The chosen nutritional care-centred intervention(s) should be adapted to the needs of older cancer patients and to the specificities of the provision of care at local, regional, or national level, duly reflecting the (cultural) diversity across Member States and Associated Countries. Furthermore, affordability and accessibility should be considered;

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141 Globocan, ECIS

142 For example: insufficient caloric intake; anorexia; cachexia, frailty, malfunctioning of the digestive tract such as difficulties with swallowing, indigestion, malabsorption, placement of a stoma, treatment-induced intolerance or allergy, inflammation, immune suppression, complications due to antimicrobial drug treatment and/or resistance, bowel dysfunction, changes to the oral, skin, lung, urethral, genital, gut, or other microbiota, fatigue, or, mental health issues.

143 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 interventions, comparative effectiveness of different treatment interventions.

- The primary and secondary endpoints of the pragmatic clinical trial(s) should support overall survival, patient-reported outcomes and quality of life issues. Such endpoints should be defined together with older patients and their caregivers through research that stimulates social innovation and supports end-user engagement using participative research models;

- Include an appropriate mix of stakeholders from various disciplines and sectors, such as physicians, academia, patients and their caregivers, patient representatives, dietitians, nutritionists, behavioural scientists, SMEs, insurance companies, charities and foundations, research organisations, civil society, regional and national health authorities;

- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space[144] while all tools and models should follow the principles of open science and be made available through the future UNCAN.eu platform.

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 the successful proposal, 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 Cancer Mission, established in 2023, and should include a budget for networking, attendance at meetings, and joint activities[145]

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-06: Support to the network of National Cancer Mission Hubs (NCMHs)

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
Expected EU contribution per project	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.

144 https://healthdcat-ap.github.io/

145 Examples of those activities are research or research capacity, 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. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

Indicative budget	The total indicative budget for the topic is EUR 10.00 million.
Type of Action	Coordination and Support Actions
Award criteria	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 is 12.

Expected Outcome: This topic will ensure the continuation of the work of supporting the creation of a Network of National Cancer Mission Hubs (NCMHs) in Member States and Associated Countries. NCMHs in each Member State and Associate Country are to operate for the whole duration of the Cancer Mission and beyond. It was envisaged that there would be a second phase of support to build on the achievements and needs identified under the ECHoS project during the first phase.

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

- The Network and NCMHs are supported to ensure the integration of Cancer Mission activities at national, regional, and local levels;
- Stakeholders, including patients and citizens, in national, regional or local health and research and innovation systems engage in policy dialogues on cancer;
- Citizens, including patients, are involved in citizen engagement activities and are involved in the design and development of these activities, which will lead to recommendations being made to governments, helping to implement and adapt strategies to national and regional needs;
- Regional and national policy makers and authorities benefit from activities carried out in the implementation of Cancer Mission actions.

Scope: Building on the first phase of NCMHs, the Mission's activities will be coordinated with relevant national, regional or local actors with a view to facilitate their integration and alignment with EU and national initiatives. The Network and NCMHs will be strengthened, including through expanding its capacities, outreach and type of activities the Network will carry out, while ensuring its sustainability.

In this regard the proposal should support the operation of the Network and activities carried out by it.

The proposal should address all of the following:

- Enhance the capacity of NCMHs in the Member States and Associated Countries, through knowledge exchange and training, and expanding the geographical outreach of the NCMHs activities in each country;

- Support the Networks' activities such as coordination of NCMHs, awareness raising of the Cancer Mission activities including coordination of EU cancer research activities and policy actions;

- Develop a methodology on mission-driven innovation implementation in mission actions with a view to building synergies at national and regional levels;

- Support the engagement of relevant national, regional or local actors, including civil society as well as business and legal advisors, including those who haven't been involved previously, in regular thematic policy dialogues and country-specific dialogues on cancer to increase the impact of EU cancer-related R&I and policies at national, regional and local level;

- Broaden engagement of local/regional actors including philantrophy to attract private funding beyond EU programmes in the development of NCMHs;

- Organise regular citizen engagement activities, at least one per year related to the objectives of the Mission, such as on prevention or screening and/or organise activities for a country or a number of countries using tools and materials developed by the European Observatory on Health Systems and Policies[146] in each Member State and Associated Country, with a view to increase awareness and participation in policy discussions;

- Develop strategies for NCMHs to reach long-term sustainability and to create a level of interest from stakeholders;

- Disseminate the results of NCMHs Networks' activities, through organisation of a yearly conference and development of policy reports;

- Provide a yearly summary report of national Mission-related activities to contribute to the monitoring of progress of the Mission implementation at national and regional levels;

- Establish appropriate collaboration with the consortium implementing HORIZON-MISS-2024-CANCER-01-06 for joint activities of dissemination and outreach related to the national nodes of the European Cancer Patient Digital Centre (ECPDC)[147]. Examples of those activities are the hosting of national web pages of the ECPDC information portal, engagement with users, assessment of their experiences and provision of feedback to the ECPDC steering board, etc.

Cancer: Other Actions

1. Continuation of bus roadshow with focus on cancer prevention

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146 European Observatory on Health Systems and Policies (who.int)

147 European Commission, Directorate-General for Research and Innovation, *An operational concept for a European Cancer Patient Digital Centre – EU missions – Cancer*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/78242

Community-based initiatives, such as the pilot EU Cancer Mission Bus Roadshow, currently implemented in Lithuania, Poland and Romania, have shown effectiveness in increasing awareness and initiating behavioural changes towards cancer prevention.

This procurement action will support a further implementation of the initiative, in other EU countries.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 3.00 million from the 2025 budget[148]

2. Develop a monitoring platform for all Mission objectives – technical assistance

This action will support the continuous monitoring of the Mission and logistical support to meetings of expert groups and events with stakeholders, including Mission project clusters and international partners and other actions launched under the EU Cancer Mission funded under Horizon Europe, including through setting up a monitoring platform.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.84 million from the 2025 budget[149]

148 Of which EUR 3.00 million from the 'Health' budget.

149 Of which EUR 0.84 million from the 'Health' budget.

Supporting the implementation of the Restore our Ocean and Waters Mission

The Mission 'Restore our ocean and waters by 2030' will provide a systemic approach to restore, protect and preserve the health of our ocean, seas and waters. The Mission is designed to deliver on the European Union's 2030 quantified and measurable targets for protecting and restoring ecosystems and biodiversity, for achieving zero pollution, and for decarbonising and reducing net greenhouse gas emissions from the blue economy towards climate-neutrality, within the EU's 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 Development [150] 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 and waters by 2030" [151].

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 2030[152] and the Nature Restoration Law[153];

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 Soil[154];

3. Make the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law[155] and the holistic vision enshrined in the Communication on a new approach for a Sustainable Blue Economy[156].

The Mission is implemented in two phases:

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

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150 https://www.oceandecade.org/

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

152 COM/2020/380 final

153 Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869 (Text with EEA relevance), OJ L, 2024/1991

154 COM/2021/400 final

155 Regulation(EU)2021/1119

156 COM/2021/240 final

- In the second 'deployment and upscaling' phase (2026-2030), the solutions will be further deployed, replicated and scaled up. Activities aim at supporting transformative and innovative solutions to be demonstrated in view of their deployment. Enabling activities will continue generating new knowledge, observation and monitoring data.

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 share and 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 ocean, seas and freshwater through the Digital Twin Ocean [157] (a key deliverable of the 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 2025 work programme is structured around the following activities:

- Evidence-based approaches and solutions to support the establishment of Marine Protected Areas (**Blue Parks);**
- A toolbox for public authorities to address plastic litter by implementing **land-to-river-to-sea** approaches;
- Uptake of innovative solutions to support the digital **transition in fisheries and aquaculture** and improve energy efficiency;
- Place-based and people-centred **restoration** (in the sense of the Mission, i.e. contributing to the three objectives of the Mission) of a number of **regions** and their coastal and riparian zone**s, waterfront cities and islands**;
- Consolidation of the core infrastructure of the **European Digital Twin Ocean (DTO)** and integration of additional models;
- Consolidation of **national and regional hubs** mobilizing national and regional funds as well as private financing, to support the replication of innovative solutions.

[157] https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters/european-digital-twin-ocean-european-dto_en

Activities to support communities to achieve the objectives of the Mission Ocean and Waters, to develop an Ocean Observation Platform, to improve accounting of blue carbon within the wetlands and to support a conference under the Danish Presidency are also covered.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-03-OCEAN-01: Blue Parks - Towards a coherent European network of strictly protected areas for restoring healthy and productive marine ecosystems

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 4.00 and 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.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.
Type of Action	Research and Innovation Actions

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

- Improved knowledge on the distribution and condition of marine habitats, as well as on key ecosystem services provided by these habitats;
- Support to, and acceleration of the designation by Member States/Associated Countries of new strictly protected areas, contributing to the EU Biodiversity Strategy and the UN Convention on Biological Diversity;
- Measurable contributions to achieving the Mission ocean and waters' Objective 1 on the Protection and restoration of marine ecosystems and biodiversity.

Scope: The EU Biodiversity Strategy for 2030 sets a target to legally protect at least 30% of EU seas and to strictly protect 10% of EU seas by 2030. Member States have supported this target and have started the scientific and technical work to identify new areas to be (strictly) protected. Strictly protected areas are also expected to play a role in the implementation of obligations to restore habitats listed in the Regulation on Nature Restoration (habitat types in Annex II[158] and habitats of species covered by the regulation) through passive restoration. There are however many data gaps concerning the distribution and condition of habitats and potential different strategies in Member States to find suitable areas for strict protection that may hinder the creation of a truly coherent EU network of strictly protected areas. There is a need for science-based conservation planning at a sea basin or sub-basin scale which would

[158] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1991&qid=1722240349976

also take into account potential trade-offs due to the main uses of the sea as well as maximise benefits for climate and fisheries. While there are ongoing projects that should support the planning of future EU Marine Protected Areas (MPAs) networks, none of them is currently focusing on the specific target of strictly protected areas and delivering benefits for climate and fisheries, as well as explicitly addressing potential spatial trade-offs with offshore renewables and other activities.

Activities will address Mission ocean and waters' Objective 1 on the protection and restoration of marine ecosystems and biodiversity, in line with the aims of the Biodiversity Strategy as well as on the objectives of the Regulation on Nature Restoration. They should also contribute to the aims of the Marine Action Plan and to the implementation of the Birds, Habitats and Marine Strategy Framework Directives, as well as the common fisheries policy and climate policy and legislation.

Activities will aim at prioritising areas for strict protection in European seas by providing a scientific basis for Member States/Associated Countries to designate new strictly protected areas, whilst delivering benefits for fisheries and climate.

Projects should identify potential areas and coherent networks of strictly protected areas covering in particular the habitat types listed in Annex II of the Regulation on nature restoration and habitats of species covered by the regulation, prioritising those habitats which are spawning, nursery and feeding areas for fish populations and species protected by the nature legislation, capturing and storing carbon as well as enhancing coastal protection. Projects should also include mapping and assessing conditions of these habitats, contributing to the implementation of Article 5 of the Regulation and providing data to EMODnet and the Digital Twin Ocean

Projects should promote trans-boundary joint actions, as national borders are most often inaccurate for reflecting natural boundaries (resource stocks, fluxes of organisms, habitats distribution). The project should also promote inter-disciplinary research (including legal sciences, economy, ecology etc.) and inter-sectorial, transdisciplinary approaches (practitioners, decision makers, scientists).

Compatibility of optimal network(s) of strictly protected areas as well as potential trade-offs with marine/maritime activities, (e.g.: fisheries, offshore wind energy and maritime transport), should be addressed.

All following activities should be covered:

- Review and compile data about the distribution and condition of habitat types listed in Annex II of Regulation on nature restoration, including by compiling data currently not available from public repositories, and collecting new data where necessary.

- Review and compile data, collecting new data where necessary, about spawning, nursery and feeding areas of fish species and species protected by nature legislation, as well as areas with habitats which play a key role in carbon capture and storage and for coastal protection, including by compiling data currently not available from public repositories.

- Based on the ecological needs of those habitats and their typical species (including for example connectivity of habitats or life cycles of species), determine optimal network(s) of strictly protected areas, contributing to the 10% target of the Biodiversity Strategy, that would best support the protection of habitats and the delivery of significant benefits for fisheries and climate, for example through spill-over effects or by ensuring undisturbed capture and storage of carbon and coastal resilience and preventive measures for protection.

- Address the compatibility with and potential trade-offs in relation to planned marine/maritime activities, (e.g.: fisheries, offshore wind energy, coastal development and maritime transport) that may overlap with the identified optimal network(s) of strictly protected areas. Relevant Marine Spatial Planning plans should be taken into account.

The project(s) is/are expected to deliver a blueprint for the establishment of optimal network(s) of marine strict protected areas, whose scale and range should be ecologically relevant and impactful. Close cooperation with the relevant public authorities and stakeholders is encouraged.

The project(s) should build on existing knowledge and projects funded by the EU and national programmes, which are relevant for MPAs and maritime spatial planning, including data collected by the Joint Research Centre and the European Environment Agency, as well as on projects supported by the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe), EMFAF, LIFE and Interreg programmes, the Partnership Biodiversa+ and JPI Oceans. Project(s) should support Member States' cooperation on the establishment of coherent networks of strictly protected areas.

Projects should cooperate closely with projects funded under Mission ocean and waters topics HORIZON-MISS-2021-OCEAN-02-01, HORIZON-MISS-2022-OCEAN-01-01, and HORIZON-MISS-2023-OCEAN-01-01 and avoid overlaps with regard to the geographical coverage of the projects already funded. Projects should build links with the Mission Implementation Platform and with the Blue Parks community.

Proposals addressing the EU Outermost Regions[159] are encouraged, given these regions' natural assets.

HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per	The Commission estimates that an EU contribution of between EUR 4.50 and 5.50 million would allow these outcomes to be addressed

[159] https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

project	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 22.00 million.
Type of Action	Innovation Actions
Eligibility conditions	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).
Technology Readiness Level	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering the 4 different Mission basins (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River 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.
Legal and financial set-up of the Grant Agreements	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 the FAIR (Findable, Accessible, Interoperable, Reusable) principles. 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/public bodies located in Member States/Associated Countries. The maximum amount to be granted to each Third Party is EUR 100,000, to showcasethe effectiveness of the toolbox and develop a replication plan for its uptake. in the 'associated region'. The Financial Support to a Third Party is provided only once for the entire duration of the project.

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

- Public authorities and relevant stakeholders have access to a toolbox to address marine plastic litter from land-to-river-to-ocean;
- Reduced plastic litter pollution in European rivers and seas according to a land-to-river-to-sea approach at basin level;
- Accelerated uptake of innovative solutions to prevent and remove litter, including plastic pollution reaching the sea in the Mission basins;
- Enhanced knowledge on marine litter, including plastics in line with the new guidelines for a common approach to tackle marine litter of the Marine Strategy Framework Directive (MSFD) Technical Group on Marine Litter;
- Measurable contributions to achieve the Mission ocean and waters and the EU Zero Pollution targets to reduce by at least 50% plastic in the sea;
- Contribution to the Mission's Digital ocean and water Knowledge system through marine observations and open data and knowledge sharing.

Scope: Understanding and tackling the inland sources, pathways, distribution and cumulative impacts of marine litter and plastic pollution into the ocean is fundamental to reduce the overall anthropogenic impact on our ecosystems and to guide the process towards the Mission's 50% plastic litter reduction target in European water systems.

The overall aim of the activities under this topic is to co-design with relevant public authorities and public service providers, as well as other interested parties the most appropriate tools and solutions to address marine litter and plastic pollution according to a land-to-river-to-sea approach at basin level.

The main deliverable of funded projects under this topic will be a toolbox providing evidence-based data and information on sources, pathways, distribution and cumulative impacts of marine litter on ecosystems and water quality, including plastics and information on related hotspots and areas of accumulation, together with a set of demonstrated, sustainable and environmentally sound removal solutions, as well as measures to prevent litter and plastics reaching the sea.

Work should focus on inland waters (including deltas and coastal areas), where, in the absence of systematic monitoring of plastic litter, data and standardised methodological tools and techniques for collection, identification, classification and quantification of plastic pollution are most urgently needed. Activities are also expected to enhance cross-border cooperation and coordination at different levels, national, regional, local.

All following components are expected to be embedded in the toolbox:

- Marine litter monitoring and data collection to detect, identify and characterise major sources and pathways, hotspots and areas of accumulation of riverine litter, as well as cost-effective quantification of litter presence and fluxes, both above and below water. Relevant data collected through these actions should follow the New guidelines for a common approach to tackle marine litter of the MSFD Technical Group on Marine Litter and be made openly available through the European Marine Observation and Data Network (EMODnet);

- A set of suitable and cost-effective innovative solutions for the sustainable and environmentally sound removal of plastics litter in rivers and inland waters, leading to reduction of litter in sea basins, without harming living organisms;

- Measures to engage with society and relevant industrial sectors, including the fishing industry, to prevent plastic litter reaching the sea (e.g.: good practices; awareness raising campaigns, community-led actions, education schemes, audio-visual campaigns, proper waste management) and to support the uptake of innovative solutions, thus driving environmental improvements and transformative changes.

Each proposal should address one Mission basin only, i.e.: 1. Atlantic and Arctic sea basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin or 4. Danube River basin. Activities should be tailored to address regional/sea basin specificities.

The effectiveness and efficiency of the toolbox should be demonstrated through at least 3 use-cases in three different countries per basin, in the most relevant identified sites, such as river deltas, important source-sites of litter or other strategic points for litter removal and with the involvement of different users (e.g.: regional authorities, municipalities, entities managing waterbodies) .

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 3 ‘associated regions’ to showcase the effectiveness of the toolbox and develop a replication plan for its uptake in the associated regions. The concept of ‘associated regions’ is implemented through Financial Support to Third Parties (see the Specific Conditions table for this topic). ‘Associated regions’, which are represented by local/regional authorities/public bodies, 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 address plastic litter according to a land-to-river-to-sea approach. The projects should ensure that the 'associated regions' are not already involved in the use cases covered by the projects. The partners should proactively reach out to the 'associated regions' to enable them to follow closely the project and its 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 in their territory the approach they developed. 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. The non implementation of the Associated region concept as described above will be considered as a major shortcoming during the evaluation.

Should the actions include the development of digital tools, to support the monitoring, data collection, forecasting and decision-making regarding marine litter at local level, interoperability with the work done in the EU Digital Twin of the Ocean and storage in the digital platform are required, as a means of continuity, creating synergies and exchanges and ensuring legacy.

The projects selected under this topic are expected to cooperate and exchange among themselves as well as with relevant projects arising from previous topics implemented under Mission ocean and waters (e.g.: HORIZON-MISS-2022-OCEAN-01-04), the Plastic Pirates project, with the WATER4ALL partnership, relevant Interreg projects as well as projects that will be funded under the topic HORIZON-CL6-2025-01-ZEROPOLLUTION-05: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and microplastic pollution and HORIZON-CL4-SPACE-2025-01-46: Innovative Earth observation services in support of maritime litter detection and ship source pollution policies. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures[160].

Cooperation with the EU Outermost Regions[161] is encouraged, given these regions' natural assets.

HORIZON-MISS-2025-03-OCEAN-03: Digital technologies and energy transition in fisheries and/or aquaculture

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 5.00 and 5.825 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 23.30 million.
Type of Action	Innovation Actions
Eligibility conditions	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). The following additional eligibility criteria apply: In addition to the

[160] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website - https://ri-portfolio.esfri.eu

[161] https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

	standard eligibility conditions, the consortium must carry out demonstration activities in 3 different countries of the basin addressed by the proposal (i.e. one of the following basins: 1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin), involving and including as beneficiaries, legal entities established in these respective countries.
Technology Readiness Level	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering the 4 different Mission basins (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River 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.
Legal and financial set-up of the Grant Agreements	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 the FAIR (Findable, Accessible, Interoperable, Reusable) principles.

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

- Energy efficiency is enhanced and CO_2 emissions are reduced in fisheries and aquaculture, without harming the ecosystem and biodiversity;
- Measurable reduction in energy use and the costs associated with energy-intensive operations in the fisheries and aquaculture sector, increasing resilience and leading to improved economic sustainability and operational safety;
- Wider adoption and application of digital solutions, including artificial intelligence and data analytics, for efficient energy management and decision-making in the fisheries and aquaculture industries;
- Improved understanding of technical, social, legal, regulatory and policy barriers to the uptake of digital solutions for a sustainable energy transition of the sector;

- Establishment of best practices for enhanced fisheries and aquaculture management and contribution to the development of standard;
- Enhanced digital and energy efficiency related skills.

Scope: The fisheries and aquaculture sectors, including algae, are critical components of the global food system, contributing significantly to food supply, food security and sustainable economic growth. Energy, specifically fuel consumption, is one of the major cost items in the European fisheries and aquaculture sector, putting the economic viability of the European fleet and aquaculture activities under tremendous pressure during periods of high energy prices. Moreover, this fuel usage contributes to CO_2 and other emissions, including underwater noise. Innovative solutions are needed to transform the energy landscape of the fisheries and aquaculture, making these critical industries more sustainable, resilient, and economically viable.

Projects under this topic will demonstrate how digital technologies can address the need to reduce energy consumption and associated economic and environmental costs in European fisheries and aquaculture and provide real-time, accurate, and actionable data and information to reduce energy use. This can include the use of advanced (remote) sensing technologies and monitoring devices, Internet of Things, artificial intelligence, data-driven approaches and data analytics, robotics and automation.

Each proposal should address one Mission basin only, i.e.: 1. Atlantic and Arctic sea basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin or 4. Danube River basin (including its delta and the Black Sea). Activities should be tailored to address regional/sea basin specificities.

Projects should carry out demonstration activities, proving in real conditions, the operational feasibility and economic viability of digital solutions to enhance energy efficiency in operation at sea (including fishing, farming, offshore aquaculture, onboard processing, vessel operations) or inland aquaculture production and in relation to infrastructure requirements. Projects should provide evidence that these solutions do not harm ecosystems and biodiversity and can contribute to a better treatment of animals.

The consortium must carry out the demonstration activities in at least 3 Member States/Associated Countries of the basin covered by the project, involving and including in the consortium partners from these respective countries.

Demonstration activities are expected to focus on relevant segments of the value chain and address different types of fisheries/aquacultures. Similarly, fishing operations, encompassing activities from route optimisation to catch handling, also present significant opportunities for energy efficiency improvements.

The implementation of the demonstration activities should also include an analysis of the obstacles and opportunities for the uptake of the solutions (technical, social, legal, regulatory

and policy, including those linked to skills, the labour market and the attractiveness of the sector for young talents). Safety and well-being of workers as well as digital security related issues should also be considered.

This topic requires an integrated, holistic and transdisciplinary approach. Proposals should therefore ensure the involvement of relevant stakeholders with complementary expertise, including SMEs and of other relevant maritime sectors. The active involvement of end-users (fishers, aquaculture operators, sea-farmers) in the demonstration activities will be crucial to tailor the solutions to specific needs and conditions.

Dedicated training and user-centric activities taking place in the demonstration sites are expected to be included, to build capacity and support skill development and a workforce adapted to a sustainable energy transition.

Showcases, dissemination and communication actions should be included to support the replication potential of the solutions, accelerate the uptake by other potential users of the solutions demonstrated in the project. Roadmaps for the uptake of digital solutions to support the energy transition in fisheries and aquaculture are also expected.

Projects should consider the provision of advisory services to the end-users to enhance energy monitoring and energy management to facilitate informed decision-making to reduce energy use, lower costs, and mitigate environmental impacts or to support the shift to renewable energy.

The projects are expected to cooperate and exchange with relevant projects implemented under the Sustainable Blue Economy Partnership [162], the Zero Emission Waterborne Transport Partnership[163], as well as projects funded under the topic 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. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures as well as related projects such as AQUASERV[164].

HORIZON-MISS-2025-03-OCEAN-04: Restoring Ocean and Waters in Regions

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	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

[162] https://www.bluepartnership.eu/

[163] https://www.waterborne.eu/projects

[164] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/; AQUASERV – research infrastructure services for sustainable aquaculture, fisheries and the blue economy https://cordis.europa.eu/project/id/101131121

	requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 15.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The consortium shall include at least [4] regional authorities or other competent public bodies from different Member States/Associated Countries as partners, with at least [1] in each of the four basin-scale lighthouses of the Mission Restore our Ocean and Waters, as defined in the Mission Implementation Plan: Atlantic and Arctic, Baltic and North Sea, Danube and Black Sea, Mediterranean.
Other conditions	The proposed actions should implement their activities in at least [8] different regions, aiming for an equal distribution across the four lighthouses. Regions are defined according to Eurostat Nomenclatures, NUTS levels 2.

Expected Outcome: This topic aims at supporting regional authorities in demonstrating and accelerating the transitions needed for achieving one or several objectives of the Mission Restore our Ocean and Waters in their coastal & riparian areas.

Projects should support regional authorities and other relevant competent authorities in carrying out restoration activities in coastal zones[165] and riparian zones[166] on land, in the land-sea continuum as well as in their surface waters (rivers, lakes, transitional and coastal waters)), which will contribute to achieving the Mission objectives.

Project results are expected to contribute to all the following expected outcomes:

- Measurable, quantifiable, 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 Plan[167] through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness of regional and local authorities for testing, deploying and upscaling systemic innovative solutions for restoring their coastal and riparian areas, incl. by strengthening synergies with their own programmes and resources.

[165] https://land.copernicus.eu/en/products/coastal-zones
[166] https://land.copernicus.eu/en/products/riparian-zones
[167] See section 1.2. 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

- Increased number of regional authorities and competent authorities taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular, supporting programmes of measures of relevant EU legislation.

- Increased resilience of coastal and riparian communities to extreme climate events and sea-level rise.

- Public and private investment is encouraged and leveraged at regional level to protect and restore degraded ecosystems, to prevent and eliminate pollution, and make the blue economy carbon-neutral and circular.

Scope: The project should test and demonstrate effective solutions to achieve the Mission's specific objectives and targets in coastal and riparian areas. The project should thus test and demonstrate solutions that contribute to:

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or

2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or

3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

The required demonstration activities are expected to take place in at least [8] regions and local areas with at least [2] in each of the four basin lighthouses.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. They will also address resilience of coastal and riparian communities to climate related extreme events, sea-level rise and water resilience aspects.

The project should provide tools to:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets in coastal regions and riparian areas;

- Identify, test and adapt innovative solutions to restore coastal and riparian areas, making a tangible and measurable contribution to one or several of the specific Mission objectives and targets;

- Encourage citizen and stakeholder involvement and uptake through active participation in the restoration initiatives of coastal regions and riparian zones (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;

- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters;

- Monitor the effectiveness of the proposed solutions in relation to the Mission objectives and targets.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the River Basin Management Plans under the WFD, the Programme of Measures under the MSFD, future national Nature Restoration Plans under the NRR, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*[168]*, river contracts*[169] or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Under the Mission approach, collaborations between regional authorities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To facilitate replication of the solutions, the proposals should already identify other suitable regions/local areas, where the solutions and approaches could be replicated. Projects should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other regions.

Regional and local authorities participating to the project are encouraged to pool and enhance synergies[170] with other sources of funding (e.g. structural, cohesion funds or LIFE projects) for implementing and deploying innovative solutions, through e.g., the conclusion of a Working Arrangement[171]. This will support a common approach towards coastal and river restoration, and sustain the implementation of solutions, transfer knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, 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 EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with “HORIZON-MISS-2024-OCEAN-02-

168 *Cf HE2020 RESTCOAST project*
169 *Cf example http://environnement.wallonie.be/contrat%5Friviere/*
170 C(2022) 4747 final
171 Ref to be provided.

01: Community-led actions to restore our ocean, seas and waters" and are encouraged to consider, where relevant, the services offered by European research infrastructures[172].

The funded project will share their experience and good practices with the projects selected under the topics of the EU Mission Climate Change Adaptation "Supporting regions and local authorities in assessing climate risks" (HORIZON-MISS-2025-01-CLIMA-01) and "Support to regions and local authorities in developing local Action Plans towards climate resilience" (HORIZON-MISS-2025-01-CLIMA-02).

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouse CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

HORIZON-MISS-2025-03-OCEAN-05: Restoring Ocean and Waters in waterfront Cities and their Ports

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 15.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The consortium shall include at least [4] public bodies managing cities, regions or municipalities and their ports as beneficiaries, with at least [1] in each of the four basin-scale lighthouses of the Mission, defined in the Mission Implementation Plan as follows : Atlantic and Arctic, Baltic and North Sea, Danube and Black Sea, Mediterranean.
Other conditions	The proposed actions should implement their activities in at least [8] waterfront cities and ports, aiming for an equal distribution across the four lighthouses.

Expected Outcome: This topic aims at supporting waterfront cities and their ports in demonstrating and accelerating the transitions needed for achieving one or several objectives of the Mission "Restore our Ocean and Waters".

[172] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

The project should support local authorities managing waterfront municipalities, cities and their ports in carrying out activities which will contribute to achieving the Mission objectives in the coastal zones[173] and riparian zones[174] of any city[175] as well as in their surface waters (rivers, lakes, transitional and coastal waters). This covers both coastal and inland cities.

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

- Measurable, quantifiable, 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 Plan[176] through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness of municipalities, city, relevant local authorities and port authorities for testing, deploying and upscaling systemic innovative solutions for restoring their urban waterfront ecosystems and preventing their degradation, incl. by strengthening synergies with their own programmes and resources.
- Increased number of municipalities, cities and ports taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular.
- Increased resilience of waterfront communities to extreme climate events and sea-level rise.
- Public and private investment is encouraged and leveraged at urban level to protect and restore degraded ecosystems, to prevent and eliminate pollution, and make the blue economy carbon-neutral and circular, and mitigate the impact of climate change on urban communities.

Scope: The goal of this topic is to accelerate the implementation of innovative solutions to achieve Mission objectives and targets in waterfront cities, including their ports/maritime infrastructures.

The project should test and demonstrate effective solutions to achieve the Mission's specific objectives and targets in waterfront cities. The project should thus test and demonstrate solutions that contribute to:

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173 https://land.copernicus.eu/en/products/coastal-zones

174 https://land.copernicus.eu/en/products/riparian-zones

175 The term city is used to refer to a geographical subnational jurisdiction ("local administrative unit") such as a town or a city that is governed by a local government as the legal entity of public administration, understanding that the institutions of local governments may vary from country to country and terminology used in national contexts may differ. Cities must have at least 50 000 inhabitants. For countries with a lower number of larger cities, this population threshold is lowered to 10 000 inhabitants. Those countries are: Croatia (HR), Cyprus (CY), Estonia (EE), Ireland (IE), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Slovenia (SI) and Slovakia (SK).

176 See section 1.2. 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

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or

2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or

3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

The required demonstration activities are expected to take place in at least [8] waterfront cities and ports with at least [2] in each of the four basin lighthouses.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. They will also address resilience of waterfront communities to climate related extreme events, sea-level rise and water resilience aspects.

The project should provide tools to:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets in waterfront cities and urban waterfront ecosystems;

- Identify, test and adapt innovative solutions to restore cities, including their ports/ infrastructures by addressing one or several of the specific Mission objectives and targets;

- Facilitate citizen and stakeholder involvement and uptake through active participation in the restoration initiatives of coastal regions and riparian zones (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;

- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters in cities which are all operating in different jurisdictions and governance contexts;

- Monitor the effectiveness of the proposed solutions in relation to the Mission objectives and targets.

Under the Mission approach, collaborations to demonstrate, test and deploy effective innovative solutions between municipalities and their ports facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To facilitate replication of the solutions, proposals should already identify other suitable cities, municipalities and ports where the solutions and approaches could be replicated. Projects

should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other municipalities, cities and ports.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the River Basin Management Plans under the WFD, the Programme of Measures under the MSFD, future national Nature Restoration Plans under the NRR, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*[177]*, river contracts*[178] or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Regional and local authorities participating to the project are encouraged to pool and enhance synergies[179] with other sources of funding (e.g. structural, cohesion funds or LIFE projects) for implementing and deploying innovative solutions, through e.g. the conclusion of a Working Arrangement[180]. This will support a common approach towards urban waterfront ecosystem restoration, and sustain the implementation of solutions, transfer of knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, 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 and from the EU Mission on Cities), as well as EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with "HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters" and are encouraged to consider, where relevant, the services offered by European research infrastructures[181].

The funded project will share their experience and good practices with the projects selected under the joint topic of the EU Mission Cities and Zero Emission Waterborne Transport Partnership on "Real time monitoring of regulated and non-regulated emissions in order to enforce emission limits in waterfront cities (HORIZON-MISS-CIT-CL5-2025-0X-0X).

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouses CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

HORIZON-MISS-2025-03-OCEAN-06: Restoring Ocean and Waters on Islands

177 *Cf HE2020 RESTCOAST project*

178 *Cf example http://environnement.wallonie.be/contrat%5Friviere/*

179 C(2022) 4747 final

180 Reference to be provided

181 The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 13.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 13.50 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The consortium shall include at least [3] regional or local authorities managing islands as beneficiaries, with at least [1] in each of the following lighthouses of Mission Ocean and Waters: Baltic/North Sea, Atlantic/Artic and Mediterranean.
Other conditions	The proposed actions should implement their activities in at least [6] islands, aiming for an equal distribution across the following lighthouses of Mission Ocean and Waters: Baltic/North Sea, Atlantic/Artic and Mediterranean.

Expected Outcome: This topic aims at supporting islands[182] and their managing public authorities in demonstrating and accelerating the transitions needed for achieving one or several objectives of the Mission "Restore our Ocean and Waters".

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

- Measurable, quantifiable, 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 Plan[183] through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness of local and regional authorities in testing, deploying and upscaling systemic innovative solutions for restoring islands, incl. by strengthening synergies with their own programmes and resources.

[182] In the context of this topic, islands are defined as territories within the European Union and Associated Countries surrounded by water.

[183] See section 1.2. 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

- Increased number of islands taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular.
- Increased resilience of island communities to extreme climate events and sea-level rise.
- Public and private investment is encouraged and leveraged on islands to protect, conserve and restore degraded ecosystems.

Scope: The goal of this topic is to support public authorities to accelerate the implementation of innovative solutions to achieve Mission objectives and targets on islands, including small ones.

The project should test and demonstrate effective solutions to achieve the Mission's specific objectives and targets on islands. The project should thus test and demonstrate solutions contribute to:

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or
2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or
3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

The required demonstration activities are expected to take place on at least [6] islands with at least [2] in each of the following basin lighthouses: Baltic/North Sea, Atlantic/Artic and Mediterranean lighthouses.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. They will also address resilience of island communities to climate related extreme events and sea-level rise.

The project should support islands (and are encouraged to work with islands that have small but growing populations, limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on external resources, and fragile environments, so that the projects help addressing their vulnerability to environmental changes, economic size, and isolation challenges. Furthermore, small islands and their communities offer the opportunity to function as models and living labs for piloting the needed transitions in a reasonably small-scale context. Following and expanding the example of the EU green energy pilot islands[184] , the project should help small islands to implement the

ecological, socio-economic and circular transitions needed to ensure their ecosystems restoration, energy- and water-security, a sustainable and circular blue economy, and climate resilience, along the Mission objectives.

The project should provide tools to:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets on islands;
- Identify, test and adapt innovative solutions to restore islands, including small ones by addressing one or several of the specific Mission objectives and targets;
- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters on islands, which are all operating in different jurisdictions and governance contexts;
- Encourage citizen and stakeholders involvement and uptake through active participation in the restoration initiatives of islands (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;
- Monitor the effectiveness of the proposed solutions in relation to the Mission objectives and targets.

Under the Mission approach, collaborations to demonstrate, test and deploy innovative solutions between islands facing similar challenges are highly encouraged and considered as a means to secure greater impact. To facilitate replication of the solutions, proposals should already identify other suitable islands, where the solutions and approaches could be replicated. Projects should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other islands and beyond.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the River Basin Management Plans under the WFD, the Programme of Measures under the MSFD, future national Nature Restoration Plans under the NRR, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*[185]*, river contracts*[186] or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Regional and local authorities participating to the project are encouraged to pool and enhance synergies[187] with other sources of funding (e.g. structural, cohesion funds or LIFE projects) for

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184 The Journey Begins 30 Renewable Islands for 2030 - Ready, Set, 30! | Clean energy for EU islands (europa.eu)

185 *Cf HE2020 RESTCOAST project*

186 *Cf example http://environnement.wallonie.be/contrat%5Friviere/*

implementing and deploying innovative solutions through e.g., the conclusion of a Working Arrangement). This will support a common approach towards island restoration, sustain the implementation of solutions, transfer of knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, addressing island restoration 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 EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with "HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters" and are encouraged to consider, where relevant, the services offered by European research infrastructures[188].

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouse CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

Cooperation with the EU Outermost Regions[189] is encouraged, given these regions' natural assets.

HORIZON-MISS-2025-03-OCEAN-07: Mission Lighthouses coordination and support activities

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 3.00 and 3.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 13.00 million.
Type of Action	Coordination and Support Actions
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering the 4 different Mission basins (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin), grants will be awarded to

187 C(2022) 4747 final

188 The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

189 https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

	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.
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) [190].

Expected Outcome: The 'lighthouse' basin approach designed for the first phase of the Mission will be enhanced, through the support to basin-specific activities implementing all Mission objectives and developing further solutions needed for replication and scale-up during the second phase, and thus strengthening basin-scale cooperation and governance. Project results are expected to contribute to all the following expected outcomes:

- Structuring effect to advance and/or consolidate the national and regional *hubs* supporting the implementation of all Mission Ocean and waters' objectives at basin level and to ensure coherence and alignment of policies, initiatives and actions at EU, national and local level;
- Well-coordinated activities underpinned by a consistent monitoring framework to assess the implementation and achievement of the Mission objectives;
- Effective provision to local stakeholders of technical services, governance and business models to support and guarantee a sustainable socio-economic development of the basins;
- A well-functioning basin scale innovation ecosystem attractive to investors and businesses;
- Increased and effective awareness about the Mission and involvement of citizens in its implementation at sea/river basin scale;
- Increased coordination and collaboration between the various lighthouses (sea/ river basins);
- Greater involvement from public procurement bodies in the innovation cycle and accelerated uptake of innovative solutions;

[190] 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

- The regional implementation of the UN Decade of Ocean Science for Sustainable Development 2021-30 is strengthened.

Scope: In the context of the Mission ocean and waters, 'lighthouses' are defined as "*hubs and platforms supporting the development and deployment of transformative innovative solutions in all forms – technological, social, business, governance, ensuring fast progress towards the achievement of Mission objectives and important impact on society in the river and sea basins through science and technology*".

The Mission supports regional engagement and cooperation through four area-based 'lighthouses' in the major basins, the Atlantic-Arctic, Mediterranean Sea, Baltic-North Sea, and Danube River-Black Sea basins, and applies a systemic approach addressing the inland waters-sea continuum.

Proposals under this topic will bring together complementary public and/or private organisations and networks, and integrate heterogeneous expertise to support the continuity of the four existing Lighthouses, expanding their scope to all mission objectives to facilitate the implementation of the second phase of the mission.

Actions should provide a broad portfolio of services ensuring the replication and upscale of innovative solutions addressing all objectives of the Mission Ocean and waters in a given lighthouse area.

Due to the transboundary nature of waters, basin-scale coordination and cooperation across regions is required for solutions to be effectively implemented and to resolve shared problems.

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 2030 for the 'deployment and upscaling phase'. Proposals are encouraged to consider, where relevant, cooperation with European research infrastructures[191].

Building on and bringing together existing governance structures and networks and relevant existing activities, proposals are expected to address all following activities:

- Support the replication and upscale of innovative solutions in the specific basin lighthouse:

  disseminate and raise awareness about suitable, impactful innovative and transformative solutions to progress towards the objectives of the mission;

  organise demonstration and testing activities for the innovative solutions;

[191] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

support access to finance and mobilise suitable investors, through e.g.: pitching events, networks of investors, venture capital funds, local Entrepreneurial Discovery processes, etc.;

support knowledge and technology transfer, including through training and skill development;

support the involvement and cooperation of 'associated regions', essential actors for the implementation of the mission objectives at basin scale;

- Design and carry out at basin scale relevant actions to promote Mission ocean and waters and its activities targeting different stakeholders and the general public, both at basin scale and at the regional/local level: disseminate information, exchange knowledge and good practices on the deployment of innovative solutions, on European and national procurement processes as well as on regulatory issues;

- Support the mobilisation of national and regional funds as well as private financing around common objectives:

  design joint initiatives under Mission ocean and waters, such as joint programmes or calls for R&I actions between the national and the EU level (based on the current programme co-fund actions) to address priorities of common interest at trans-regional/national level and ensure critical mass and effective use of resources;

  support the alignment and test synergies between Regional Smart Specialisation Strategies and other relevant European programmes;

  target relevant funding organisations such as investment funds, banks and philanthropists at national/regional levels to facilitate mobilisation of the funding;

  support the implementation of Pre-Commercial Procurements (PCP) and/or Public Procurement of Innovative solutions (PPI) by bringing together procurement agencies or departments in charge of the acquisition of innovative solutions at European, national, regional or local level to share investment plans and/or to plan common procurements of research services or of innovative solutions or products in the domains covered by Mission ocean and waters.

- Contribute to the overall monitoring of the Mission implementation by providing relevant information in relation to each basin lighthouse area and liaising with Mission projects to collect relevant data and information;

- Strengthen lighthouse governance and networking:

  liaise with the Mission secretariat to ensure a coherent and timely implementation of the Mission deployment and upscaling phase in the lighthouse basin;

bring relevant new actions and initiatives under the Mission charter to promote their visibility and possible replication/uptake, including by connecting with other relevant initiatives in the basin such as Ocean Decade Actions and partners;

support an effective and participatory governance structure for the basins lighthouse involving key multi-sectoral stakeholders at sea/river basin level covering both marine and inland waters as well as the land-sea continuum and ensure cooperation and networking for achieving the three objectives of the Mission Ocean and waters by 2030;

liaise with the UN Ocean Decade actions and initiatives and promote international cooperation (e.g.: UN ECOP, etc.).

The proposals should build on and enhance the outcomes stemming from the actions implemented in previous Mission work programmes such as Prep4Bluehttps://prep4blue.eu/]], BlueMissionAA[192], BlueMissionMed[193], BlueMissionBANOS[194] and EcoDaLLi[195] or actions supporting networking and engagement.

This topic supports the follow up to the July 2023 Communication on EU Missions assessment[196] and utilizes the budget reserved from the EU Missions part of the HE work programme 2023.

HORIZON-MISS-2025-03-OCEAN-08: EU Digital Twin Ocean: Contribution to the EU DTO core infrastructure through applications for sustainable ocean management

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.
Type of Action	Innovation Actions
Eligibility conditions	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

192 https://bluemissionaa.eu/
193 https://bluemissionmed.eu/
194 https://bluemissionbanos.eu/
195 https://ecodalli.eu/
196 COM(2023) 457 final and SWD(2023) 260 final

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
Legal and financial set-up of the Grant Agreements	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 the FAIR (Findable, Accessible, Interoperable, Reusable) principles. Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2024-OCEAN-IBA-01 EU Public Infrastructure for the European Digital Twin Ocean, phase 2

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

- At least two new Digital Twin Ocean (DTO) domain applications (such as Marine Strategy Framework Directive - MSFD, Maritime Spatial Planning Directive - MSPD, Common Fisheries Policy, Nature Restoration Law, design of Marine Protected Areas - MPAs and design of Other Effective Conservation Measures (OECMs), sea level rise, coastal resilience and adaptation, pollution monitoring and reduction, cumulative impact across multiple sectors, frameworks for assessing opportunities for sustainable growth in marine industries, etc.), with demonstrated usability at different geographical scales, for ocean and coastal management and planning, policy or regulatory implementation and decision-making or sustainable marine and maritime business operations, each demonstrated in at least 3 different European sea basins, including quality labelling of applications, comparative analysis, characterisation and communication of uncertainties in particular in the context of decision-making support, etc.
- Improved and increased amount of digital twin intermediate and final open services, directly developed into the EU DTO core infrastructure (EDITO).

For each proposed application, proposals should ensure or lead to:

- Improved FAIR (Findable, Accessible, Interoperable and Reusable) dataflows and best practices across the data value chain: harmonisation and standardisation of data formats (including units), acquisition, collection, quality assurance and sharing.
- Increased availability of models and related best practices (e.g. bio-geochemical, species distribution, ecosystem and integrated coastal and marine models, i.e. coupled models incorporating environmental, social, economic and policy considerations) on the EU

DTO core infrastructure (EDITO) and develop relevant applications directly on the EDITO infrastructure, using the offered capabilities.

- Improved data assimilation processes and interconnections between models, including land use, hydrological (water quality and quantity) and marine models in a source-to-sea perspective. The resolution of the models should be adequate to properly resolve the requirements of each application, while identifying and quantifying the impact of increased availability of data in the quality and scope of the applications.

Scope:

The European Digital Twin of the Ocean core infrastructure is the platform that consolidates European Marine Knowledge, bringing together marine observation and data, an extended variety of ocean models (covering all the dimensions, from physics to social-ecological), digital applications and tools as well as advanced computing capabilities. The goal is to enable the development of multiple verified virtual representations of the marine and coastal systems, including transitional waters (e.g.: land-sea continuum), which will simulate the complex and dynamic nature of oceanic systems and test their evolution under different future scenarios, offering insights and capabilities that go beyond traditional models or simulations.

By integrating real-time and historical observations with advanced numerical modelling, artificial intelligence, machine learning and high-performance computing, digital twins of the ocean can provide ocean stakeholders (scientists, business operators, regulatory authorities, policy makers and civil society) with an innovative set of user-driven and interactive digital tools to support their activities. In particular, DTO will support decision making, allowing to monitor and continuously refine the assessment of the impacts of decisions, in terms of sustainability, efficiency, effectiveness and durability under different possible future scenarios (climate change, ecosystems adaption, anthropogenic pressures, etc.). Interactive visualisation tools will allow users to explore and interact with simulated ocean environments in intuitive ways, enhancing understanding and facilitating communication of complex oceanic phenomena.

The EU Digital Twin of the Ocean core infrastructure is conceived, and being built, as a public service and open co-working environment to support and facilitate the development of specific sectorial and/or local digital twin ocean applications. The objective of this topic is to develop specific user-driven digital twin ocean applications, relying on the EU DTO core infrastructure capabilities but also contributing to its development by enriching the array of open data, models and services it provides.

Proposals should target at least two domains of applications, addressing policy or regulatory implementation (MSFD, MSPD, CFP, design of MPAs, pollution prevention and remediation, sea level rise, coastal resilience, and adaptation, compatibility of future offshore developments to reach climate targets and 2030 Biodiversity Strategy and Nature Restoration Law, etc.) or sustainable marine or maritime business operations (aquaculture and fisheries, sustainable tourism, etc.), with each application demonstrated with specific, verified use cases (implementation of the domain applications at different geographic settings, including the

relevant data, models, tools and interactions with stakeholders) in at least 3 different sea basins (amounting to 6 use cases in total), with each of the 4 EU sea basins (1. Atlantic and Arctic Sea basin, 2. Baltic and North Sea, 3. Mediterranean Sea basin and 4. Danube River basin and Black Sea) covered at least by one use-case.

Proposals addressing offshore energy renewables or marine litter should ensure complementarity with the scope addressed by, respectively, HORIZON-CL5-2025-05-D3-08: Understand and minimise the environmental impacts of offshore wind energy and *HORIZON-CL6-2025-01-ZEROPOLLUTION-05: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and microplastic pollution* and *HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean.*

Importantly, while these digital twin ocean applications are the desired end-product, they have an integrative function: to transform the available knowledge into actionable information for use from policy, industry and/or civil society. When designing a specific application, the whole knowledge value chain should be considered by the proposals, with a multi-actor approach, to ensure the involvement of the appropriate actors, including implementing authorities in the appropriate level of jurisdiction (national and/or regional authorities), at each step:

- Co-creation with stakeholders: Include the end-users of these applications, for each sea-basin use-case, in the development process, ensuring incorporating their needs, promoting common understanding and ensuring ownership of the outcomes (what scenarios are relevant, what policy alternatives are feasible, what are the limitations, for instance on uncertainties created by data gaps, etc.). Include the stakeholders along the full process of the digital twins' development. The relevant stakeholders may evolve throughout each development phase/ step.

- Data: identification of data needs to verify the credibility of each application, identification of gaps and their impact on the quality of results; potential for improvements (if data is to be made available).

- Models and what-if scenarios: primary data processing and analysis, model developments, refinements and downscaling; model coupling to serve targeted needs and development of what-if and policy scenarios (together with relevant stakeholders), quality of modelled assessment data products.

- Interactive visualisation tools. Specific attention to the design of appropriate interfaces with and for end-users, utilising new technologies as artificial intelligence, gaming interfaces, virtual reality and more.

- Quality assurance processes and appropriate quality labelling should accompany all steps of development to provide guarantee to the end-users of the applications.

For applications related to supporting the implementation of legislations or policies, responsible national or local authorities should be closely involved from the start of the project and throughout its duration.

Proposals are encouraged to cooperate with actors such as the European Commission's Joint Research Centre (JRC) on model scenarios (as for the Blue2MF) in support of marine policies.

Proposals should favour open data, open source, and public-use models and algorithms with open-source licensing and must develop the applications directly into the EU Digital Twin of the Ocean core infrastructure (EDITO).

Proposals should leverage the data and services available through EMODnet and through the European Open Science Cloud, as well as data from relevant Data Spaces in the data-driven analyses and should also demonstrate clear links to Copernicus Marine and associated Member State Coastal Systems (MSCS). Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures[197].

Proposals are expected to build on the outcomes of EDITO-Infra and EDITO-Model Lab and to contribute to the enrichment of the portfolio of biogeochemical, ecosystem marine and integrated coastal models, beyond those already integrated by EDITO-model lab.

While proposals are free to address the application domains of their choice, aiming for the greatest possible impacts, specific requirements need to be followed for applications relating to the implementation of EU legislation, as indicated below:

- Models targeting MSFD implementation at the regional and national levels should implement a multi-descriptor approach (at least 6 descriptors, including possible connectivity between them) and propose methodological frameworks for the design of effective measures to achieve Good Environmental Status (GES), based on the requirements of the Directive.

- Applications relevant to Descriptors 1, 2, 3, 4 and 6 of the MSFD should address multispecies systems (group of species), according to the requirements of Commission Decision (EU) 2017/848 and the 2021 ICES advice sr.2021.14.2.

- The what-if scenarios of applications to implement marine nature based-solutions for climate change adaptation and mitigation, should also address the achievement of Good Environmental Status.

- Applications for decision support tools on the planning and management of marine space (MSPD) must include environmental, social, economic and policy considerations and take into account climate change impacts through appropriate scenarios.

[197] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/

- Applications targeting the CFP should support the assessment of Essential Fish Habitats and Vulnerable Marine Ecosystems (also relevant for Regional Fisheries Management Organisations - RFMOs, Biodiversity Strategy and more), while also addressing the sustainability of the fisheries sector through scenarios related to fishing gear, decarbonisation of the sector and more.

Restore our Ocean and Waters by 2030: Other Actions

1. Services to Communities to support the achievement of the objectives of the Mission Ocean and Waters.

The specific objective of this contract is to organize and manage the identification and selection process, aiming at selecting a minimum of 50 applicants from targeted communities: municipalities, including small cities and regions and then provide services to them by conducting technical assistance and transition agendas for their planned projects/initiatives that will support the achievement of the objectives of the Mission Ocean and Waters. Services include:

1. Technical assistance for planned initiatives, projects, or activities that are defined to achieve the Mission's objectives within a specific community or geographical area. 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

- Enhance transition agendas intended as a strategic roadmap towards reaching all objectives and targets of the Mission 'Restore our ocean and waters by 2030', 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).

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 1st Quarter 2026

Indicative budget: EUR 4.16 million from the 2025 budget[198]

2. Ocean Observation Platform

Ocean observation is currently undertaken independently for different purposes including fisheries management, safe navigation, coastal protection, environmental impact assessment and research. In order to avoid duplication, identify gaps and reduce administrative burden, a digital platform will be further developed and maintained and building on existing observation initiatives, such as EuroGoos and European Research Infrastructures. The digital platform will collect observation campaign plans prepared by the responsible public bodies following common standards. This platform will reinforce EmodNet and the European Digital Twin Ocean by ensuring structured reliable data provision that will allow it to fulfil its potential as a tool underpinning a competitive and sustainable blue economy.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2nd Quarter 2026

Indicative budget: EUR 1.48 million from the 2025 budget[199]

3. Mission Ocean and Waters conference under the DK presidency

The proposed conference under the Danish Presidency in the second half of 2025 will address the restoration of the Ocean and Waters. The overall focus will be on the challenges facing the Ocean and Waters and showcase the opportunities the Mission can give to solve these problems. The two-day event conference will include both political discussions as well a more specific discussions on the related research questions. The conference will significantly

198 Of which EUR 4.16 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

199 Of which EUR 1.48 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

contribute to achieving the desired governance impact and ensure effective mobilisation of key decision-makers at the event.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 0.15 million from the 2025 budget[200]

4. Study to provide evidence for EU actions on wetlands

Wetlands contribute to all three objectives of Mission "Restore our Ocean and Waters". If managed appropriately they can enhance biodiversity, improve water quality and sequester carbon. From 2026 they should be included in EU Member State inventories of greenhouse gases in the EU's Land Use, Land Use Change and Forestry Regulation (LULUCF) [201].

Their ecosystems must meet the 2030 targets set out in the Nature Restoration Law[202]. Under the IPCC's 2013 guidelines for reporting national inventories[203], saltmarsh, seagrass and mangroves are classed as coastal wetlands. Coastal wetlands are also referred to as coastal blue carbon. This study covers freshwater and coastal wetlands.

A study under Mission Ocean has shown that (1) some Member States already report greenhouse gas inventories for wetlands to LULUCF although there are differences in how it is done (2) no Member State has indicated an intention to include a separate accounting of blue carbon within the wetland landuse category (3) finding, access, and harmonising the necessary data is a barrier to providing reliable inventories. The reporting requirements for wetlands habitats under the Nature Restoration Law will face the same data challenges. Measures to resolve these data issues would not only contribute to more accurate inventories but also provide a solid foundation for enabling authorities to certify blue carbon under the EU certification framework for carbon removals by carbon farming[204]. The EU has already taken measures to improve the evidence base for monitoring forests[205]. The aim of this study is to understand what would be required to achieve the same for wetlands and provide the knowledge base necessary to implement existing legislation and to underpin future actions at EU level.

The study will (1) identify current and upcoming EU legislation and intergovernmental agreements requiring data on both freshwater and coastal wetlands extent and functioning (2) develop a set of indicators that would meet the reporting requirements of each of these

200 Of which EUR 0.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

201 Regulation (EU) 2018/841 as amended by Regulation (EU) 2023/839

202 Regulation (EU) 2024/199

203 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands

204 Proposal for a regulation establishing a Union certification framework for carbon removals, COM/2022/672

205 Proposal for a regulation on a monitoring framework for resilient European forests COM/2023/728

agreements taking into account any ongoing efforts at an international level (3) identify the data required to estimate these indicators. This should use a common nomenclature of wetland ecosystems, distinguish between classifications of 2006 and 2013 IPCC guidelines and between data that can be acquired from earth-orbiting satellites and those that require measurements made by other means (4) determine the adequacy and completeness of the data provided from existing European or international data services including the Copernicus Land Service, EMODnet and European Soil Data Centre and whether it can be enhanced (5) interview national authorities to determine the feasibility and cost of assembling data in a common interoperable format in order to estimate the indicators defined, (6) structure the results and insights of this study in an Access database, (7) validate the results at a workshop of recognised international experts and (8) provide the knowledge base for future actions at EU level.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.90 million from the 2025 budget[206]

[206] Of which EUR 0.90 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

100 Climate-Neutral and Smart Cities by 2030

The Work Programme 2025 of the Climate-Neutral and Smart Cities Mission, in line with the Implementation Plan of the Cities Mission, supports the implementation of the Mission by providing strong and direct support to cities committed to climate-neutrality, enabling them to implement their climate action plans and achieve climate-neutrality by 2030. The cities benefitting from these actions will act as experimentation and innovation hubs for other European cities aiming to become climate-neutral by 2050.

Cities' green and digital transformation with the aim of climate-neutrality is associated with important co-benefits and urban qualities such as reduced air and noise pollution, more sustainable mobility, improved health and well-being, reduced urban environmental footprints, enhanced urban greening, more efficient use of energy and infrastructures, as well as improved waste and water management. It also improves policy coherence across sectors and stimulates 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 at the latest, the supported actions will also contribute to the UN Agenda 2030, the Urban Agenda for the EU, the New Leipzig Charter, the Fit for 55 strategy, the EU Industrial Strategy, the Green Deal Industrial Plan and the Net-Zero Industry Act, the EU Zero Pollution Action Plan, the Circular Economy Action Plan, the Smart and Sustainable Mobility Strategy and the related new EU urban mobility framework, the Biodiversity Strategy for 2030, Europe's Digital Decade and the EU Strategy on adaptation to climate change.

The topics of the Work Programme 2025 reflect the cross-cutting nature of the Cities Mission and most of them have been designed as joint activities with other parts of the Horizon Europe programme, namely Cluster 4, 5, 6, other Missions, co-programmed partnerships, as well as in close coordination with other topics, such as one under the Ocean Mission (HORIZON-MISS-2025-03-OCEAN-05). The envisaged actions will aim at:

- Coupling circularity and climate mitigation in industrial sites and their cities and regions through a **joint action with the Circular Cities and Regions Initiative (CCRI)**;
- Innovative, AI-based solutions for urban planning and management through a **joint action with Horizon Europe Cluster 4**;
- Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP);
- **Joint call "Cancer Mission – Cities Mission"**: Increasing the modal share of walking and cycling to reap health benefits and emission reductions and integrating active mobility and micro-mobility devices, with smart technologies and infrastructure.

Not listed in detail in this section of the Work Programme, but co-financed by the Cities Mission budget, is the following topic located in Cluster 5, Destination 5 under the transport-related health and environment part of the programme:

- **Joint topic "Zero-Emission Waterborne Transport (ZEWT) Partnership – Cities Mission"**: Real time monitoring of regulated and non-regulated emissions to enforce emission limits in waterfront cities.

Moreover, the prize "Renewable energy technology (RET) solutions in energy communities" in Cluster 5 under other actions, links to the Cities Mission. Energy communities can play a pivotal role in achieving climate neutrality at the city level. Embedding their activities in existing strategic and systematic approaches to climate neutrality in the city, such as the Climate City Contracts**,** will be weighted in the evaluation for the prize.

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) reinforce services aimed at supporting the implementation of the Climate City Contracts (CCCs) of the cities selected to participate in the Mission through the Call for Expression of Interest; (2) provide 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.

Support for financial advisory services to be provided to help cities 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.

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. Where applicable, they should consider the services offered by the EU-funded European Research Infrastructures[207]; these services range from data sets in human behaviour to modelling or experimental techniques. Proposals should also ensure the 'Do No Significant Harm' principle.

Strong synergies contributing to the implementation of the objectives of the Cities Mission is expected also from other relevant Horizon Europe partnerships such as 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. In addition, synergies are expected with the Regional Innovation Valleys, which, in line with the

[207] ri-portfolio.esfri.eu/ri-portfolio/table/

New European Innovation Agenda, bring together less and more innovative regions with a view to addressing the most burning challenges facing the EU, namely reducing the reliance on fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity), improving healthcare and achieving circularity. Moreover, strong synergies exist with the LIFE Programme, a main EU funding instrument for environmental and climate action plans, particularly through its Climate Change Mitigation and Adaptation sub-programme, which aligns closely with the Cities Mission's objectives by supporting innovative efforts to reduce GHG emissions, enhance urban resilience, and promote climate change awareness.

Proposals should set out a credible pathway to contributing to the Climate-Neutral and Smart Cities Mission, and more specifically to one or several of the following impacts:

- Increased capacity among European cities, with particular attention to those selected under the Cities Mission, to implement their CCCs and to achieve climate-neutrality.
- Cities are taking action to increase energy and resource efficiency, promote circular economy, encourage urban regeneration and resilience, and they accelerate the uptake of innovative systemic solutions and clean tech in key areas (e.g., energy, mobility, construction, industry, spatial planning, environment, digitization, and data handling).
- Cities are engaging their citizens in the technologies developed and actions taken to achieve climate-neutrality, in order to guarantee acceptance, adherence and adoption, while paying particular attention to vulnerable groups.
- Cities are increasingly employing data and digital technologies to enhance decision-making, improve the efficiency of service delivery, and reduce emissions through open standards and shared technical specifications.
- Cities embrace innovative and inclusive cross-sectorial collaborative governance models, facilitating multi-level and multi-stakeholder engagement in decision-making and joint planning, as well as the CCC implementation in collaboration with citizens and local stakeholders.
- The CCCs identify and pool the demands of the cities in the Cities Mission across sectors, providing scalability and predictability for industry and investors, thus strengthening the competitiveness of European industry and SMEs.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-04-CIT-01: Coupling circularity and climate mitigation in industrial sites and their cities and regions

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission
Specific conditions

Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 17.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: At least three different demonstration sites and at least three replication sites must be part of the consortium as beneficiaries. They must each be situated in different EU Member States or countries associated to Horizon Europe, ensuring geographical balance. At least one demonstration site should be situated in one of the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities[208] and at least another site should involve a CCRI city, region or territorial cluster[209].
Technology Readiness Level	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
Legal and financial set-up of the Grant Agreements	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[210] 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 Cities Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. This topic will also be part of the demonstration projects for the

[208] 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.

[209] Lists of CCRI Pilots and Fellows. List of cities and regions participating in the CCRI projects.

[210] Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform.*

	implementation of the European Commission's Circular Cities and Regions Initiative (CCRI) and must be carried out in close cooperation with it. This means that proposals must cooperate with CCRI and its Coordination and Support Office by means of sharing with this initiative knowledge and experiences developed during the project lifetime. Applicants must integrate explicitly these obligations into their proposal's work plan.

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

- Significant advances in climate mitigation and resource circularity, with associated reduction in pollution and waste, in industrial ecosystems at urban and peri-urban scale.
- Increased local and regional competitiveness and strengthened capacity for innovation of EU industries.
- Long-term change towards sustainable, flexible and responsive local and regional industrial ecosystems that connect key circular economy and climate mitigation stakeholders throughout planning, interventions and value chains.

Relevant indicators and metrics for the 2030 horizon, with baseline values, should be clearly stated in the proposal.

Scope: Climate mitigation and circularity are key building blocks for achieving industrial and urban futures that are climate-neutral and sustainable. While mitigation and circularity performance are typically modelled at the global or national level, a gap persists in action plans and practice at local level where the coupling of decarbonisation and circularity against the background of industrial-urban symbiosis and of the sharing economy (energy and materials) could yield significant ecological, economic and social benefits. There is therefore a pressing need to overcome the lack of coordination among industrial, circularity and urban activities and actors that yields sub-optimal outcomes in terms of climate mitigation, energy efficiency, resource use (including water), environmental pollution, material valorisation and waste reduction.

Proposals must involve at least three different demonstration sites and at least three replication sites as beneficiaries. Each site must involve key circular economy and mitigation actors from both local public authorities and industries in a certain region. Demonstration sites must cover at least two different economic sectors, value chains and/or services.

The proposed actions will:

- Set up and deploy innovative governance and business models as well as joint actions on climate mitigation[211] and circularity (such as circular supply models, collaborative consumption models, service system models, hire or leasing models, joint public procurements etc.) in the 3 demonstration sites as defined above.

[211] As defined in the Info Kit for Cities: cb258381-77d5-435a-8b25-9a590795dc9e_en (europa.eu)

- Assess and quantify the climate and other benefits of proposed joint mitigation and circularity actions including but not limited to: reduction of greenhouse gas emissions, pollution and water use; reduction of costs for secondary raw materials and waste management; new revenues generated from end-of-life and by-products, waste diversion from landfill and incineration; performance of mitigation infrastructure; industrial-urban symbiosis; creation of new business opportunities; development of green skills and strengthening of environmental profiles.

- Quantify and assess the co-benefits, constraints and trade-offs of coupling circularity and climate mitigation, considering social, economic and environmental aspects, as well as links with key sectors such as energy, buildings and transport. Complementary actions in terms of spatial planning (e.g. more sustainable and efficient uses of land and building stock), digitalisation and data enhancement should also be considered as appropriate.

- Define for each demonstration and replication site the strategies, processes and actions needed to underpin the climate-neutral and circular transition through a systemic, multi-sectoral multi-stakeholder approach. This should include the engagement of relevant stakeholders such as policymakers, research bodies and academia, the civil society and the private sector (industry, entrepreneurs, start-ups, SMEs etc).

- Based on the lessons learned, deliver guidelines and recommended approaches (including innovative methods) to integrate circularity in the cities' mitigation strategies and vice versa.

- Implement activities to develop and secure long-term support from the national and regional public authorities, which may include the establishment of inter-institutional multi-level governance partnerships, the introduction of binding rules, regulations, subsidies and/or other economic incentives.

Proposals should plan for early financing follow-up by linking with the Climate City Capital Hub of the NetZeroCities Mission Platform and the Circular Cities and Regions Initiative financial advisory services (including the Horizon Europe funded Project Development Assistance Projects and the European Investment Bank's Circular City Centre). This should serve to further scale-up and deploy at city/region scale the innovative activities/measures/business models through a combination of funding sources and financial instruments beyond the duration of the proposed action.

Proposals should envisage clustering activities with other projects selected under this topic, which could be in the form of cooperation, consultations as well as joint activities on cross-cutting issues such as sharing results, lessons learned and ways to address barriers and mitigate risks, joint communication, dissemination and capacity building activities, or assessing and evaluating impacts. Dedicated tasks with appropriately earmarked resources should be planned to this end. These tasks may also include collaboration with relevant CCRI-related projects[212] and relevant projects funded under the Cities Mission.

[212] List of CCRI Projects | Circular Cities and Regions Initiative (europa.eu)

As part of the broader European Green Deal framework, proposals should link as relevant with the objectives of the new Circular Economy Action Plan of 2020[213] (that recognises the interlinkage between the circular economy and climate policies, presenting 'circularity as a prerequisite for climate neutrality') and the Green Deal Industrial Plan of 2023[214] (that, together with the 2020 Industrial Strategy[215] and its 2021 update[216], sets the framework for the transformation of the EU's industry for the net-zero age). Projects should also link as relevant with the objectives of the Net Zero Industry Act[217], the Critical Raw Materials Act[218] and the Clean Transition Dialogues[219] that highlight the importance of circularity in the green transition. In addition, actions should consider and promote synergies with pollution reduction measures, with reference to the Zero Pollution Action Plan[220] and the Industrial Emissions Directive [221]. Synergies are expected with other relevant EU initiatives, such as the Hubs for Circularity[222] and the Regional Innovation Valleys[223], which foster industrial circularity hubs and support circularity transition at a local and regional level.

HORIZON-MISS-2025-04-CIT-02: Innovative, AI-based solutions for urban planning and management

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 24.00 million.
Type of Action	Innovation Actions

213 https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en
214 COM(2023) 62 final
215 COM(2020) 102 final
216 COM(2021) 350 final
217 COM(2023) 161 final
218 COM(2023) 160 final
219 COM(2024) 163 final
220 https://environment.ec.europa.eu/strategy/zero-pollution-action-plan_en
221 https://environment.ec.europa.eu/topics/industrial-emissions-and-safety/industrial-emissions-directive_en
222 Set up under Horizon Europe, the Hubs for Circularity are first-of-a-kind, lighthouse demonstrator plants of near commercial size implementing industrial and/or urban industrial symbiosis, optimising the use of resources in energy-intensive industries and beyond.
223 The Regional Innovation Valleys for Bioeconomy and Food Systems contributes to the New European Innovation Agenda by building 100 regional deep-tech innovation valleys, fostering bioeconomy deployment, addressing the EU's innovation gap, and achieving circularity.
224 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.

Eligibility conditions	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). The following additional eligibility criteria apply: At least three cities must be part of the consortium as beneficiaries, at least one of which should be among the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities[224]. The cities must each be situated in different EU Member States or countries associated to Horizon Europe, ensuring geographical balance.
Technology Readiness Level	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
Legal and financial set-up of the Grant Agreements	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[225] 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 Cities Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. 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)[226].

Expected Outcome: Projects are expected to contribute to the following outcomes:

[225] Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform.*

[226] 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

- Digital Twin models with their associated tools, that use Artificial Intelligence (including generative AI), developed in line with the requirements defined in the scope, which are tested, calibrated, and implemented in each city participating in the proposal;

- Guidelines and recommended approaches on the integration and orchestration of developed models, applications and tools in urban planning and management and the subsequent decision-making process, considering synergies with the open sand-boxing infrastructure provided by the LDT-CitiVERSE-EDIC[227];

- Capacity building, for instance, making available software in relevant platforms (such as AI on Demand platform [228], open source, EU LTD toolbox, etc.), and peer learning for potential replication in other cities;

- Plans for the exploitation of the project result(s) through relevant Smart Cities networks specifically of the Digital Twins developed, including a market analysis for replicability and scalability of solutions;

- Visualisation component of the Digital Twin promoting participatory urban planning and management and facilitating communication between different stakeholders, while enabling citizens to provide well-informed feedback and solutions;

- Creation of multidisciplinary communities, bringing together IT developers, urban planners, designers, local authorities, and other relevant actors. This will facilitate future activities for adaptation, enhancement and integration of existing and future AI-based applications and solutions, including Digital Twins, applied in different urban domains (e.g. infrastructure planning, including nature-based solutions, urban logistics, network and traffic management, climate neutrality, safe and inclusive streets, health and wellbeing urban space, etc.). This could be achieved through synergies with the LDT-CitiVERSE-EDIC[229] and with other funded projects under this topic and under topics covering similar themes and aspects.

Scope: Urban planning and management require the analysis and integration of data ranging from zoning laws and buildings to overground infrastructure (street networks and their amenities, rail networks, etc.) and underground infrastructure (sewage, gas, electricity, heat, and water supply networks). Besides this complex physical urban fabric, urban planning and management cover intangible features such as administrative organisation, flows of goods and services, environmental determinants, demographic, social, and economic trends, evolving social values, behaviours, and local cultures.

Since the 1980-ties, Geographic Information Systems (GIS) integrating urban information within layers of data and translating them into tables, graphs, and maps, were introduced in urban planning with the purpose to allow a more efficient data collection, analysis, aggregation, and management, enabling planning and decision-making for increasingly

[227] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202400459
[228] https://www.ai4europe.eu/
[229] https://living-in.eu/news/ldt-citiverse-edic-fact

sustainable and innovative cities. However, given the rapid digitalisation of almost every aspect of urban life and the increase in complexity and variety of data over the last decades, the field of Artificial Intelligence (AI) opens promising, new opportunities for embedding sustainability and climate-neutrality concepts in urban planning and management. AI-based applications (including generative AI) and tools such as machine learning (ML), neural networks (NNs), deep learning, autonomous systems, pattern recognition, simulation modelling – Digital Twins, Internet of Things (IoT), etc. can be harnessed to guide decision-making, predict trends, develop scenarios, optimize resource allocation, engage citizens, and further enhance and promote human creativity, inclusiveness and well-being in urban planning and design.

This topic explores the use and integration of AI-based applications and tools, particularly of Digital Twins, in urban planning and management.

Proposals should contain a comprehensive state-of-the-art of existing AI applications and tools for urban planning and management and evidence of relevant skills for the development of Digital Twins.

Proposals are invited to develop a Digital Twin model that complies with the following requirements:

- Integrates within the urban planning process and practice and supports the development of medium- and long-term strategic visions at city level for achieving a climate-neutral city.
- Supports decision-making and prioritization of policies and investment for sustainable, energy-efficient, and climate-neutral measures and solutions through visualization, prediction, diagnosis, assessement and prevention.
- Incorporates static physical urban characteristics such as topography, buildings, overground, underground, blue-green infrastructures, energy and heat grid, also considering the EU buildings dataset from the EU_LDT toolbox and at least two of the following urban features as variables:

  Urban functions – zoning, land-use.

  Mobility modes and services, including freight transport and logistics.

  Energy generation and consumption, including energy generation from RES and energy storage infrastructure (e.g., heat grid).

  Weather forecast and reduction of pollutant emissions.

  Socio-demographic, economic and cultural trends.

- Provides different scenarios for achieving climate-neutrality as well as the possibility to simulate the impacts when prioritizing the implementation of specific policies, measures, or solutions for the other areas/sectors, and for the city as a whole. When defining

climate-neutral scenarios, both forecasting and backcasting methodologies could be employed.

- Evaluates potential use cases, and assesses the potential of replication of developed Digital Twins, in other cities.
- Allows, using its flexible features, the estimation of the resources needed to implement the different projected scenarios.

Proposals should explore the development and use of Digital Twins that incorporate real-time monitoring and response, with the purpose to support city authorities, operators, service providers and citizens to strengthen city's resilience and its coping and response mechanisms when confronted with unexpected events or hazards.

Proposals should promote the possibility of joint policy coordination such as clustering activities guidelines, synergies from the start of the project.

The AI-based Digital Twin to be developed for each city could cover a city-wide area – the urban core but can extend as far as the functional urban areas with well-defined characteristics (in terms of morphology, density, socio-demographic and/or economic features)". The involved cities should promote complementarity in terms of climatic conditions, city typologies and geographical balance.

This topic invites for proposals from consortia composed of at least three cities of which at least one should be among the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities, where the responsible local authorities, urban planners, IT developers, operators, service providers and other relevant actors jointly develop, test and integrate Digital Twins in urban planning and management. The participating local partnerships should demonstrate their common plan and vision on how they will put in place an effective cooperation.

A demonstrated contribution to the implementation and delivery of the Climate City Contracts and/or Sustainable Energy Action Plans, Sustainable Energy and Climate Action Plans and/or Sustainable Mobility Plans is expected.

If proposals use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries are expected to describe how the use of Copernicus and/or Galileo/EGNOS are incorporated in the proposed solutions.

Synergies with the Driving Urban Transitions partnership[230] and the Urban Transitions Mission[231] under Mission Innovation, would be of added value, as well as synergies with the Local Digital Twin Toolbox that will be composed of open AI-based tools to foster the adoption of digital twins across rural and urban.

Proposals should also demonstrate that the proposed approaches and developed AI-Based applications and tools are built on the results from previous research and innovation actions

[230] https://dutpartnership.eu/

[231] https://mission-innovation.net/missions/urban-transitions-mission/

funded under Horizon 2020 and Horizon Europe calls/topics. Moreover, proposals are encouraged to explore the support of the Digital Europe Programme and its EU Toolbox for Local Digital Twins helping cities to combine data from different domains. In the same context, actions to be funded under this topic could liaise with projects funded under the third call for proposals EUI-Innovative Actions[232], notably the topic "Technology in Cities".

Proposals are encouraged to seek synergies, concerning the data collected and used, with the Common European Data Spaces[233], especially the Data Spaces that are relevant such as the EU Smart Communities Data Space, the mobility Data Space, Tourism Data Space, the Green Deal Data Space etc. To plan for interoperability and compatibility with the Common European Data Spaces, proposals are invited to consider engaging with the SIMPL project[234]. Proposals are invited to consult the Staff Working Document on the Common European Data Spaces[235].

Proposals are expected to demonstrate the robustness of the AI-based systems and/or techniques that will be used. For instance, they should be technically robust, reliable, and able to provide a suitable explanation of its decision-making process.

Proposers should demonstrate that appropriate security measures are in place to ensure that the data collected and used in the projects are secured from unauthorised access and cannot be used for purposes other than the project.

Data Management actions should be included in the proposals to ensure that Data used in the Digital twins are of good quality and data generated are well documented and can be reused in future projects.

Proposals should briefly describe the environmental footprint of the AI tools in the project. If the footprint is significant (e.g., at a scale that could raise questions on the usefulness of the project), a short cost-benefit analysis should be included in the proposal, along with corresponding mitigation actions that will be taken during the project. Finally, proposals are expected to assess potential risks in the project and if relevant, describe solutions that mitigate those risks.

HORIZON-MISS-2025-04-CIT-03: Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP)

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission	
Specific conditions	
Expected EU contribution per	The Commission estimates that an EU contribution of between EUR 7.00 and 12.00 million would allow these outcomes to be addressed

232 https://www.urban-initiative.eu/calls-proposals/third-call-proposals-innovative-actions
233 https://digital-strategy.ec.europa.eu/en/policies/data-spaces
234 https://simpl-programme.ec.europa.eu/
235 https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces

project	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 37.00 million.
Type of Action	Pre-commercial Procurement
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.
Legal and financial set-up of the Grant Agreements	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[236] 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 Cities Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. The Cities Mission Platform should in particular support cities with the preparatory work for the PCP and facilitate the upscaling as well as the replicability of the solutions that will be developed through the PCP. This action allows for the provision of financial support to third parties in line with the conditions set out in General Annex B – Eligibility of the Horizon Europe Work Programme. The beneficiaries can use financial support to third parties to provide financial incentives to final end-users to adopt the solutions. The support to third parties can only be provided in the form of grants. As a derogation to the standard limit of EUR 60 000 per third party entity set in the Financial Regulation 480 (Article 204), the Commission considers that in order to ensure the deployment and impact of the project outcomes, the maximum amount to be granted to each third party is EUR 200 000. The selection of the third parties to be supported under the grant will be based on an external review by independent experts of the proposed work.

[236] 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.*

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Public procurers stimulate from demand side the competitive development of market ready innovative solutions to reduce greenhouse gas emissions that can contribute to the transition of local communities towards climate neutrality, whilst strengthening EU open strategic autonomy;
- Public procurers leverage PCP to bring to the market innovative solutions in sectors relevant for climate change mitigation (such as energy efficiency in buildings, production and use of renewable energy, sustainable and smart mobility, digitalisation etc.) and implement those innovative solutions in the participant cities to reduce greenhouse gas emissions;
- Public procurers drive innovation and increase resilience in the supply chain by opening up opportunities for innovative companies established in the European Union's Member States and Horizon Europe Associated Countries, in particular SMEs and Startups, to access the public procurement market and scale up their business;
- Increased opportunities for wide market uptake and economies of scale for the supply side through increased demand for innovative solutions to reduce greenhouse gas emissions at the local level, wide publication of results and where relevant contribution to standardisation, regulation or certification;
- Present the expected greenhouse gas emission reduction in the participating cities by 2030 and 2050, in comparison to a baseline established at the beginning of the project.

Scope: By closing the gap between supply and demand in a way that reinforces EU open strategic autonomy, PCPs can make a key contribution to enhancing the European Union's economy and competitiveness[237]. In order to master the green and digital transition and make our cities climate-neutral and liveable places, European public procurers need to lead by example by procuring more solutions to reduce greenhouse gas emissions. This topic therefore focuses on forward looking procurement of R&D to bring to the market new solutions to reduce greenhouse gas emissions that can increase Europe's resilience and preparedness to tackle the climate challenge.

On the road towards climate-neutral cities this topic addresses the lack and fragmentation of public demand for innovative solutions. Europe's companies, in particular SMEs and Startups, are indispensable in delivering the required innovations. As past experience shows that pre-commercial procurement opens up the procurement market for startups and enables

[237] General Annex H to the work programme provides for specific conditions for PCP such as place of performance and commercialisation conditions that can require the majority of the procured R&D activities and later commercialisation/production of developed solutions to take place in the European Union's Member States and Associated Countries, as well as the possibility to limit the participation to the PCP procurement to economic operators that are established in the European Union's Member States and Associated Countries if there are sufficient economic operators in these territories that can develop the requested solutions. These conditions apply to this topic.

the public sector to address societal challenges more effectively, public procurers should make more strategic use of PCP.

This topic supports public procurers, specifically local authorities, to collectively implement PCPs to drive innovation from the demand side and open up wider commercialisation opportunities for companies in Europe to take or maintain international leadership in new markets for net-zero technologies that can deliver solutions to reduce greenhouse gas emissions. The aim is to leverage PCP to encourage the development and to provide a first customer reference for the piloting, installation and validation of breakthrough innovations.

PCP actions target consortia of procurers with similar needs that want to procure together the development of innovative solutions to reduce greenhouse gas emissions in cities. This topic does not provide direct funding to developers, industry or research organisations to perform R&D. They will be able to respond to the call for tenders launched by consortia of procurers funded under this call. Specific guidance on PCP actions and minimum eligibility requirements can be found in General Annexes H of the Horizon Europe work programme.

Continuous dialogue between demand and supply side is required for the success of PCPs, therefore the effective involvement of end users (e.g. cities teams that would need to adopt climate mitigation solutions, regional structures cooperating with cities on climate mitigation, citizens etc.) needs to be considered in the proposal. Furthermore, to stimulate dialogue with the supply side, public procurers are required to organise an open market consultation before launching the procurement and to promote the call for tenders widely across Europe to potentially interested suppliers.

Proposals should demonstrate sustainability of the action beyond the life of the project. They should demonstrate how the project is anchored in a clear strategy to provide climate-neutral cities and enhance the economy in a sustainable way through stronger early adoption of innovative solutions to reduce greenhouse gas emissions. Activities covered should include cooperation with policy makers to reinforce the national policy frameworks and mobilise substantial additional national budgets for PCP and innovation procurement in general beyond the scope of the project.

Involvement of procurement decision makers is needed to ensure that end solution(s) are adopted by local public buyers, increasing the societal impact of the related research activities. Therefore, procurers should declare in the proposal their interest to pursue deployment of solutions resulting from the PCP in case the PCP delivers successful solutions and indicate whether they will (1) procure successful solution(s) as part of the PCP, (2) launch a separate follow-up procurement after the PCP to buy such type of solutions, (3) adopt successful solutions without the need to procure them (e.g. in case of open source solutions), (4) foresee financial or regulatory incentives for others to adopt successful solutions (e.g. in case the final end-users of the solutions are not the procurers but for example citizens). In these four cases, the procurers can implement the project as a fast-track PCP (see general annex H). In the first case, the procurers must foresee the budget in the proposal to purchase at least one solution during the PCP. In the second case, the procurers should include in the proposal a deliverable that prepares the follow-up procurement to purchase such type of

solution(s) after the PCP. In the first and third case, the procurers must foresee sufficient time during the project to deploy and validate that the solutions function well after installation. In the fourth case, the procurers can use financial support to third parties to provide financial incentives to final end-users to adopt the solutions, with a maximum budget of EUR 200 000.00. Projects funded under this topic, which target the higher end of the budget range, should demonstrate a greater degree of ambition in terms of innovation level and/or deployment scope.

Projects funded under this topic should include at least three cities of the 112 selected ones for the EU Mission on Climate-Neutral and Smart Cities[238], and the lead procurer from the buyers group should be one of these 112 cities. In addition to the buyers' group that will implement the PCP, projects are encouraged to actively cooperate with an additional group of follower cities in the preparation and follow up of the procurement, including possibly also in the testing of solutions, to smoothen faster uptake of solutions to the wider followers group. Collaboration amongst the projects financed under this topic and with the 'Climate-Neutral Smart cities' Mission Platform is essential to the increase impact and coherence of the action. Appropriate provisions for activities and resources aimed at enforcing this collaboration should be included in the work plan of the proposal. The Mission Platform will support cities with the preparatory work for the PCP. The Mission Platform will also support the upscaling and replicability of the developed solutions, and the monitoring of the impact of the projects using a common methodology and clearly established indicators. The collaboration with the Mission Platform must be formalised through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. To ensure that the new solutions are appropriately identified, the projects should plan for liaising with the different other Horizon funded projects, partnerships and initiatives that promote innovation in the different domains (such as CCAM Partnership, 2ZERO Partnership, and Built4People Partnership, Circular Cities and Regions, and CIVITAS) to avoid overlaps or contradictory conclusions.

This action supports the follow up to the July 2023 Communication on EU Missions assessment[239] and utilizes the budget reserved from the EU Missions part of the HE work programme 2023.

100 Climate-Neutral and Smart Cities by 2030: Other Actions

1. Specific Grant Agreement to the FPA to reinforce the operations of the Climate-Neutral and Smart Cities Mission Platform

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

[238] 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.

[239] COM(2023) 457 final and SWD(2023) 260 final

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 ensuring the Mission Platform's continued 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 while taking into account the lessons learned and the new priorities that emerged from the first few years of its implementation.

The Mission Platform will assist the cities that were selected[240] 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 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:

1. reinforcing services aimed at supporting the implementation of the Climate City Contracts (CCCs) of the cities selected to participate in the Mission through the Call for Expression of Interest;

2. 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.

Special emphasis should be placed on the following activities:

- Building on the good practices developed in the previous SGAs to support cities in the implementation of their investment plans through tailored advice and assistance offered by the **Climate City Capital Hub** and the **City Finance Specialists**. This activity will reinforce synergies between the Adaptation and Cities Missions, supporting cities in finding financing solutions for both mitigation as well as adaptation projects[241];

- Assistance to cities with **innovative and strategic procurement**, including joint procurement with other cities, bridging with EU mechanisms and collaborating with national platforms on procurement, for example through regulatory sandboxes;

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240 https://ec.europa.eu/commission/presscorner/detail/en/IP_22_2591

241 For this purpose, the Adaptation Mission is financially contributing to the *Climate City Capital Hub*.

- Support for cities in **monitoring and reporting** on the implementation of the CCC;
- Expand and regularly update the **open-source services of the online platform**, accessible to all cities;
- Carry out a **capacity building and mutual learning programme**, supporting cities' move towards climate neutrality;
- Foster **mutual learning and exchange of good practice** through for instance mentoring and twinning actions;
- **Demonstrators accelerating and sustaining city climate-neutrality solutions**, building on the experience of activity 4 under the *Specific Grant Agreements to the FPA for the Climate-Neutral and Smart Cities Mission Platform* in the Work Programme 2021-2022. This support will enable Mission Cities to catalyse and sustain innovation and accelerate systemic change towards the objectives articulated in their CCC. In particular, it will support Mission Cities to anchor the resulting paradigm shift and embed transformative change over time towards the new normal of carbon neutrality.

    Launch and manage calls for proposals to support pilots for the deployment in participating Mission cities;

    Establish cooperation and regular exchange with the R&I projects that are and will be funded under the Climate-neutral and smart cities Mission Work Programme in order to identify complementarities, avoid potential overlaps with the pilots supported by the Mission Platform and ensure synergies where relevant, to the benefit of the participating cities. This collaboration should be formalised through a Memorandum of Understanding with the relevant projects and initiatives.

The Mission Platform should build on existing actions, including relevant ones developed through Horizon 2020 and Horizon Europe 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 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.

In addition, it will draw in national-level support and expertise through close cooperation with the Cities Mission's national networks, established under the calls HORIZON-MISS-2021-CIT-01-01 and HORIZON-MISS-2024-CIT-02-01.

Specific conditions:

This action allows for the provision of financial support to third parties in line with the conditions set out in General Annex B – Eligibility of the Horizon Europe Work Programme. The activity "Demonstrators accelerating and sustaining city climate-neutrality solutions", includes the launch of open calls for proposals to support pilots for the deployment in participating Mission cities of systemic innovative solutions. For this purpose, beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. As a derogation to the standard limit of EUR 60 000 per third party entity set in the Financial Regulation[242] (Article 204), the Commission considers that in order to increase the impact of the pilot projects to be supported under the call(s) that will address the deployment of systemic innovative solutions and in order to achieve the objectives of this action, the maximum amount to be granted to each third party is EUR 1.5 million. The Commission considers that the size of the pilots should range between EUR 0.5 million up to EUR 1.5 million, depending on the expected impact of the proposed projects. The selection of the third parties to be supported under the grant will be based on a review of the proposed work by external independent experts. The scope of these calls will be further defined building on and ensuring complementarities with similar initiatives developed by the projects funded under the Horizon 2020 Green Deal call topic LC-GD-1-2-2020: Towards climate-neutral and socially innovative cities[243] as well as the projects funded under the *Specific Grant Agreements to the FPA for the Climate-Neutral and Smart Cities Mission Platform* in the Horizon Europe Missions Work Programme 2021-2022.

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.

This action will be implemented through Research and Innovation Actions (RIA).

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 2025

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242 https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32018R1046&from=EN

243 Horizon 2020 Work Programme 2018-2020, Part 20. Cross-cutting activities, Call - Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/lc-gd-1-2-2020. The Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, has been selected under the Green Deal call topic "LC-GD-1-2-2020 Towards Climate-Neutral and Socially Innovative Cities" and started its activities on 1 October 2021.

Indicative budget: EUR 30.64 million from the 2025 budget[244]

2. 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 (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: Third quarter 2025

Indicative budget: EUR 18.40 million from the 2025 budget[245]

244 Of which EUR 30.64 million from the 'Climate, Energy and Mobility' budget.
245 Of which EUR 18.40 million from the 'Climate, Energy and Mobility' budget.

A Soil Deal for Europe: Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'

As part of the vision and objectives to achieve healthy soils by 2050 set out in the **EU soil strategy for 2030,** the European Commission proposed a **Directive on Soil Monitoring and Resilience** in July 2023. The new law addresses key soil threats in the EU, such as erosion, floods and landslides, loss of soil organic matter, salinisation, contamination, compaction, sealing, as well as loss of soil biodiversity. **The proposed Directive recognizes the Mission 'A Soil Deal for Europe', the Mission, as a key instrument for its implementation**.

The **Mission goal** is to establish 100 living labs and lighthouses to lead the transition towards healthy soils by 2030 and builds around four operational objectives:

- build capacities and the knowledge base for soil stewardship;
- co-create and upscale place-based innovations to improve soil health in all places;
- develop an integrated EU soil monitoring system and track progress towards soil health;
- engage with the soil user community and society at large.

The Mission **2021-2022 and 2023-2024 Work Programmes** have invested unprecedented resources to advance on the four operational objectives and contribute to achieving healthy soils by 2050. The first 25 living labs started operations in 2024 and another 45 projects are running addressing soil biodiversity, carbon farming, circular solutions for soil health or soil contamination and remediation. A **solid infrastructure of cross-cutting support** for the objectives and projects of the mission has also been put in place. The collection of data and knowledge on soil health from the Mission projects is key to feeding the EU Soil Observatory and the European Soil Data Centre (ESDAC) and facilitate end users access to knowledge as well support Member States in the implementation of the future Directive. The Mission has been critical for the advances in the **EU soil health monitoring framework**. The first EU-wide soil health observatory dashboard went live in March 2023 under the leadership of the Joint Research Centre, and offers 19 soil health parameters and identifies the main soil degradation processes in the European Union and their geographical distribution. Efforts continue to propose cost-efficient improved soil health indicators and methodologies for measuring different parameters at the local, regional and EU level scale, leveraging on digital and earth observation technologies and others.

A **vibrant community** of key actors is also being empowered by the Mission to take action on soils including researchers, innovators, land managers[246], advisors, educators, artists, citizens, industry, policymakers and representatives of national, regional and local administrations. Noteworthy, is the Mission Manifesto which has mobilized more than 3,000 signatories across the EU and beyond our borders, with more than 550 organizations committed to protecting and restoring soil health. Soil health is a global issue and the **Mission**

[246] 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.

is gas provided support for important soi health topics in other continents and is supporting 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, the Long-term Vision for the EU's rural areas and the Common Agricultural Policy).

The **2025 Work Programme** builds on, consolidates and completes the actions initiated in previous programmes. The deployment of the **living labs network** continues towards the goal of 100 living labs in 2030, with a mainly bottom-up approach but ensuring that there are no relevant areas left uncovered with targeted topics. The next support action to provide **support services** to the living labs and lighthouses in 2026 and 2027 is also launched including further strengthening the collection of data and knowledge and the consideration and recognition of other similar and synergistic initiatives are some of the novelties. Together with the policy advancements, the Work Programme 2025 continues to increase and fill knowledge gaps on **soil health monitoring**, addressing specific degradation processes, such as salinisation, and effectively supporting Member States in the implementation of the future directive with advances on transfer functions and quantification of the impact of different soil management practices on soil health. The adoption of new soil management practices is supported not only by new solutions or more knowledge but also by an increased consideration of **cultural, social or economic barriers**, which is specifically targeted in 2025 together with another topic to ensure that new **policy-relevant scientific knowledge is easily available** to EU and (sub-)national decision-makers across different sectors.

The Commission Communication on Missions COM(2023) 457 adopted on 19 July 2023 pointed out a number of areas of improvement for the Missions overall. The 2025 Work Programme contributes to a higher **involvement of citizens and territorial administrations** and the critical **mobilization of additional economic resources** to materialize the transition towards healthy soils. A specific topic on citizen engagement through local and regional authorities and the introduction of financial advisory services and technical assistance to leveraging and scaling private funding including philanthropy in the next Mission Soil Platform contract are included.

Finally, the **international dimension** of the Mission is further supported with a specific focus on the EU global footprint on soil for the first time and exploring the application of the principles of the Mission Soil living labs in other regions of the world as an instrument to accelerate the co-creation and adoption of innovative solutions for soil health.

Potential applicants should prepare their proposals considering the aim of the EU Missions as an instrument, i.e., to bring concrete solutions to the great challenges identified and to deliver results by 2030, and specifically the Mission Soil objectives (Mission Implementation Plan) and state of play. Proposals for topics under the Mission "A Soil Deal for Europe" Work Programme 2025 should set out credible pathways to contribute to the three key strategic orientations of the Strategic Plan 2025-2027 and more specifically to the following long-term impacts:

1. Soil health-improving innovative governance, policies, practices, and incentives that integrate the main environmental, social, economic, regulatory, and cultural factors influencing soil management and soil degradation are in place, particularly at regional and local levels.

2. Improved and coherent soil health monitoring is adopted by land managers, including farmers and foresters, researchers, and Member States, within and beyond the EU using cost-efficient techniques that harness the potential of remote sensing and digital technologies.

3. Researchers, land managers, policymakers, and citizens are aware of soil health issues in the EU and AC, and beyond, and engaged in the design of solutions to protect and restore soil heath.

Coordinated contributions to the Mission's long-term impacts and relevant Mission objectives will be key for the Mission success. Sharing data, knowledge and information, creating synergies and collaborations and avoiding duplications between projects is essential, as well as considering mobilising other resources and actors where relevant and possible. Proposals are therefore encouraged to **build on and collaborate with** ongoing Mission projects and support structures and specific projects such as SoilWise, SOILL Start Up and the Mission Soil Platform. Projects are also 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).

Finally, to ensure EU-wide communication in all areas related to the Common Agricultural Policy (CAP) specific objectives, in particular agriculture, forestry and rural development, this knowledge must also be summarised in an appropriate number of 'practice abstracts' in the common EIP-AGRI format. Where applicable, involvement of interactive innovation groups, such as EIP-AGRI Operational Groups funded under Rural Development Programmes, is strongly recommended. For areas falling outside the EU CAP Network and CAP specific objectives remit, other similarly effective solutions ensuring dissemination and interaction with innovation groups at EU level should be sought.

Specific requirements for multi-actor projects:

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. 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 organizations including NGOs, and government representatives. The choice of the key actors participating in projects will depend on the objectives of the topic and the proposal. The genuine and sufficient involvement of different actors (essentially the (end-) users[247] of the project results backed up by any other useful

intermediaries and actors who can contribute with further expertise and innovative ideas) should take place over the whole course of the project: from its inception and planning to implementation, dissemination and possibly exploitation of results. The building blocks of a proposal are expected to come from science as well as from practice in 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. Proposals submitted for topics requesting to follow the multi-actor approach should describe:

- How the proposed objectives and planned activities are targeting the needs/problems/challenges and opportunities of the (end-)users.
- How the proposed approaches 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 he delivery of results ready for practice.
- How existing practices and tacit knowledge will be included. 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 multi-actor engagement process will be facilitated by making use of the most appropriate methods and expertise.
- How practical and ready to use knowledge, approaches, tools or products, that are easily understandable and freely accessible, will be developed.

How results and outputs ready for practice will feed into the existing dissemination channels most consulted by (end-) users across countries and regions.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-05-SOIL-01: Co-creating solutions for soil health in Living Labs

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.

[247] An "(end-) user" of project result is a person who is him/herself putting the project results into practice.

Indicative budget	The total indicative budget for the topic is EUR 36.00 million.
Type of Action	Research and Innovation Actions
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties to facilitate active involvement of appropriate stakeholders, (e.g. farmers, small businesses or civil society) in one or more of the living labs of the project. 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.

Expected Outcome: Activities under this topic respond directly to the goal of the Mission 'A Soil Deal for Europe' (Mission Soil) 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 Soil dealing with urgent soil health challenges (see in particular specific objectives 1 to 6 and 8 in the Mission implementation plan).

Activities should also contribute to meeting the European Green Deal ambitions and targets and more specifically those of the EU soil strategy for 2030 and the EU Biodiversity Strategy for 2030, the Zero Pollution Action Plan, the proposal for a Soil Monitoring and Resilience Directive, the Communication on Boosting Biotechnology and Biomanufacturing in the EU, as well as to Sustainable Development Goal (SDG) 15 on Life on land and SDG 3 on Good health and well-being.

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, test and promote the implementation of economically viable solutions for soil health.
- Enhancement of soil health in the areas where the living labs are deployed.
- Practice-oriented knowledge and tools are more easily available to land managers and land users 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 regarding soil health, including the economic sustainability of solutions, and can use this knowledge to design and implement more effective policies.

Scope: Projects funded under this topic should expand and complement the network of Mission Soil living labs and lighthouses initiated in previous Mission Soil Work Programmes to gradually establish 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

The Mission Soil 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 facilitate a green transition towards healthy soils by developing solutions in a co-creative manner, involving multiple actors in real-life settings at territorial level to achieve large-scale impacts on soil health and soil governance.

Nowadays, there are various definitions and conceptualizations of living labs. However, three components are recognizable within the well-established living labs research concept: (a) co-creation with a large set of stakeholders, (b) carried out in real-life settings and (c) involving end-users. For the purpose of the Mission Soil, "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 level[248]. Individual sites could be e.g. farms, forest holdings, urban green[249] or industrial areas, enterprises and other entities, where work is carried-out and monitored under real-life conditions.

Lighthouses in contrast are defined as real-life "places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement". They are individual, local real-life sites (one farm, one forest holding, 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)), 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 compare results, exchange good practices, validate methodologies, replicate actions and solutions, and benefit from cross-fertilisation within a local/regional setting.

More specifically, each of the proposals should:

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248 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.

249 By urban green areas, we refer to green spaces in cities such as parks, gardens, green roofs or walls, green corridors, squares, recreational areas, etc.

- 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 (e.g. agricultural, urban, industrial, forest and natural or semi-natural). The living labs should be located in at least three different Member States and/or Associated Countries. Proposals with living labs exclusively focusing on brownfield areas[250] are excluded from this topic as a dedicated topic is opened in this work programme (HORIZON-MISS-2025-SOIL-01-02: Living Labs for soil remediation and green redevelopment of brownfields).

- Describe the rationale for cooperation across the living labs and explain how the work undertaken will contribute to one or more of the Mission's specific objectives[251]. Proposals should present a realistic combination of a limited selection of variables which should be clearly described (e.g., number of soil health challenges addressed, pedo-climatic conditions, land uses, Mission objectives addressed).

- Establish, based on the Mission specific objectives to be addressed, an interdisciplinary approach to be undertaken in the living labs to co-design, co-develop, and co-implement locally adapted solutions for the selected soil health challenge(s) taking into account relevant drivers and pressures. This shall make use of relevant Social Sciences and Humanities (SSH) disciplines to achieve an inclusive and effective participatory process. Proposed solutions (practices, tools, strategies, etc.) should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating.

- Establish for each living lab a baseline for the relevant soil descriptors/indicators to allow for an accurate assessment of the soil conditions and changes in the different sites over time, and for monitoring the progress towards soil health improvements. As appropriate, the set of soil health indicators/descriptors presented in the Mission Soil Implementation Plan and the proposal for a Directive on Soil Monitoring and Resilience should be used.

- Monitor and carry out an assessment of the effects of the proposed solutions on soil health and related ecosystem services. This should consider a demonstration of their viability (technical, social, economical, cultural and environmental), scalability and transferability.

- Identify real life sites that demonstrate high performance in terms of their actions and results on soil health improvement and that may be converted into lighthouses.

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250 See definition of brownfield areas under topic HORIZON-MISS-2025-SOIL-01-02

251 Mission Soil specific objectives described in the Mission Soil Implementation Plan: 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; reduce the EU global footprint on soils, increase soil literacy in society.

- Propose strategies (e.g., financial, organisational) to ensure the long-term sustainability and continuity, impact and ambition of the established living labs beyond the Horizon Europe funding. Strategies should include the identification of possible business models and actions involving local authorities, social economy entities and social enterprises, business communities, SMEs, investors, entrepreneurs and co-funding schemes. Applicants are encouraged to explore and test new (or combination with existing) public or private funding schemes and financial instruments, involving, where relevant, finance providers. Proposals should integrate knowledge and expertise from SSH disciplines.

In line with the nature of living labs, projects 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, but not limited to researchers, landowners or land managers, industry (e.g., SMEs), public administrations, representatives of civil society (e.g., consumers, local inhabitants, environmental NGOs, youth organisations). Care should be taken to describe the capabilities and roles of the different partners involved, depending on their area of expertise, and on their social/economic activity.

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 in a project 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[252]. Financial support to third parties (FSTP) to facilitate active involvement of appropriate stakeholders (e.g. land managers, small businesses or civil society) in one or more of the living labs of a project, 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.

Proposals are expected to build on existing knowledge (e.g. data from national soil health monitoring) and solutions developed at national scale or in the frame of other Horizon projects including those funded under the Mission 'A Soil Deal for Europe'. Proposals are also encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures (ESFRI).

Dedicated tasks and appropriate resources should be envisaged to collaborate with SOILL, the structure created to support soil health living labs and lighthouses, Applicants can benefit from the services of SOILL already during the proposal preparation stage. During implementation, collaboration will include, among others, regular monitoring and reporting of living labs performance, capacity building to support the living labs day to day operations, viability and scale-up. The details of the collaboration will be further defined during the grant agreement preparation phase. Proposals should include dedicated tasks and appropriate resources for collaboration with other thematically relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', Horizon Europe or other EU programmes

[252] 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

including engagement in relevant Mission Soil cluster activities. Where relevant, cooperation with the Horizon Europe Partnerships on Agroecology and on Sustainable Food Systems and/or relevant networks active at local level, such as EIP-AGRI operational groups, is also encouraged, in order to promote the involvement of key local stakeholders in living labs' activities or in the dissemination of solutions.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines. Incorporating social sciences and humanities into living labs processes is essential to foster social innovation and socio-cultural and behavioural change. Social, economic, and cultural innovation is an integral part of research, monitoring, capacity building and knowledge transfer in 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. Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-MISS-2025-05-SOIL-02: Living Labs for soil remediation and green redevelopment of brownfields

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.
Type of Action	Research and Innovation Actions
Legal and financial set-up of the Grant Agreements	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 facilitate active involvement of appropriate stakeholders (e.g. urban planners, environmental professionals, small businesses or civil society) in one or more of the living labs of a project.

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. They support the specific objectives of the Mission Soil dealing with urgent soil health challenges (see in particular specific objectives 3, 4, 6 and 8 in the Mission implementation plan).

Activities should also contribute to meeting the European Green Deal ambitions and targets and more specifically those of the EU soil strategy for 2030 and the EU Biodiversity Strategy for 2030, the Zero Pollution Action Plan, the Roadmap to a Resource Efficient Europe, the proposal for a Soil Monitoring and Resilience Directive, the Communication on Boosting Biotechnology and Biomanufacturing in the EU as well as to Sustainable Development Goal (SDG) 15 on Life on land and SDG 3 on Good health and well-being.

Project results are expected to contribute to 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, test and promote the implementation of economically viable solutions for soil remediation and green redevelopment of brownfields.
- Practice-oriented knowledge and tools are more easily available to land managers and land users and contribute to an enhanced consideration and uptake of effective solutions for soil remediation and green redevelopment of brownfields, in regions where the selected living labs are operating.
- Policymakers in the EU and Associated Countries are more aware of local needs regarding soil remediation and green redevelopment of brownfields, including the dimension of economic sustainability as a way of strengthening the uptake of solutions and can use this knowledge to design and implement more effective policies.

Scope: De-industrialisation and abandonment of areas previously developed for industrial or commercial purposes have produced many brownfields[253] all over Europe, representing a major concern at different levels with adverse effects on the economy the environment, human health, social well-being and quality of life in their surroundings. However, many brownfields are located within urban boundaries and as such represent an opportunity for sustainable urban regeneration initiatives and offer competitive alternatives to greenfield developments (in line with the New European Bauhaus initiative).

Projects under this topic are intended to expand and complement the network of Mission Soil living labs and lighthouses initiated with projects funded under Work Programmes 2023 and 2024 of the Mission Soil, with the aim of gradually establishing 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

[253] According to the US Environmental Protection Agency, brownfields are properties that contain or may contain a hazardous substance, pollutant or contaminant, complicating efforts to expand, redevelop or reuse them.

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 facilitate a green and fair transition towards healthy soils by developing solutions in a co-creative manner, involving multiple actors in real-life settings at territorial level to achieve large-scale impacts on soil health and soil governance.

Nowadays, there exist various definitions and conceptualizations of living labs. However, three components are recognizable within the well-established living labs research concept, these include (a) co-creation with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users. 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 level[254]. Individual sites could be e.g. abandoned commercial and industrial sites, former mining areas or zones with former or current military activities.

Lighthouses in contrast are defined as real-life "places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement". They are individual, local real-life sites (one industrial site, one quarry, 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, in the specific context of this topic, 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, the proposals should:

- Support the setup of four to five living labs to work together on soil remediation solutions (practices, tools, strategies, etc.) and green redevelopment of brownfields. The living labs should be located in at least three different Member States and/or Associated Countries.

- Describe the rationale for cooperation across the living labs and explain how the work undertaken will contribute to one or more of the Mission's specific objectives[255].

[254] 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.

Proposals should present a realistic combination of a limited selection of variables which should be clearly described (e.g., number of soil health challenges addressed, pedo-climatic conditions, land uses, Mission objectives addressed).

- Establish an interdisciplinary approach to be undertaken in the living labs to co-design and co-develop locally adapted solutions for selected soil health challenge(s), taking into account relevant drivers and pressures. Make use of relevant Social Sciences and Humanities (SSH) disciplines to achieve an inclusive and effective participatory process. Proposed solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating.

- Establish for each living lab a baseline for the relevant soil descriptors/indicators adequate for brownfields, to allow for an accurate assessment of the soil conditions and changes in different sites over time. As appropriate, the set of soil health indicators/descriptors presented in the Soil Mission Implementation Plan and the descriptors of the proposal for a Directive on Soil Monitoring and Resilience should be used.

- Propose and assess innovative solutions for soil remediation and potential green redevelopment plans for the sites (brownfields) involved in the living labs. This should include a demonstration of the viability (technical, social, economic, cultural and environmental) of the solutions.

- Identify real life sites that demonstrate high performance in terms of their actions and results on soil remediation and green redevelopment of brownfields, which may be converted into lighthouses.

- Propose strategies (e.g., financial, organisational) to ensure the long-term sustainability and continuity, impact and ambition of the established living labs beyond the Horizon Europe funding. Strategies should include the identification of possible business models and actions, involving local authorities, social economy entities and social enterprises, business communities, SMEs, investors, entrepreneurs and co-funding schemes. Applicants are encouraged to explore and test new (or combination with existing) public or private funding schemes and financial instruments, involving, where relevant, finance providers. To this end, proposals should integrate knowledge and expertise from SSH disciplines.

In line with the nature of living labs, projects 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, but not limited to researchers, landowners or land managers, industry (incl. SMEs), public administrations, representatives of civil society (e.g. consumers, local inhabitants, environmental NGOs, youth organisations). Care should be taken to describe the capabilities and roles of the different partners involved, depending on their area of expertise and on their social/economic activity.

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[255] See the Mission implementation plan

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 in a project 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[256]. Financial support to third parties (FSTP) to facilitate active involvement of appropriate stakeholders (e.g. land managers, small businesses or civil society) in one or more of the living labs of a project, 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.

Proposals are expected to build on existing knowledge and developed at national scale (e.g. data from national soil health monitoring) or developed in the frame of other Horizon projects including those funded under the Mission 'A Soil Deal for Europe'. Proposals are also encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures (ESFRI).

Dedicated tasks and appropriate resources and budget should be envisioned to collaborate with SOILL, the structure created to support soil health living labs and lighthouses, as well as with other thematically relevant projects funded under the Mission 'A Soil Deal for Europe', Horizon or other EU programmes including engagement with the relevant cluster activities. Applicants can benefit from the services of SOILL already during the proposal preparation stage. During implementation, collaboration will include, among others, regular monitoring and reporting of living labs performance, capacity building to support living labs day to day operations, viability and scale-up. The details of the collaboration will be further defined during the grant agreement preparation phase.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines. Incorporating social sciences and humanities into living labs processes is essential to foster social innovation and socio-cultural and behavioural change. Social, economic, and cultural innovation is an integral part of research, monitoring, capacity building and knowledge transfer in 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 maps and information can potentially be available publicly through the EUSO. Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-MISS-2025-05-SOIL-03: Social, economic and cultural drivers, and costs of land degradation

[256] 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

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 11.00 million.
Type of Action	Research and Innovation Actions

Expected Outcome: Activities under this topic will help to progress EU efforts to better protect soils and reaffirm its commitment to achieve land-based climate neutrality in the EU by 2035 as outlined in the EU Soil Strategy for 2030. Moreover, results under this topic will contribute to progress on all the Mission 'A Soil Deal for Europe' objectives, as social, economic and cultural studies are fundamental to understanding how drivers and human behaviour can change to adopt sustainable land management practices.

Project results are expected to contribute to all the following outcomes:

- Enhanced understanding of the key social, economic, cultural, political, and regulatory factors driving soil management and degradation and the interaction of these factors.
- Enhanced estimates of land degradation costs (e.g., GDP losses and negative externalities) and better understanding of the consequences of land degradation for food security and other ecosystem services, people's well-being, markets, and finance. These estimates should be based on the integration of soil bio-physico-chemical indicators with socio-economic methods and models.
- Increased access to evidence-based strategies, policies, and integrated approaches for policy makers (at EU, national, regional and local level), land-managers, and other stakeholders to overcome barriers to soil health protection and restoration and facilitate sustainable land management.
- Improved consideration of cost-benefit analysis in the implementation of soil conservation and restoration actions and sustainable land management.

Scope: The social, economic, cultural, political, and regulatory factors that drive land management and land degradation and the interaction among these factors has been insufficiently explored. Moreover, there is a knowledge gap in estimating the costs that land degradation generates on-site, directly affecting land users and managers, and offsite, borne by society. Currently, the lack of knowledge on the costs of land degradation hampers the development of cost-benefit scenarios for the adoption and implementation of soil conservation and restoration actions across the EU and Associated Countries. An improved understanding of the social, economic, political, regulatory, and cultural factors, together with

quantification of the costs of land degradation, should lead to evidence-based strategies, policies and integrated approaches that support land managers in rural, intermediate, and urban areas to adopt and implement sustainable land management practices that reduce and eventually stop land degradation and enhance soil health.

Proposed activities should:

- Identify the social, economic, cultural, political, and regulatory factors that drive soil management and degradation and are key in the development of strategies, policies and integrated approaches for sustainable land management across different land uses. The analysis should include, among other factors, those related to gender, education, inequalities, and access to land.
- Explore how existing patterns of thought and action can be modified to implement sustainable land management. This should include the analysis of successful examples of sustainable soil-human relations and their potential replicability.
- Review existing socio-economic methods and models for assessing land degradation costs and conduct pan-European assessments of the socio-economic costs of different aspects of land degradation (e.g. soil organic carbon losses, soil erosion, biodiversity decline, nutrient loss, soil contamination, soil sealing, and land subsidence) across all relevant land use types.
- Carry out cost-benefit analyses of soil conservation measures and sustainable land management approaches by building on other EU funded projects or initiatives.
- Evaluate the socio-economic impacts of EU Green Deal policies related to land degradation (scenario analysis) and the socio-economic costs and benefits of their implementation.
- Develop a toolbox of policy solutions for different governance levels to promote sustainable land management and avoid land degradation and sealing, considering the diverse cultural, political, and administrative systems, land uses, and geographical and pedo-climatic conditions in the EU and Associated Countries.
- Support the adoption of sustainable land management through capacity building and evidence-based integrated approaches.

In carrying out the activities, consortia should:

- Work in an interdisciplinary way bringing together environmental sciences and social sciences and humanities (SSH) disciplines (including economics, political science, sociology, history, geography, cultural anthropology, behavioural sciences).
- Regularly engage with policy makers and stakeholders to co-create and evaluate strategies to mitigate land degradation and sealing.

Finally, proposals should:

- Include dedicated tasks and appropriate resources for coordination measures and joint activities with the other project funded under this topic, as well as with other relevant projects and initiatives funded under the Mission "A Soil Deal for Europe", including engagement with the relevant cluster activities.

- Demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the EU Soil Observatory and the SoilWise[257] project.

HORIZON-MISS-2025-05-SOIL-04: Increasing environmental resilience through a better knowledge and management of the soil-water nexus

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	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'. Activities will also contribute to the EU Biodiversity Strategy for 2030 and the Nature Restoration Law, to the EU Soil Strategy for 2030 and the proposed Soil Monitoring and Resilience Directive, EU Water Framework Directive, as well as the EU Action Plan on the Development of Organic Production.

Project results are expected to significantly contribute to all the following outcomes:

- Enhance stakeholders' (including decision-makers' and land managers') understanding of the importance that soil-water interactions play in mitigating risks associated with extreme events such as droughts, wildfires and floods and their virulence.

- Raise stakeholders' awareness of the relevance of soil biodiversity[258] to soil characteristics (e.g. water retention capacity, permeability, saturation, etc.) which are relevant for the soil-water nexus.

- Substantially contribute to increasing [XYZ areas'] environmental resilience to extreme events like floods, droughts, or wildfires, as well as to other undesired soil health processes, through restoration, conservation and integrated management of the soil-water nexus.

257 https://cordis.europa.eu/project/id/101112838
258 https://esdac.jrc.ec.europa.eu/themes/soil-biodiversity

Scope: The world is facing an increasing trend in the frequency and virulence of extreme events like droughts, wildfires, and floods, with soil, and more precisely soil-water interactions, playing a key role in their occurrence and impact. A holistic response is necessary to face these events and better manage the risks and impacts they create onto the environment, food security, the economy and human security.

For example, recent studies have shown the significance of soil moisture in wildfire probability and virulence[259], the importance of soil-water retention capacity and availability for vegetation and crop possibilities to endure droughts, and the potential for improved retention and infiltration to reduce flood peak flow and its destructive effects[260]. Soils, sediments, and water are intimately connected, as soils filter, absorb and buffer water, but can also get eroded and contaminated through water. Healthy soils can help mitigate not only the occurrence, virulence and scope of extreme events, but also other undesired processes like erosion or contamination. But when soils are unhealthy, compacted or sealed, they lose capacity to absorb and store water, which reduces their capability to mitigate the risks and impacts of extreme events.

While soil biodiversity plays an important role with respect to soil properties such as porosity, aggregation or organic matter content, its influence on water dynamics is often complex and indirect, and thus still poorly studied. Therefore, it is necessary to enhance the understanding of the functional role of soil biodiversity for soil-water dynamics, and to develop and validate new models for mainstreaming and integrating soil biodiversity together with other risk assessment parameters.

Proposed activities should:

- Develop and validate one or more indicators for the soil water holding capacity descriptor included in the proposed Soil Monitoring Law, considering the different pedoclimatic areas and land uses in the EU and Associated Countries.
- Identify the soil properties and associated indicators (e.g., structure, bulk density, porosity, depth, organic matter, buffering etc.) and factors (e.g., slope, frost, cover, drainage network, etc.) that determine soil-water dynamics and are relevant for the probability and virulence of extreme events. The use of remote sensing techniques is encouraged for soil factors identification.
- Assess the role of soil biodiversity for the previously identified water-relevant soil properties and the impact of the different soil factors on soil biodiversity, considering different pedoclimatic areas and land uses in the EU and Associated Countries. Where relevant, involve soil biodiversity taxonomists to validate methods and expand knowledge.

[259] https://doi.org/10.2136/sssaj2017.01.0003; https://doi.org/10.1016/j.agrformet.2018.09.012; https://doi.org/10.3390/rs12101543

[260] https://link.springer.com/chapter/10.1007/978-3-030-26265-5_6

- Develop and validate new models (or substantially improve existing ones) at watershed/landscape level that mainstream and integrate the functional role of soil biodiversity in soil-water interactions and specially in risk assessment of extreme events.

- Assess and validate strategies and best practices proposed in the context of other relevant EU-funded projects and initiatives (e.g. Living Labs funded under the EU Mission "A Soil Deal for Europe"[261] or the Horizon Europe projects SpongeBoost[262] and SpongeScapes[263]) to increase environmental resilience by improving the soil-water nexus through restoration, conservation and management of soil and its biodiversity, considering the different pedoclimatic areas and land uses in the EU and Associated Countries.

The proposed activities should duly consider the different pedoclimatic areas and land uses (agricultural, natural, and urban) across the EU and Associated Countries, with enough experiment design robustness to guarantee the meaningfulness of results. In the specific case of agricultural lands, due attention should be given to the impact of the differences between conventional, agroecological and organic production.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant EU-funded initiatives, specially under the Mission 'A Soil Deal for Europe', in particular for the validation of innovative approaches for increasing environmental resilience, and for engagement with the relevant cluster activities.

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)[264] and SoilWise[265].Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide "FAIR-by-design" data, i.e., data that is FAIR from its generation.

When dealing with models, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code and data, that is managed in compliance with the previously mentioned FAIR principles.

Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures in the environment, biological & food domains or imaging capacities[266].

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261 https://mission-soil-platform.ec.europa.eu/

262 https://cordis.europa.eu/project/id/101112906

263 https://cordis.europa.eu/project/id/101112738

264 https://esdac.jrc.ec.europa.eu/euso

265 https://cordis.europa.eu/project/id/101112838

266 The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/.

HORIZON-MISS-2025-05-SOIL-05: Developing transfer functions for the Soil Monitoring Law

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	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' and the proposed Directive on Soil Monitoring and Resilience (Soil Monitoring Law – SML)[267], by integrating different soil monitoring systems for a harmonised soil health assessment in the EU.

Project results are expected to significantly contribute to all the following outcomes:

- Stakeholders have access to validated transfer functions for all soil descriptors included in the SML proposal, enabling compatibility, interoperability, and comparability of data for laboratorial and field methods used in the EU that differ from those prescribed in Annex II of the proposal.
- National monitoring programmes, Land Use and Coverage Area frame Survey (LUCAS) and protocols (e.g. ISO/CEN) included in the SML proposal are integrated by interoperability, enabling harmonised soil health assessments across the EU by using the existing monitoring schemes in Member States and at EU level.
- Enhanced understanding of the applicability of statistical methods for combining soil data collected with different protocols, to produce harmonised EU statistics and maps.

Scope: The proposed Directive on Soil Monitoring and Resilience (Soil Monitoring Law – SML) aims to put in place a coherent and integrated soil monitoring framework for all soils across the EU. However, currently there are many different methods in the EU to monitor and assess soil health, from sampling to laboratorial procedures, and some Member States have long-standing soil monitoring systems and procedures which they prefer to keep for economic reasons and to safeguard long-term datasets.

Validated transfer functions are therefore needed to reliably convert soil measurements to a common reference method and to facilitate a smooth and cost-effective transition to a

[267] COM/2023/416 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A0416%3AFIN

harmonized soil health assessment across the EU. Some knowledge on transfer functions is already established for certain soil physical and hydraulic properties, but existing knowledge does not cover the entire combination of laboratorial and field methods available across the EU for all the soil descriptors present in the SML proposal.

Proposed activities should:

- Identify and collect the information available in existing samples archives such as LUCAS.
- Develop and test, together with Member State monitoring bodies, transfer functions for all descriptors proposed in the SML proposal (e.g. soil organic carbon, excess nutrient content, soil acidity, pH, P-Olsen, Electrical conductivity, bulk density, etc.) and for the diverse methods used for field sampling collection (including sampling depth) and analysis different than those prescribed in the SML proposal. Identify conversion factors to transform data from one method to another.
- Compare results obtained by different sampling protocols and laboratorial procedures, and link national monitoring systems with LUCAS outputs and the protocols of ISO/CEN and others included in the SML proposal.
- Determine the most reliable statistical methods for combining soil data collected with different sampling protocols and analytical methodologies to produce harmonised and comprehensive statistics and maps.
- Validate transfer functions by sampling a subset of the LUCAS 2022 locations, covering at least 21 MS and 80% of the EU land surface area and analogous to LUCAS in terms of land cover and climate regions. A minimum of 30% of the budget must be allocated for the sampling and analysing of at least 4000 samples.

A strong collaboration is expected with the Joint Research Centre to identify and access existing samples archives and to make sure that relevant data, maps and information can be used and displayed by the EU Soil Observatory. 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)[268], SoilWise project[269]. and the JRC Life Cycle Assessment group[270].

Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide "FAIR-by-design" data, i.e., data that is FAIR from its generation. Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures in the environment, biological & food domains or imaging capacities.[271]

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268 https://esdac.jrc.ec.europa.eu/euso

269 https://cordis.europa.eu/project/id/101112838

270 https://eplca.jrc.ec.europa.eu/index.html

When dealing with transfer functions, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code and data, that is managed in compliance with the previously mentioned FAIR principles.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant EU-funded initiatives, specially under the Mission "A Soil Deal for Europe", including engagement with the relevant cluster activities. Likewise, projects should build on the results and data collected in previous related EU-funded initiatives, such as EJP SOIL.

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-2025-05-SOIL-06: EU global footprint on soils

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	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 towards its specific objective 7 'Reduce the EU global footprint on soils'.

Project results are expected to significantly contribute to all the following outcomes:

- Improved access to knowledge and data on the impact of the EU demand for bio-based products (e.g., food, feed, fibre, woods and biomass) on non-EU soils.
- Enhanced recognition and comprehension by businesses, stakeholders and citizens of the impact of producers', traders' and consumers' behaviour and decisions on the EU global soil footprint.
- Accelerated uptake of integrated innovative and reproducible approaches and management practices to reduce the global impact on soils due to the EU demand for bio-based products.

[271] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/.

- Improved understanding of the impact of EU soil stewardship on soil degradation and related social issues globally.

Scope: The use of bio-based products (e.g. food, feed, fibre, wood and biomass) by businesses and consumers in the EU has an impact on global soils. However, this impact has been poorly studied and understood. The European Commission has developed a Life Cycle Assessment (LCA)-based framework to monitor the evolution of the overall environmental footprint of EU production and consumption and to compare it against planetary boundaries, the "EU Consumption Footprint Platform". However, this framework does not sufficiently consider the specific impact on soil and there is a need to enrich the existing indicators in terms of physical, chemical and biological soil properties.

An EU Global Soil Footprint Tool would allow measuring the impact that a given activity has on soil health globally, measured in terms of soil degradation. This should also address the impact of the EU demand for bio-based products on global trade and the links to GDP and the Human Development Index. A crucial step will be to trace back relevant imported products (for final consumption or as inputs to EU production) to the country where they were originally produced. To this end, work can build upon previous work of the JRC on quantifying the land footprint of EU consumption. Moreover, there is also a need to investigate further the carbon emissions produced from EU demand (carbon footprint), the impact of EU imports on ecotoxicity and eutrophication (contamination footprint) and soil biodiversity elsewhere, and the environmental impact and social inequalities due to land use change (in particular the effects on deforestation[272]).

Proposed activities should:

- Develop and test a robust tool or approach (a Soil Footprint Calculator) to track, assess and establish a baseline for the global soil footprint of the EU demand for and import of bio-based products (e.g. food, feed, fibre, wood and biomass).
- Explore the positive and negative social, economic and environmental impacts of improved production systems elsewhere, including soil conservation and restoration actions, in their attempt to reduce the EU global footprint on soils.
- Bring forward policy recommendations aiming at minimising the EU's global soil footprint. Identify obstacles and propose incentives for the uptake and scale-up of measures that can help reduce the EU's global footprint.
- Carry out activities for communication and awareness raising on the EU's global soil footprint and for the demonstration and dissemination of measures that can reduce the EU's global soil footprint, in cooperation with international organisations such as UNCCD bodies, FAO or UNEP.

Cooperation with international partners is highly encouraged to engage a global network of experts in life-cycle analysis. In particular, the involvement of Latin American and Caribbean

[272] Considering possible linkage with Regulation 2023/1115 on deforestation free supply chains

(LAC) partners is encouraged, as this region encompasses more than 50% of the world biodiversity and is an important trading partner for the EU regarding bio-based products. In this sense, activities to be developed should be in line with the roadmap and action plan of the EU-CELAC Action Plan on Science, Technology and Innovation. Involvement of African partners is also encouraged.

When assessing the impact on soils, proposals should take into account the soil health indicators presented in the Mission Soil Implementation Plan and the soil descriptors in the proposed Directive on Soil Monitoring and Resilience.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', including engagement with the relevant cluster activities. Proposals are expected to build on the results of the SOLO project and its roadmap on knowledge gaps and opportunities project and its roadmap on knowledge gaps and opportunities[273]. Moreover, proposals should envision to collaborate with international organisations such as UNEP, UNCCD bodies, FAO and FARA[274]. Finally, proposals should consider synergies with SCAR-ARCH and Agricultural Research for Development.

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), the SoilWise project and the Life Cycle Assessment group.

HORIZON-MISS-2025-05-SOIL-07: Quantifying the impact of farming practices on soil health in arable lands

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	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 towards its specific objective 2 "Conserve and increase soil organic matter', 5 'Prevent erosion', 6 'Improve soil structure to enhance habitat quality for soil biota and crops' and 8 'Increase soil literacy in society across Member

[273] https://journal.soils4europe.eu/article/118569/
[274] Forum for Agricultural Research in Africa – https://faraafrica.org/

States' (see Mission implementation plan). Activities will also contribute to the implementation of the European Green Deal, in particular nutrient related objectives, the EU Action Plan for the Development of Organic Production, and the environmental objectives of the Common Agricultural Policy[275].

The successful projects are expected to contribute to all of the following outcomes:

- Consolidated scientific knowledge on the impact of farming practices on soil health, both in isolation and combined as part of a holistic strategy. This should include refined estimates of the impact from current and potential adoption of the practices by farmers at EU/European level.
- Increased adoption of farming practices which improve and restore soil health, driven by robust policy measures at EU and national levels in alignment with relevant CAP measure.
- Member States' competent authorities are aware of specific soil health difficulties and hurdles to implementation of soil health improving agricultural practices and align incentives in their CAP Strategic Plans.

Scope: Agricultural land accounts for almost half of the EU area, with around two-thirds used for arable crops. Some agricultural practices, both individually and in combination, play a crucial role in maintaining essential soil functions, such as soil structure, nutrient cycling, and water retention, which are vital for food production and ecosystem resilience. There is a need to better understand how different farming practices impact the composition and functions of soil biodiversity, carbon capture and storage, GHG emissions, water infiltration and retention. Additionally, more knowledge is needed to understand how multiple threats and farming practices simultaneously affect soil health (e.g. the interplay between various farming practices and climate change).

The Common Agricultural Policy (CAP) promotes efficient natural resource management, which contributes to mitigating climate change while also halting and reversing biodiversity loss[276]. Under the current CAP (2023 – 2027 period), actions to improve soil health are expected to cover nearly 47%[277] of EU's utilised agricultural area (UAA). A specific Result Indicator 19[278] is used to measure CAP contributions to the improvement and protection of soils. EUR 50.6 million is the initial estimation of the CAP 2023-2027 contribution to results captured by RI19. In addition, around 1,000 Operational Groups under the EU CAP Network are expected to address soil.

While all farmers receiving CAP direct payments must respect certain standards on good agricultural and environmental conditions (GAECs), these standards are defined via basic

275 CAP 2023-27 - European Commission (europa.eu)

276 Sustainable agricultural practices and methods - European Commission (europa.eu)

277 EUR-Lex - 52023DC0707 - EN - EUR-Lex (europa.eu); csp-at-a-glance-eu-countries_en.pdf (europa.eu)

278 RI.19 - 'UAA under supported commitments favourable to soil management to improve soil quality and biota'

requirements as a first set of practices to prevent soil erosion, maintain soil organic matter and soil structure or protect biodiversity and water. There is a need to build on existing CAP measures (GAEC, CAP Eco-schemes and AECM[279] under Pillar II), to provide stronger and refined incentives for climate- and environment-friendly farming practices and approaches (such as organic farming, agro-ecology, carbon farming, etc.). Ultimately, scientific evidence on the soil response to different farming practices, and their combinations, at local scale and subsequently at macro scale is still needed. In particular, it is necessary to find quantitative coefficients that capture the impact of farming practices on soil health for specific pedo-climatic conditions and cropping systems over time across Europe. This is crucial information for policy making.

Proposed activities should:

- Define and map homogeneous soil-use and pedo-climatic regions in EU arable lands (consideration of existing Earth observation databases and datasets is encouraged) and develop (iMAP) coefficients linking farming practices to soil health indicators. The latter must align with the Soil Mission Implementation Plan and descriptors of the proposed Directive on Soil Monitoring and Resilience (Soil Monitoring Law – SML). Work should leverage existing data and focus on soil biodiversity, carbon capture and storage, GHG emissions, and water infiltration/retention, considering both CAP-supported and other farming practices.

- Quantify the impact of farming practices on soil health for major pedo-climatic regions and arable crops in the EU. Establish clear relations between farming practices, arable lands and types of crops for each soil use and pedo-climatic region, as well as the properties that define such region. Farming practices should align with the requirements of the "Good agricultural and environmental conditions" standards (GAEC) and GAEC when combined with other CAP interventions, such as "Eco-Schemes" (ES) or/and "Agri-environment-climate measures" (AECM) under Pillar II, but not exclusively.

- Solidify and develop an inventory of farming practices (e.g., organic fertilisation, no-tillage) that contribute to good agricultural and environmental conditions and of eco-schemes relevant to soil health from national CAP Strategic Plans. The inventory should cover various farming systems/approaches and alternative farming practices like organic, agroecology, and regenerative farming.

- Select a set of soil health indicators (SOC, water retention capacity, acidity, conductivity, biodiversity, soil erosion, nutrients, diffuse contamination, etc.) considering the Mission Soil Implementation Plan, the SML and the results produced by the Mission portfolio of projects, to quantify farming practices effects.

- Expand and enrich existing online databases and visualisations by integrating all information produced or collected in the previous activities (i.e. pedo-climatic regions, arable lands, cropping systems) to enhance user accessibility.

[279] Agri-environment-climate Measures

- Develop a model to compare, analyse and evaluate scenarios of the effects of different single farming practices (e.g., conventional tillage vs. no-tillage, organic amendment vs. mineral fertilisation, etc.) and combined practices and strategies (e.g., conservation, organic, agroecology, regenerative).

- Identify and analyse the limitations of map, indicators, model, measurements, and results obtained. Produce a gap analysis to address remaining soil health challenges in Member States, considering what is proposed in national CAP Strategic Plans, and which future R&I could fill.

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 SoilWise. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Reusable).

Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures[280].

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', including engagement with the relevant cluster activities, and in particular with projects funded under the Horizon Europe Partnership on Agroecology

HORIZON-MISS-2025-05-SOIL-08: Improved land suitability for soil health and sustainable biomass production

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	Research and Innovation Actions

Expected Outcome: Activities under this topic contribute to the implementation of the Mission 'A Soil Deal for Europe' in particular to its specific objective 4 "Reduce soil pollution and enhance restoration" and 7 "Reduce the EU global footprint on soils", the EU Bioeconomy Strategy and the Nature Restoration Law.

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

[280] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/.

- Improved soil health, land suitability choice and optimised sustainable production of biomass (both quantity and quality) across different types of land (including agricultural lands, forest and -for paludiculture or nature restoration purposes only- also peatlands and marginal lands[281]).

- Improved knowledge on the relationships between biomass production, soil and ecosystem health, and soil-water interactions (water-holding capacity, drainage patterns, and irrigation requirements).

- Better understanding and assessments of land suitability and land management practices that contribute to soil restoration and sustainable biomass production for food and non-food uses across Europe.

- Increased deployment of sustainable biomass production systems that improve soil health while valorising production systems' contribution to nature restoration, climate mitigation and climate resilience adaption strategies.

Scope: Soil, as a fundamental component of terrestrial ecosystems, is crucial for biomass[282] production and its capabilities and limitations. Hence, effective land use planning must consider the requirements and constraints associated with different soil properties. For instance, excessive nutrient export due to biomass removal can negatively impact soil health and the overall ecosystem functioning. Consequently, prioritizing land suitability, alongside other key biophysical aspects such as climate, is essential for maintaining soil health while ensuring sustainable biomass production.

When stakeholders and land managers take land suitability and soil properties into account, they can make more informed decisions about e.g., land use, land management practices, and environmental protection. This approach ultimately promotes sustainable and efficient land management strategies for biomass production.

Proposed activities should:

- Develop process-based models using various data sources including the EUSO data repository, the European Joint Programme on Agricultural Soil Management (EJP SOIL) Long Term Field Experiment[283] and other EJP SOIL data repositories and literature review field results from ongoing EU Mission Soil projects, including the Mission Soil living labs, and other relevant Earth observations datasets. The models should simulate soil properties, land suitability, and their impact on soil health and biomass production for both food and non-food uses.

281 https://knowledge4policy.ec.europa.eu/glossary-item/marginal-land_en

282 In this call, biomass refers to organic, non-fossil material of plant biological origin. The biomass in the scope of this call includes biomass of plants used for food, feed, ecosystem restoration and bio-based materials.

283 https://ejpsoil.eu/visiting-scientists-support-access-to-infrastructure/partner-countries-with-ltes

- Engage with land managers to understand their needs and challenges and develop decision tools to aid them in enhancing biomass production while maintaining soil health.

- Conduct a comprehensive literature review focusing on data to assess the conditions for optimal land suitability that contributes to improving soil health while producing sustainable biomass – considering the dynamics of soil water interactions (water-holding capacity, drainage patterns, and irrigation requirements). The analysis should include social, economic, and environmental aspects of biomass production and use.

- Broaden the scope of the findings by upscaling experimental results and models to larger scales (regional, national, European) and integrate them with social-economic data (e.g. cost, effect on local economies, job creation, social implications).

Proposals should focus the proposed activities on the ten most important annual and perennial agricultural and forest crops and paludicultural plants in Europe, including peatland and marginal land biomass. Multifunctional cropping systems should be considered together with the corresponding value creation and process chains that improve the nexus of soil, water, biodiversity, climate adaption, climate protection, and overall resilience. In the specific case of peatlands, biomass should be adapted to the typical peatland vegetation for each pedoclimatic region, taking into account current and potential future rewetting actions, and never including afforestation, as rewetting is the only long-term alternative for sustainable use and restoration of drained peatlands (for both carbon sequestration and biodiversity objectives).

Proposals should outline a clear pathway towards open access, longevity, sustainability and interoperability of knowledge and outputs – including adoption of standard-based ontologies/vocabularies and data harmonization mechanisms – through close collaboration with the European Union Soil Observatory (EUSO) and the SoilWise project. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Reusable).

Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures[284]. Proposals should include dedicated tasks and allocate appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', including engagement with the relevant cluster activities.

HORIZON-MISS-2025-05-SOIL-09: Broadening the living labs approach for soil health in Africa and Latin America and the Caribbean (LAC)

Call: Supporting the implementation of the Soil Deal for Europe Mission
Specific conditions

[284] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/.

Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.
Type of Action	Research and Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: Due to the scope of this topic, legal entities established in non-associated third countries in Africa or in Latin America and the Caribbean (LAC) are exceptionally eligible for Union funding. The following additional eligibility criteria apply: International organisations with headquarters in a Member State, associated country or in Africa or in Latin America and the Caribbean (LAC) are exceptionally eligible for funding. Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
Procedure	The procedure is described in General Annex F. The following exceptions apply: Proposals should focus on one of two geographical areas: Africa or Latin America and the Caribbean (LAC), i.e., proposed activities should be performed in one of these two areas. Proposals shall clearly indicate the geographical area they are covering. To ensure that both areas are covered, grants will be awarded to applications not only in order of ranking but also to one project focusing in Africa and one project in LAC, provided that proposals attain all thresholds.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries should provide financial support to third-party consortia to set up participatory initiatives in real-life sites. 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 300,000. Minimum 60% of the total requested EU contribution must be allocated to this purpose.

Expected Outcome: Activities under this topic contribute to the eight specific objectives of the Mission 'A Soil Deal for Europe'. Activities will also contribute to the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture (FNSSA), African Union

strategies, the 'Declaration of the EU-CELAC Summit 2023'[285], the LAC Communication[286], as well as other initiatives and action plans relevant for soil health and the support of global commitments such as the United Nations Sustainable Development Goals (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 expected outcomes:

- Soil degradation is minimized or reversed, and soil health is enhanced in rural, urban and peri-urban areas of Africa and Latin America and the Caribbean (LAC).
- Local communities and small land managers and land users in Africa and LAC have increased access to scalable practice-oriented tools and learning mechanisms for soil health, including monitoring, based on participatory research.
- Establishment of a recognised mechanism for exchange of soil health knowledge, of learning experiences and tools that can be replicated and that can attract additional finance to support human-centred design and testing of solutions for soil health.
- Policy makers can put in place an effective framework to support continuous generation and adoption of knowledge-based, context-specific solutions for soil health and sustainable land management in Africa and LAC.

Scope: Living labs have the potential to empower the transition towards healthy soils by closing the gap between science and practice. Three components are recognizable within the now well-established living labs research concept: (a) co-creation of solutions with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users. Living labs are thus collaborations between multiple actors that operate and undertake experiments on individual sites such as farms, forest stands, urban green or industrial areas, enterprises and other locations, where the work is carried out and monitored under real-life conditions.

Soil health gains require adapted, site-specific practices. However, providing millions of (small) land managers with access to regional or field-specific solutions and tailored advisory, remains challenging and requires new approaches. In particular, as the lack of feedback loops between land managers and researchers may lead to the development or implementation of inappropriate solutions or hinder the adaptation of solutions to local contexts.

Building on the abovementioned living labs principles, this topic aims to support the development of human-centred tools for research, development, education, extension and support sustainable soil management, with the final goal of accelerating and expanding the adoption of context-specific solutions for soil health protection and restoration in Africa and LAC. The Mission Soil living labs concept (see topic HORIZON-MISS-2025-05-SOIL-01: Co-creating solutions for soil health in Living Labs) is not expected to be replicated as such, but rather to inspire the exploration of new models and participatory initiatives that, based on

[285] Declaration of the EU-CELAC Summit 2023 (europa.eu)
[286] New Agenda to strengthen EU's partnership with LAC (europa.eu)

the same principles, emerge from African and LAC soil-related communities as drivers of change in soil management.

Proposed activities should:

- Support the set up of at least 12 participatory initiatives in real-life sites to co-design, co-develop and co-implement with all relevant actors locally adapted practical solutions and holistic approaches to key soil health challenge(s) related with one or more of the Mission Soil specific objectives. The initiatives should cover and the solutions be adapted to a diversity of environmental, socio-economic and cultural contexts across the regions (Africa or LAC).

- Monitor and assess the progress on soil health and socio-economic resilience derived from the implementation of the solutions. For this, adequate indicators (new or existing) should be used and a baseline established.

- Support land managers, land users and advisers as well as other relevant actors in the value chain, to co-implement the solutions, by providing training, capacity building, knowledge exchange (e.g. sharing best practices, demonstration activities, cross-visits).

- Identify initiatives that are exemplary in their performance on soil health improvement and can act as places for demonstration of solutions (similar to the Mission Soil lighthouse concept) to efficiently disseminate knowledge and accelerate the adoption, scale up and transferability of solutions and increase the impact on the ground.

- Establish a toolbox to support the adaption and replication of the participatory initiatives to solution co-development and co-implementation in small-scale environments.

- Establish an inclusive exchange mechanism that facilitates rapid peer-to-peer learning among the established initiativesand catalytic interventions that are affordable and possible to replicate by others. The mechanism should operate in at least 5 to 6 countries in each region (Africa or LAC) and be designed in a way that allows in the future expansion of its geographical scope and becomes self-sustainable.

- Ensure long-term sustainability and continuity, impact and ambition of the established mechanism beyond the Horizon Europe funding, including attracting other funding and identifying possible business models and actions involving local authorities, social economy entities and social enterprises business communities, SMEs, investors, entrepreneurs and philanthropic organisations.

Proposals should include expertise in human centred design, capacity to operate at regional level and deep understanding of the different environmental, socio-economic and cultural contexts as well as existing soil health needs and management practices in Africa or LAC. An effective contribution of social sciences and humanities (SSH) disciplines is essential to implement strong participatory initiatives, foster social innovation and enhance social, cultural and behavioural change.

Proposals must provide financial support to third-party consortia from Africa or LAC including, for example, research organisations, land-managers, start-ups, SMEs, civil society organisations and/or other multidisciplinary actors, as the mean to set up at least 12 participatory initiatives in real-life sites and only for that purpose. The selection criteria for the third parties should consider: their ability to advise on or contribute to innovative, inclusive, agile research and implementation approaches; their expertise in human centred design; their capacity to operate at regional level; and, their deep understanding of the context and existing soil health needs as well as management practices in Africa or LAC. Proposals should include a dedicated task, appropriate resources and a plan on how they will build on the results of and/or collaborate with related projects funded by philanthropic entities and other relevant actions under Horizon Europe (e.g. Soils4Africa, or the project to be funded under topic 'HORIZON-MISS-2024-SOIL-01-09: Assessment of Soil Health in Africa').

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 the data produced in the context of this topic is FAIR[287] and that relevant data, maps and information can potentially be available publicly through the EUSO.

HORIZON-MISS-2025-05-SOIL-10: Support to the operation and further development of soil-health science-policy interfaces and national soil-health hubs

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.
Type of Action	Coordination and Support Actions

Expected Outcome: Activities under this topic contribute to strengthening science-based policies for soil health across different levels of governance, in particular the implementation of the proposal for a EU Directive on Soil Monitoring and Resilience (Soil Monitoring Law), and to improved anchoring of R&I activities of the EU Mission "A Soil Deal for Europe" (Mission Soil) at national and regional level.

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

- EU and (sub-)national decision-makers across different sectors have easy and timely access to, and make increasing use of, up-to-date policy-relevant scientific knowledge –

[287] Findable, Accessible, Interoperable and Reusable

presented in a way that suits their purposes – on drivers of soil degradation, the state of soil health, and sustainable soil management practices.

- Across all EU Member States and interested Horizon Europe Associated Countries, national- and regional-level structures for coordinating soil-health research and policy are strengthened and, where relevant, newly established.

Scope: A range of programmes, projects and initiatives have been working at international, EU, and national level to increase and systematise available scientific knowledge on soil health and drivers of soil degradation, and to facilitate the uptake of this knowledge in policies for more sustainable soil management practices. This includes efforts, including under the Mission Soil, to create dedicated structures at national level to facilitate the sharing and transfer of knowledge between science on the one hand, and the designing and implementation of policies on the other. However, linkages between different science-policy interfaces in the European and international landscape remain relatively weak, and their effectiveness is subject to debate, while some do not appear to be fully operational.

There is now a need to systematically take stock and assess the strengths and weaknesses of existing science-policy interfaces in a comparative perspective and, where relevant, to improve their results, outcomes and impacts. Their effectiveness should be evaluated across different contexts, and coordinated action should be taken to make them fully operational, ensure coverage of a broader range of land uses, and address all relevant levels of governance. This should serve also the transposition and implementation of the forthcoming Soil Monitoring Law, for which national authorities and soil stakeholders need to consider the latest scientific and policy developments and have opportunities to exchange with each other and with the scientific community.

Proposed activities should:

- Take stock of past, present and planned soil-health related science-policy mechanisms and activities across different policy areas (covering at least agriculture and forestry, environment including biodiversity, climate, and spatial planning) and governance levels, analyse their purposes and the tools employed, and assess performance (at least in terms of effectiveness, efficiency and long-term sustainability). This should include case studies of real-life science-policy interactions around specific challenges of monitoring and improving soil health, and identification of criteria for – and likely conditions of – success or failure of such interactions.

- Facilitate better connections among existing mechanisms and structures for science-policy dialogue on soil health across sectors and governance levels, so that overlaps and gaps in substantive and territorial coverage are reduced, and overall effectiveness is increased.

- Identify and evaluate options for setting up and operating a functioning science-policy interface for soil health across the EU and its Member States and interested Horizon Europe Associated Countries. Options should include the medium-term establishment of

a dedicated science service as a central entry point for support requests from EU and national administrations.

- Develop one or more tools for managing (collecting, organising, synthesising and presenting) existing and emerging soil-health knowledge, in particular (but not exclusively) from EU-funded R&I projects, with a view to integrating the tool(s) into a future EU-wide science-policy interface.

- Taking into account different biogeographic, administrative and cultural contexts and building on relevant existing structures, support the creation or further development and improved operation of national soil-health hubs in all Member States and interested Associated Countries, and coordinate the creation of a functioning Europe-wide network. The hubs should involve all relevant parts of public administrations, involve other stakeholders as appropriate, liaise with relevant national, regional and EU authorities, and address the full range of land uses impacting on soil health. Among other functions, the hubs and their network should be able to function as, or in close cooperation with, science-policy interfaces and provide regular opportunities for the further development of research agendas in line with evolving policy needs.

Proposals should build on the work of previous and ongoing projects and initiatives addressing horizontal aspects of science-policy interaction and knowledge management in the Mission Soil and other parts of Horizon Europe and other EU funded programmes.[288] They should include a dedicated task and allocate resources for close coordination with those still ongoing and with other Horizon Europe projects addressing (sub-)national involvement in different missions horizontally, as well as contribute to relevant cluster activities.

Proposals 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), and with relevant international institutions and initiatives[289].

HORIZON-MISS-2025-05-SOIL-11: Citizen engagement for sustainable land management through local and regional authorities

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.

[288] Including the project SoilWise; also relevant is the Mission Soil Platform.

[289] International institutions whose relevance should be explored include the Global Soil Partnership's Intergovernmental Technical Panel on Soils and the Science-Policy Interface of the UN Convention to Combat Desertification (UNCCD).

Type of Action	Coordination and Support Actions
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries are expected to 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 75 000. It is expected that minimum 60% and maximum 75% of the EU funding will be allocated to this purpose.

Expected Outcome: Activities under this topic contribute to the implementation of the Mission 'A Soil Deal for Europe', in particular to its specific objective 8 "improve soil literacy in society", and to strengthening the capacities of local and regional authorities in line with the proposal for a Directive on Soil Monitoring and Resilience.

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

- Substantially increased awareness and understanding among citizens and local and regional policy makers of the value of soils, soil health challenges and drivers (both bio-physical and socio-economic dimensions) across Europe.
- An increased number of regions and municipalities across Europe have adopted Territorial Management Agreements[290] co-designed with citizens and stakeholders to foster sustainable land management practices.
- Local and regional authorities have improved access to capacity-building activities on how to implement solutions for the protection and restoration of soil health and enhance citizen engagement in sustainable land management.

Scope: Citizen engagement is one of the building blocks of the Mission Soil but despite the advances in recognising the importance of soil health and the momentum for soil in the political agenda, active participation in soil protection and restoration and understanding of soil health importance often remain limited among non-experts. Activities under this topic should involve local and regional authorities in the protection and restoration of soil health and establish participatory processes that take into account citizens' priorities. Local and regional participatory processes should result in Territorial Management Agreements[291] aimed at the protection and restoration of soil health, including for climate change mitigation and adaptation.

Proposed activities should:

- Engage citizens and stakeholders at the local and regional level for the protection and restoration of soil health.

[290] Territorial Management Agreements is the terminology used by the Horizon Europe project Healthy Municipal Soils (HuMuS). For consistency, proposals should use the same terminology.

[291] This is the terminology adopted by the HuMuS project, https://humus-project.eu/

- Provide training and technical support to public authorities to design and run inclusive and effective participatory processes at local and regional level that lead to the adoption of Territorial Management Agreements to foster sustainable land management and contribute to climate change adaptation and mitigation.

- Launch the implementation of at least 40 Territorial Management Agreements[292] and provide guidelines and resources to sustain and monitor their implementation in the long term.

- Organise capacity-building activities for representatives of local and regional authorities including training, peer-to-peer learning and knowledge-sharing activities to promote the adoption of solutions for the restoration of soil health at their level of governance.

Proposals should actively involve local and regional authorities as beneficiaries or through the use of financial support to third parties. If making use of financial support to third parties, the support should be provided in the form of grants following an open call of European dimension for local or regional authorities to run participatory processes to co-design with citizens Territorial Management Agreements and launch their implementation. The maximum amount to be granted to each third party is EUR 60 000.

Proposals should bring together expertise on environmental and soil sciences, as well as transdisciplinary expertise on spatial planning and social sciences and humanities (SSH), including gender studies, to design and organise successful capacity building activities and implement inclusive and effective participatory processes. The engagement of citizen and stakeholders should be representative of the local community and be inclusive. Thus, proposals must incorporate gender perspectives and give attention to the inclusion of people in vulnerable situations.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission "A Soil Deal for Europe", including engagement with the relevant cluster activities.

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 SoilWise.

HORIZON-MISS-2025-05-SOIL-12: Network on carbon farming and emissions reductions for agricultural and forest lands

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
Expected EU contribution per	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately.

[292] One Territorial Management Agreement per local or regional authority involved.

project	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 3.00 million.
Type of Action	Coordination and Support Actions
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). [293].

Expected Outcome: Activities under this topic contribute to the implementation of the Mission 'A Soil Deal for Europe', in particular specific objective 2 "conserve soil organic carbon stocks". Activities further support the design and implementation of soil health-improving innovative carbon farming practices in Europe, as intended by the implementation of the EU regulatory Carbon Removal Certification Framework (CRCF)[294] and the European Commission Communications on a recommended 2040 emissions reduction target and on sustainable carbon cycles. .

Project results should contribute to all of the following expected outcomes:

- Consolidated knowledge and descriptions of the state of the art on practices for carbon farming and for the reduction of emissions from agriculture, forestry and livestock, in support of, but not limited to, the implementation of the CRCF, are available for land managers, farmers and forest owners and the Commission's Expert Group on carbon removals.
- Enhanced uptake by land managers of carbon farming and practices for the reduction of -emissions (mentioned in the previous bullet) in Europe, and development of standards to support these practices.
- Increased capacities of land managers for measuring, monitoring and standardising carbon fluxes, in particular at landscape level, through a robust network for data collection and facilitated improvement of (new) data collection.

Scope: The success of carbon farming in Europe will be judged on the quantity and quality of the sequestration of carbon in plants and soils and the reduction of greenhouse gas (GHG)

[293] 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

[294] Press release: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_885.

emissions from agricultural soils, as well as on the benefits for sustainability objectives (notably biodiversity) of the activities leading to such carbon sequestration or emission reductions, in a context of increasing impacts from climate change. To upscale carbon farming successfully and to establish long-term business perspectives, it is essential to standardise the methodologies and rules for monitoring, reporting and verifying (MRV) the gains or losses in carbon sequestered. Currently, private schemes apply very different benchmarks and rules to the carbon credits placed on the voluntary markets. With a high degree of transparency, environmental integrity, and methodology standardisation, buyers should have more trust in the quality of the offered carbon farming credits, land managers should also be able to more easily estimate their potential revenues, and policy makers should be keener to allow the use of such credits to warrant compliance with the EU climate regulatory framework, including currently existing 2030 targets (Effort-Sharing Regulation, Regulation on land use, land use change and forestry - LULUCF) and the 2050 neutrality goal. Therefore, such a regulated framework should contribute to develop a successful market for carbon farming.

The provisional agreement on the CRCF was adopted by EU co-legislators in April 2024. Following the co-decision process, the scope of carbon farming was extended to cover the certification of emission reductions from the improved use of fertilisers, in addition to carbon removals and the reduction of carbon release. With the CRCF adopted, it is now a priority for the Commission to advance work on preparing (and also updating in the future) the specific high-quality carbon farming certification methodologies, such as from rewetting of drained peatlands or agroforestry, with the continued assistance of the Commission's Expert Group on carbon removals. As part of the legislative review of the CRCF in 2026, the Commission will also prepare a pilot methodology for the certification of practices that reduce emissions from livestock management.

The Expert Group is assisting the Commission in the preparation of policy initiatives and non-legislative proposals and covers all carbon removal topics (permanent storage, carbon farming and storage in products). To develop its work, the Expert Group needs the continuous support of a network of key stakeholders to collect and aggregate views on best practice for standards for carbon farming and emissions reductions and to synthesise the state-of-the-art on existing related certification methodologies. Currently, the CREDIBLE project (foreseen to end in June 2026) is building and coordinating this network, developing a platform for knowledge sharing, and establishing data collection networks. The network should remain in a key position to provide input for the discussions as well as to contribute to increased capacities for measuring, monitoring and standardising carbon fluxes, in particular at landscape level, through a robust network for data collection. There is also a need to accompany the implementation of the CRCF by enhancing the uptake of its methodologies and by getting feedback from the actors applying them on how to update these methodologies.

Proposed activities should:

- Coordinate the continuation and expansion of the existing network of key stakeholders drawn from European research facilities, systems developers, solution providers,

administrations, farm advisors and managers and others, involved in soils programmes linked to carbon sequestration and emission reductions, in particular at the landscape scale.

- Support the work of the Expert Group on carbon removals by providing concrete, operational and solution-oriented recommendations, based on best practice and identifying the actors (European/national/regional authorities, certification bodies, land managers, etc.) which should implement each specific recommendation.

- Continue developing a platform for networking, knowledge sharing, exchange of experiences, mutual learning, best practices and support to facilitate the development (design, implementation and evaluation) of result-based schemes for carbon farming and the reduction of emissions from agricultural soils and livestock.

- Underpin the expansion of data collection networks (such as carbon flux measurements stations, ground sampling campaigns, etc.), continuing to promote the practice of data sharing and standardisation, retrieval and aggregation of information.

- Identify gaps and opportunities at the landscape level in ecosystem monitoring and soil carbon flux mitigation practices, leveraging EU level geographically-explicit monitoring systems and solutions.

- Support and establish pathways to improve national GHG inventories with the data received from projects (e.g. carbon farming).

- Propose and adopt strategies to ensure that the above-mentioned activities are self-sustainable at the end of the project.

Proposals should cover **carbon removals and GHG emission reductions** (e.g. due to fertilisers) **in all relevant LULUCF categories**[295], including at least croplands and grasslands under various farming systems management / approaches (e.g. agroforestry, agroecology, organic farming), and forest land categories, regardless of their accountability in either the Agriculture or LULUCF sectors of the GHG inventories. Activities must contribute to support the knowledge base for addressing emissions from livestock through inter alia improved farm management and stocking densities. A systemic approach considering both removals and emission reductions by implementing whole-farm management approaches, including livestock, would be desirable. Proposals should aim to cover emissions reductions in the different nutrient and mass-flow chains (e.g. crop, feed, stable, biogas plant, fertilisers, root and crop residues, biogas, root uptake of nutrients, humus reproduction, etc.) as well as value creation chains (including processes, business options, carbon storage and multifunctional ecologic aspects).

[295] Article 2 of 2023 revision of EU Regulation (EU) 2018/841 of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF) in the 2030 climate and energy framework, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511.

A substantial part of the budget should be dedicated to co-creating with stakeholders the project's tools and services, enhancing communication, raising awareness and engaging with stakeholders, thereby ensuring co-ownership of the project's results and outputs and supporting the interest in, knowledge about and uptake of carbon farming.

Special attention should be given to the promotion and integration of existing databases and datasets, the application of digital technologies, and the combination of Earth observation techniques (drones, airborne, satellite based) with in-situ monitoring for (enhancing) the provision of robust, timely and accurate GHG removals/emissions' estimates.

Proposals must include dedicated tasks and appropriate resources for:

- Building on other relevant EU programmes, projects and initiatives (which will have finished at the start of the project) on carbon farming and soil carbon monitoring: e.g. CREDIBLE; MRV4SOC; EJP Soil- including the project Road4Schemes-; ClieNFarms; HOLISOILS; ORCASA; SEPLA and the work of the JRC within the Administrative Arrangement "Carbon Removal on Land"; relevant LIFE projects; relevant data from the Farm Sustainability Data Network (FSDN) initiative as well as from countries GHG inventories.

- Collaborating on measures and joint activities with other relevant projects and initiatives (or build on them, if they have finished by the start of the project): e.g. MARVIC; ESA World Soils; LILAS4SOILS[296]; HORIZON-MISS-2024-SOIL-01-07: Development of high spatial-resolution monitoring approaches and geographically-explicit registry for carbon farming; HORIZON-CL6-2024-CLIMATE-02-1: New knowledge and innovations for climate-smart farming - connecting research stations; HORIZON-CL6-2025-02-CLIMATE-04: Monitoring, reporting, verification and mitigation of non-CO2 greenhouse gas emissions and related air pollutants from agriculture; Climate Farm Demo; OrganicClimateNET; the Horizon Europe Partnership on Agroecology; relevant LIFE projects.

- Engaging with the relevant cluster activities and ultimately feeding into the Expert Group.

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 SoilWise.

HORIZON-MISS-2025-05-SOIL-13: Soil Salinity in Europe: Drivers, indicators, current levels and temporal changes

Call: Supporting the implementation of the Soil Deal for Europe Mission
Specific conditions

[296] At the time of writing this topic, there was no weblink to CORDIS.

Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 6.00 million.
Type of Action	Research and Innovation Actions
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). [297].

Expected Outcome: Activities under this topic will help progress towards the objectives and targets of the Mission 'A Soil Deal for Europe', in particular towards its target 4.6 'Halt and reduce secondary salinization'.

The successful projects are expected to contribute to all of the following outcomes:

- Improved indicators and access to knowledge and quantitative data on the current levels and impact of soil salinity in Europe.
- Enhanced understanding of the primary drivers and mechanisms of soil salinization across different pedo-climatic regions in Europe.
- Improved access to knowledge and quantitative data on temporal shifts in soil salinity levels over the past decades and to projections for future trends across Europe under varying scenarios.
- Accelerated uptake of integrated innovative and reproducible sustainable land management strategies to prevent, minimise and remediate soil salinization in Europe.

Scope: Excessive soil salinity is a significant environmental issue in Europe, negatively impacting soil fertility, plant growth, soil biodiversity, the soil microbiome, and overall ecosystem functioning. Climate change, coupled with increased evaporation and irrigation, is likely to exacerbate salinization, potentially leading to uncertain consequences for carbon storage and water cycling because of soil degradation induced by salinity. Salinity is one of the descriptors in the proposal for a Directive on Soil Monitoring and Resilience and is

[297] 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

recognized as one of the major drivers of soil degradation. The extent of soil salinization in Europe remains uncertain. Currently, there is no quantitative model capable of predicting future soil salinization in Europe under changing climatic conditions at the resolution necessary for local management action and policy development.

Proposed activities should:

- Investigate the relationship between soil salinity, vegetation, soil biodiversity and drought (climate conditions) across all relevant land use types, and in the specific case of agricultural lands also including the relationship between crop production, plant adaptation mechanisms and crop resilience.
- Develop a harmonised assessment of soil salinity in Europe. This should include integration of high-resolution remote sensing data (earth observation techniques) with quantification techniques to enhance spatial resolution and accuracy in soil salinity monitoring, harmonisation of laboratorial procedures and monitoring systems, and testing the feasibility of statistical methods to combine soil salinity data collected by different protocols.
- Assess the impact of saltwater intrusion on soil salinity and soil health in coastal regions to gauge vulnerability within climate change and rising sea levels.
- Identify hotspots of soil salinization and areas at risk across Europe to inform policy formulation, action planning, and sustainable land management strategies.
- Formulate innovative land management strategies that address both mitigation and adaptation to soil salinization, in co-creation with relevant stakeholders.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', including engagement with the relevant cluster activities.

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 SoilWise. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Reusable). Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures[298].

A Soil Deal for Europe: Other Actions

1. Mission Implementation platform[299]

[298] The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website https://ri-portfolio.esfri.eu/.

[299] **Mission Implementation platform**

The main tasks are to assist the EU Commission (in particular the Mission Secretariat in DG AGRI) in implementing the Mission Soil. This will include:

- Supporting the overall coordination of activities under the various building blocks of the Mission.
- Providing support and opportunities to Mission Soil projects to create synergies and collaborate on relevant topics (e.g. via clustering activities).
- Monitoring and assessing activities funded under the Mission Soil and other relevant activities in quantitative and qualitative terms, including their impacts, and tracking progress towards the achievement of the Mission's targets, objectives and overall goal.
- Enhancing communication, outreach, and engagement with citizens and stakeholders in Member States, Associated Countries, and globally through events, training and knowledge exchange, maintenance and update of the Mission Soil Platform website, and communication products.
- Providing financial advisory and technical assistance to the Mission Soil to leveraging and scaling private funding including philanthropy.

The contractor should ensure the continuity of activities developed under the service contract REA/2022/OP/0001 and its amendment.

This action supports the follow up to the July 2023 Communication on EU Missions assessment and utilizes the budget reserved from the EU Missions part of the HE work programme 2023.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 9.93 million from the 2025 budget[300]

2. 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 Agreement (SGA). This SGA will cover two years of the FPA (2026-2027). One single proposal should be submitted. The evaluation committee will be composed entirely by representatives of EU institutions.

The support structure under this SGA should continue to implement the action plan presented under the FPA while building on the needs and gaps identified by the first SGA (SOILL-Startup), which is currently running (2024-2025) and the European Commission.

[300] Of which EUR 9.93 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

Proposed activities should:

- Give continuity to SOILL-Startup activities in terms of tailored support to Mission Soil funded living labs and lighthouses (LL & LH), in the form of advice in their day-to-day operations (including on technical, networking and communication issues), capacity building, training and monitoring (including harmonization of approaches within and across LL). The SGA should also provide selected services to other LL & LH working on soil health issues, created by other projects or by other programmes. Finally, the SGA should expand its activities to support emerging soil health initiatives (including existing on the ground experiments), showing potential to develop in mature LL & LH.

- Facilitate the exchange of knowledge, data, findings and experiences within and across LL & LH (with a focus on, but not limited to, those funded under the Mission Soil) and with key stakeholders and other projects, where co-design, testing and evaluation of innovative soil management practices and technologies will take place. To this end, the SGA should continue identifying common areas of interest between funded LL & LH to engage them in concrete actions that create synergies and capitalise on the wealth of existing experiences and resources. This includes, amongst others, the organization of workshops, seminars, annual network 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, use of digital tools, integration of behavioural sciences in research and innovation). The participation in or collaboration with working groups or clusters created by the Mission Secretariat, other projects or by the Mission Soil Platform (MSP) should be foreseen. 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 the Mission's objectives and to discuss possibilities for scaling up activities beyond the living lab areas.

- Support LL & LH projects in establishing 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, the SGA should contribute to the systematic collection of soil health data and indicators from LL activities to ensure a continuous flow of high-quality information on local soil health conditions to support Member States in implementing the future Soil Monitoring Law. Likewise, the SGA will help identify, disseminate and implement sustainable soil management practices and solutions created, tested and demonstrated in LL & LH, so that these are widely known and can be accessed by potential users outside the living lab areas. The SGA 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 plan.

- Promote the creation of new LL & LH by providing potential applicants with information, guidelines, recommendations and dedicated services (such as a helpdesk, a capacity building, mentoring programme and matchmaking tools) on the Mission's living lab concept and its implementation as well as with ideas for collaboration. To reach a wide audience, the support structure should widely publicise its information, amongst others by organising targeted match-making events as a follow up to those carried out under the project NATI00NS. Due attention shall be given to ensuring a balanced thematic and geographic coverage of the growing network of LL & LH.

- Help funded LL & LH in developing strategies to sustain their activities beyond the lifetime of each project. This will include assisting living lab partners in the development of financial strategies and long-term management plans, as well as strengthening connections with local business communities, in particular SMEs, investors and other commercial stakeholders as well as social economy entities and social enterprises. To this end, assist also applicants to LL topics to explore new public or private funding schemes and financial instruments, involving, where relevant, finance providers such as financial institutions and investors.

- Apply the "quality standards" developed under SOILL-Startup for the validation of LL & LH depending on their level of development and advance towards an acknowledgment certification. This should support harmonisation and comparability of approaches across LL & LH working in different settings and on different themes. Conduct a specific assessment of activities in sites that can potentially develop into lighthouses. Assist LL & LH in their transition towards acknowledgment by the Mission Soil providing the corresponding certification.

- Continue monitoring and assessing the performance of the LL & LH in a systematic way and report the main achievements, experiences and issues encountered when working within a living lab approach. The periodicity of the quantitative reporting should be agreed with the Mission Secretariat. A detailed qualitative evaluation of the progress achieved by the funded living lab projects should be reported in a yearly basis. These reports should bring together and complement the information arising from monitoring activities performed by each of the funded living lab projects on their proposed solutions to the identified soil health challenges. Close cooperation with the MSP regarding the reporting and monitoring requirements is essential to feed into their overall monitoring of the Mission, as the SGA will be the main contact point for the MSP to obtain high quality information and data on the performance of the living lab projects.

- Maintain and further develop the web-portal initiated by SOILL-Startup and other tools and services for information, dissemination, exchange of experiences and outreach, integrating and further developing existing information and resources. Through the provision of a collaborative space for LL & LH partners, the web-portal should support the establishment of a dynamic and inclusive community of practice.

- Maintain and further develop an interactive map of LL & LH initiatives building on and integrating the maps set-up by the project PREPSOIL and by SOILL-Startup. The map will contain all three categories of LL & LH above-mentioned: 1) those LL & LH funded under dedicated topics of the Mission Soil; 2) other soil health LL & LH created under other projects or programmes that are aligned to the Mission Soil criteria; and 3) emerging and growing soil health initiatives (including existing on the ground experiments) showing potential to develop in mature LL & LH.

- Produce regular newsflashes and a 3-monthly electronic newsletter to support the evolving community of practice of LL. Communication and outreach should benefit LL & LH operating as part of the Mission Soil or outside, as well as a wide range of stakeholders and the wider public.

- Offer training activities and capacity building for soil managers, landowners, advisors and relevant authorities on sustainable soil management practices, as well as activities to support soil education and citizen engagement, in line with and in support of the objectives of the future Soil Monitoring Law.

- Activities performed by the SGA should support all emerging and established LL & LH, regardless of their geographical and thematic coverage.

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.

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 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 budget: EUR 4.00 million from the 2025 budget[301]

[301] Of which EUR 4.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

EU Missions' Joint Calls

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-06-CIT-CANCER-01: Increasing walking and cycling: to reap health benefits, emission reductions and integrate active mobility and micro-mobility devices, with smart technologies and infrastructure

Call: Joint Call between the Climate-Neutral and Smart Cities Mission and the Cancer Mission

Specific conditions

Expected EU contribution per project	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.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: At least five lead cities and five follower 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. At least half of the cities should be among the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities[302]. 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).
Technology Readiness Level	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B.
Legal and financial set-up of the Grant Agreements	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[303] 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. In grants awarded under this topic, eligible costs for major infrastructure

[302] 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 112 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.

[303] Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03*: *Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

[304] 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.

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

- Cities advance in **achieving their climate neutrality targets** and reducing greenhouse gas emissions from transport by at least 15%, by promoting and implementing walking and cycling and by incorporating walking, cycling and micro-mobility infrastructure and services (e.g. bicycles, e-bikes and e-scooters) in multimodal transport networks;
- **Increased modal share** of walking and cycling in follower cities, in particular increased number of daily trips on foot and by bike, by at least 30%;
- Increased **integration** of (e)bikes and -e-scooters (and other "intelligent" micromobility vehicles) through the **digital and green** road infrastructure by extending the work on Cooperative Intelligent Transport Systems (C-ITS) to them in order to increase their modal share as well as their safety;

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- As a feedback to EU research, health and transport policy, a comprehensive EU guidance on increasing (1) walking, (2) cycling, and (3) micro-mobility in cities is developed, including:

  concrete measures for improving the quality, safety, quantity, continuity and attractiveness of pedestrian/walking and cycling infrastructure;

  improved integration of walking, cycling and micro-mobility in transport models and traffic management urban systems/traffic light management at local/regional/national level;

  concrete measures for industry and city planners to use smart technologies to bring about healthy behavioural change for getting more people into active modes of transport;

  support and guidance for urban transport authorities to establish partnerships with the relevant local/regional/national health authorities to promote active mobility projects and solutions that demonstrate quantified health benefits for the city population. In particular through implementation research on cancer prevention by increasing physical activity and reducing obesity and how walking and cycling can improve symptoms and side effects of cancer patients.

The expected outcomes should be supported by clear indicators with baselines and quantified targets which are monitored for each city. The expected outcomes should take into account expected technological and policy developments.

Scope: Mobility and transport are key components in every citizen's life, especially in cities, regardless of their size and population density. However, transport is still a significant source of greenhouse gas emissions, air, noise, soil and water pollution. Congestion and scarcity of public space remain serious challenges to the efficiency of transport systems and reduce the liveability of affected areas at a considerable cost to society and the economy.

Active mobility modes, such as walking and cycling, represent a sustainable and healthy means of mobility, with considerable potential to support the decarbonisation of urban transport and help achieve the EU-wide target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990, and climate neutrality by 2050 in line with the European Climate Law[305].

According to the WHO, physical inactivity, overweight and obesity are linked to many types of cancer[306]: regular physical activity, maintaining both a healthy body weight and diet can reduce the risk. Similarly, air pollution has been linked to several malignancies[307], especially

[305] REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

[306] E.g. oesophagus, colorectal, breast, endometrial and kidney cancer. Excess body mass was responsible for 3.4% of cancers in 2012, including 110,000 cases of breast cancer per year.

lung cancer[308]: an increase in the uptake of cycling and walking is a promising, low-cost, and equitable route to more physical activity, thus reducing the risk of cancer. Engaging patients in physical activity during or after cancer treatment can assist in recovery, reduce the incidence of second cancers and other chronic diseases, and improve survival[309], thus improving their quality of life.

With the increase in numbers of active mobility users as well as the increasing use of micro-mobility devices[310], improvements towards high-quality infrastructure, effective planning and preparation are required. This includes the preparation of cycling and walking infrastructure network plans, raising standards in design guidance documents, linking cycling and walking with other modes of transport, in particular public transport, and improvements in how the transport system and traffic flows are managed.

While cars are becoming more (inter-)connected, more work is needed to test how to bring e-bikes, e-scooters and micro-mobility devices, into the design of "smart" infrastructure through the measures of digitalization and connectivity of vehicles and infrastructure in the intelligent transport systems. Connected mobility / Cooperative Intelligent Transport Systems (C-ITS) are being developed but other road users of (e-)bicycles and e-scooters are yet to be integrated. Although some European cities have already tested use cases of bicycles in intelligent transport systems sector[311], more efforts are needed to extend the work on C-ITS to them. Additional efforts should lead to increased safety via the digital road infrastructure and an increase in their modal share.

Proposals are therefore expected to address all of the following:

1) improve the quality, safety, quantity, accessibility, continuity and attractiveness of walking and cycling infrastructure by:

- Providing an updated state of the art of the uptake of walking and cycling policies, programmes and projects in urban, transport, research, and health strategies and plans as well as of their socio-economic, environmental and health benefits resulting from their demonstrated potential in emission reduction.

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307 Including lung cancer, urinary bladder cancer and acute leukaemia: the evidence is most abundant for lung cancer, for which several causal factors are well established (Samet JM, Cohen AJ (2006). Air pollution In Schottenfeld D, Fraumeni JF Jr, eds Cancer Epidemiology and Prevention, 3rd ed New York: Oxford University Press, pp 355-381)

308 Recent studies published in the AACR journal Cancer Epidemiology, Biomarkers and Prevention have demonstrated that fine particulate matter in the air may increase cancer-specific mortality in adult patients with early breast cancer and in paediatric and young adult patients with various cancers. Globally about 300,000 lung cancer deaths in 2019 were attributed to exposure to fine particulate matter, known as PM2.5 contained in air pollution.

309 McTiernan A, Friedenreich CM, Katzmarzyk PT, Powell KE, Macko R, Buchner D, Pescatello LS, Bloodgood B, Tennant B, Vaux-Bjerke A (2019) Physical activity in cancer prevention and survival: a systematic review. Med Sci Sports Exerc 51:1252–1261

310 Micro-mobility refers in this context to a growing range of small, lightweight vehicles options operating at speeds typically below 25km/h and mostly used for trips up to 10km. Micro-mobility vehicles can be personally owned or shared; electric or manual

311 MegaBITS MegaBITS | Interreg North Sea; Final Remarks on the BITS Project, Interreg VB North Sea Region Programme

- Preparing cycling and walking infrastructure network plans which foster multimodality by linking cycling and walking with other modes of transport, in particular public transport, and by improving network and traffic flow management.

- Develop case studies and identify best practices particularly focused on quality, safety, quantity, accessibility, continuity and attractiveness of walking/pedestrian and cycling infrastructure.

2) improve integration and modal share of active mobility:

- Developing a case study to identify how walking and cycling can help to improve symptoms and quality of life of cancer patients.

- Looking at the integration of walking and cycling policies and projects in urban development, transport-research and health strategies and plans through a comparative analysis across at least 10 EU cities, selected by taking into account geographical balance, size and population as well as different levels in the uptake of active mobility.

- Demonstrating in new and/or existing living labs innovative solutions to increase the modal share of active mobility, including through testing tactical urbanism measures in real-life urban spaces.

- Test behavioural change regarding the uptake of walking and cycling among different populations through implementation research. Identify and address specific bottlenecks and barriers that prevent the uptake of behavioural change.

- Fostering the exchange of knowledge, experience and best practices about the implementation and upscale of innovative solutions for walking and cycling that could be replicated and upscaled among cities.

- Supporting the development of local, regional and national active mobility policies, and their implementation across cities participating in the action, leading at least to a 30% increase in the modal share of walking and cycling within follower cities and thus contributing to the implementation of related EU policies and in particular of the European Declaration on Cycling[312].

3) use smart technologies and integration in traffic management systems/traffic light management at local/regional/national level, including in the new "smart" infrastructure:

- Exploring conditions and infrastructure requirements for the integration of e-bikes and micro-mobility devices in traffic management systems/traffic light management.

- Identifying and testing use cases to extend connected vehicles technology (C-ITS) to cycling, micro-mobility, bike sharing etc. to enhance the contribution of these transport modes to a sustainable urban mobility system.

[312] EUROPEAN DECLARATION ON CYCLING (C/2024/2377)

- Exploring conditions for a wider uptake of smart technologies in the cycling/micromobility sector taking into account the latest legislative developments[313] and building on results from previous European R&I projects[314].

4) coordination/exchange/capacity building for increasing the uptake of active mobility by:

- Supporting further coordination, exchange of experience and best practices, including training and capacity building activities, as well as co-creation and citizens engagement activities, taking into account the different levels of experience and development of walking and cycling strategies across Europe.

- Involve a variety of actors, including e.g. local/regional/national transport, research and health authorities, cancer charities, academia, public transport authorities and operators, urban mobility practitioners, shared mobility service providers, citizen associations, stakeholder organisations, and industry associations and representatives.

The topic invites proposals from consortia including at least five cities from different Member States and/or Associated Countries, together with at least five follower cities, reflecting a sound geographical balance, where the responsible local authorities and other relevant stakeholders join forces to test and implement packages of technological and non-technological innovations and policy-based measures.

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.

Projects selected through this topic will contribute to the implementation of EU policies and strategies fostering sustainable urban mobility such as the European Green Deal[315], Sustainable and Smart Mobility Strategy[316], New Urban Mobility Framework[317], Recommendation on national SUMP support programme[318] and in particular active mobility, including the EU Declaration on Cycling[319], as well as contributing to the implementation of the Mission on Cancer[320] and Europe's Beating Cancer Plan[321] in particular promoting active mobility as effective mean of cancer and obesity prevention and to the implementation of the Zero Pollution Action Plan[322], its targets for 2030 and the relevant Flagship Initiatives, in

313 E.g. revised Delegated Regulation on EU-wide multimodal travel information service (MMTIS: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_6112); ongoing work on building the European Mobility Data Space (Passenger Mobility Package - European Commission (europa.eu)) and the revised ITS Directive (Directive - EU - 2023/2661 - EN - EUR-Lex (europa.eu))

314 E.g. BITS – Bicycle and ITS: BITS, Interreg VB North Sea Region Programme

315 The European Green Deal, COM(2019) 640 final

316 Sustainable and Smart Mobility Strategy – putting European transport on track for the Future, COM(2020) 789 final

317 The New EU Urban Mobility Framework, COM(2021) 811 final

318 COMMISSION RECOMMENDATION (EU) 2023/550 of 8 March 2023 on National Support Programmes for Sustainable Urban Mobility Planning (notified under document C(2023) 1524)

319 EUROPEAN DECLARATION ON CYCLING (C/2024/2377)

320 470f388c-1b44-43a1-87f5-cf9119ee0251_en (europa.eu)

321 Europe's Beating Cancer Plan, COM(2021) 44 final

particular the reduction by more than 55% the health impacts (premature deaths) of air pollution and by 30% the share of people chronically disturbed by transport noise, with numerous co-benefits in other areas.

Proposals should plan for an active collaboration amongst the projects selected under this topic - for dissemination, evaluation and coordination - facilitated by and within the CIVITAS[323] initiative through the signature of a Memorandum of Understanding. Proposals should ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work-plan. Detailed description of the specific activities and common actions that will be undertaken is not required at proposal stage and can be further defined during the grant agreement phase. Collaboration with the Mission Platform (HORIZON-MISS-2021-CIT-02-03) is essential and should take place through the CIVITAS initiative. The latter should establish, through a collaboration agreement, clear links with the Mission portfolio for synergies and complementarities. The Commission will facilitate Mission-specific coordination through future actions, notably fostering exchanges with other proposals. Hence, successful applicants will be asked to join the 'Prevention' cluster for the Mission on Cancer, established in 2022[324]. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate. Collaboration with the Driving Urban Transitions (DUT) partnership is recommended.

Proposals should take stock of existing work developed in relevant EU and/or national projects, build on the results of existing studies[325]. In order to ensure complementarity in particular on road safety related aspects, projects awarded under this topic will be invited to liaise and collaborate with the projects that will be selected under topic Horizon-2025-D6-12 "Safety of Cyclists, Pedestrians and Users of other Micro-mobility Devices".

322 Pathway to a Healthy Planet for All, EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil', COM(2021) 400 final

323 https://civitas.eu/

324 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.

325 E.g. results from projects funded under the calls: MG-4.1-2017; LC-MG-1-3-2018; MG-7-2-2017; MG-5.3-2014 as well results from the study supported through the call for tender "THE DEVELOPMENT OF CROSS-BORDER CYCLING LANE INFRASTRUCTURE - EC-MOVE/2024/OP/0029"

Other Actions [326]

Public procurements

1. EU Missions' Portfolio Management Tool

The objective is to create the whole EU Missions portfolio approach. It includes: mapping existing programmes, instruments and schemes at EU and national levels and collecting data from the Member States and Associated Countries; structuring the dataset, identifying keywords and visualising results. In addition, maintaining the portfolio management tool.

The action is expected to develop and provide a method and plan detailing how EU Missions portfolio will be operated, kept up-to-date and adapted to emerging needs. It is expected to structure the dataset using AI or/and LLMs; identify and develop a set of keywords through AI and manual processes; set up database to centralise, store, process and make publicly available in a user-friendly and effective way the portfolio tool. The action is expected to support multistakeholder collaboration.

It is expected to ensure that the portfolio tool developed uses European Commission's IT and complies with the Europa Component Library, the EU Missions visual identity and the Commission's accessibility and usability rules. The action is expected also to ensure that the Commission can access the back office of the system and that the latter can be transferred to another provider or the Commission at the end of the project.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q4 2025

Indicative budget: EUR 5.00 million from the 2025 budget[327]

2. Strengthen EU Missions as a policy instrument

The objective of this action is to ensure the follow up to the July 2023 Communication on EU Missions assessment[328]. It contributes to addressing the challenges still faced by EU Missions in the following areas identified in the exercise, particularly in improving EU Missions' monitoring and governance. Additionally, it focuses on raising awareness and enhancing engagement among citizens and stakeholders in the EU Missions.

Action will include:

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326 The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

327 Of which EUR 5.00 million from the 'Climate, Energy and Mobility' budget.

328 1] COM(2023) 457 final and SWD(2023) 260 final

- Strengthening the monitoring of all EU Missions, including by helping with the collection and analysis of data for cross-missions indicators as well as reporting on, communicating and disseminating results;
- Developing a dedicated joint portal for all EU Missions that would provide the public with a single-entry point to access key elements for each Mission in a harmonised format;
- Further exploiting the Horizon Results Platform and results from other EU programmes for EU Missions, including by providing advisory services that would help connecting results owners to missions' actors;
- Developing series of communication and dissemination activities to inform citizens and stakeholders on the activities of the EU Missions;
- Organising interactive in person and online events to engage citizens in the development of Missions' initiatives in the Member States and Associated countries.

This action supports the follow up to the July 2023 Communication on EU Missions assessment[329] and utilizes the budget reserved from the EU Missions part of the HE work programme 2023.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3 2025

Indicative budget: EUR 1.00 million from the 2025 budget[330]

Indirectly managed actions

1. Strengthen evidence-informed policy making for mission-oriented innovation

Expected outcomes:

The action would be expected to provide:

- Mission-oriented innovation policies' theory and policy recommendations;
- Support to the EU Missions implementation;
- Missions Community of Practice.

Expected impact:

[329] 1] COM(2023) 457 final and SWD(2023) 260 final

[330] Of which EUR 1.00 million from the 'Climate, Energy and Mobility' budget.

- Evidence-informed policy for EU Missions and potential future mission-oriented policy initiatives;
- Stronger eco-system for sustained mission performance.

Scope:

Public policy should be equipped with a sound system of evidence collection and dissemination, which is the basis of continuous learning, improvement and ultimately evidence-informed policy making. As EU Missions are focused mainly on the implementation and delivery against their objectives, a feedback loop providing the latest evidence and state of the art on the theories and practices is needed to support these new instruments.

This includes:

- Providing regular reports on mission-oriented innovation policies' theory and good practices,
- Supporting the European Commission in indicator development, data collection and analysis, notably on evolutions in policies and relevant measures of progress and impact,
- Helping to develop new methodologies for pooling, processing and analysing the large amounts of information that are at the basis of portfolio management and link to monitoring,
- Building a Community of Practice (including mutual learning, workshops, forums and skills development) around mission-oriented innovation,
- Providing policy recommendations for EU Missions and potential future mission-oriented policy initiatives.

The Commission will cooperate with the OECD to set up this system to underpin evidence-informed policy making. The OECD has unique access to countries where missions have been developed and expertise in the mission-oriented innovation policies. The proposed action would build on the recently completed study[331].

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: Q3 2025-Q4 2029

Indicative budget: EUR 4.00 million from the 2025 budget[332]

Other budget implementation instruments

[331] European Commission Decision C(2022)2975 of 10 May 2022, OECD Benchmarking Study on Missions Implementation, Horizon Europe Work Programme 2021-2022, 12. Missions

[332] Of which EUR 4.00 million from the 'Climate, Energy and Mobility' budget.

1. Commission expert groups: Mission Boards

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')[333].

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 work[334].

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: Q3 2025

Indicative budget: EUR 1.50 million from the 2025 budget[335]

2. Use of individual experts: Mission Board Chairs

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

[333] C(2016) 3301
[334] C(2016) 3301
[335] Of which EUR 1.50 million from the 'Climate, Energy and Mobility' budget.

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: Q3 2025

Indicative budget: EUR 0.12 million from the 2025 budget[336]

[336] Of which EUR 0.12 million from the 'Climate, Energy and Mobility' budget.

Budget[337] [338]

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-MISS-2025-01		113.40
	from 01.020250	*113.40*
HORIZON-MISS-2025-02		116.00
	from 01.020210	*116.00*
HORIZON-MISS-2025-03		118.80
	from 01.020260	*118.80*
HORIZON-MISS-2025-04		78.00
	from 01.020240	*12.00*
	from 01.020250	*60.00*
	from 01.020260	*6.00*
HORIZON-MISS-2025-05		120.00
	from 01.020260	*120.00*
HORIZON-MISS-2025-06		12.00
	from 01.020210	*2.00*
	from 01.020250	*10.00*

[337] 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 2025.

[338] The contribution from each Cluster to the EU Missions for the year 2025 is the following: EUR 129 139 816 for Cluster 1, EUR 16 801 312 for Cluster 2, EUR 11 513 623 for Cluster 3, EUR 100 769 168 for Cluster 4, EUR 239 203 416 for Cluster 5 and EUR 153 385 728 for Cluster 6.

Other actions		
Public procurement		See footnote[339]
	from 01.020210	*3.84*
	from 01.020250	*12.14*
	from 01.020260	*16.47*
Provision of technical/scientific services by the Joint Research Centre		See footnote[340]
	from 01.020250	*0.50*
Indirectly managed action		See footnote[341]
	from 01.020250	*22.40*
	from 01.020260	*0.15*
Specific grant agreement		See footnote[342]
	from 01.020250	*30.64*
	from 01.020260	*4.00*
Expert contract action		See footnote[343]
	from	*1.62*

339 To which EUR 16.47 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 3.84 million from the 'Health' budget and EUR 12.14 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 32.46 million for these actions.

340 To which EUR 0.50 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 0.50 million for these actions.

341 To which EUR 0.15 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 22.40 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 22.55 million for these actions.

342 To which EUR 4.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 30.64 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 34.64 million for these actions.

343 To which EUR 1.62 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 1.62 million for these actions.

	01.020250	
Estimated total budget		649.97