



EUROPEAN UNION



EU MISSIONS

SOIL DEAL FOR EUROPE

100 living labs and lighthouses to lead the transition towards healthy soils by 2030

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DG Agriculture and Rural Development - European Commission



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#EUmissions #HorizonEU #MissionSoil



Why a mission on soil?



- Soils **support ecosystem services and provide vital functions:**
 - producing nutritious and safe food
 - hosting biodiversity
 - purifying and regulating water, thus providing protection from droughts and floods
 - cycling nutrients
 - storing and cycling carbon, supporting climate mitigation and adaptation
 - supporting human activities, landscapes and cultural heritage
- Soil is a finite resource, meaning its loss and degradation is not recoverable within a human timespan.
- Soils are threatened: **60-70% of soils in Europe are considered to be unhealthy** due to current management practices, pollution, urbanisation and the effects of climate change.



We need to act now

Our soils are threatened due to current management practices, pollution, urbanization, effects of climate change, etc.



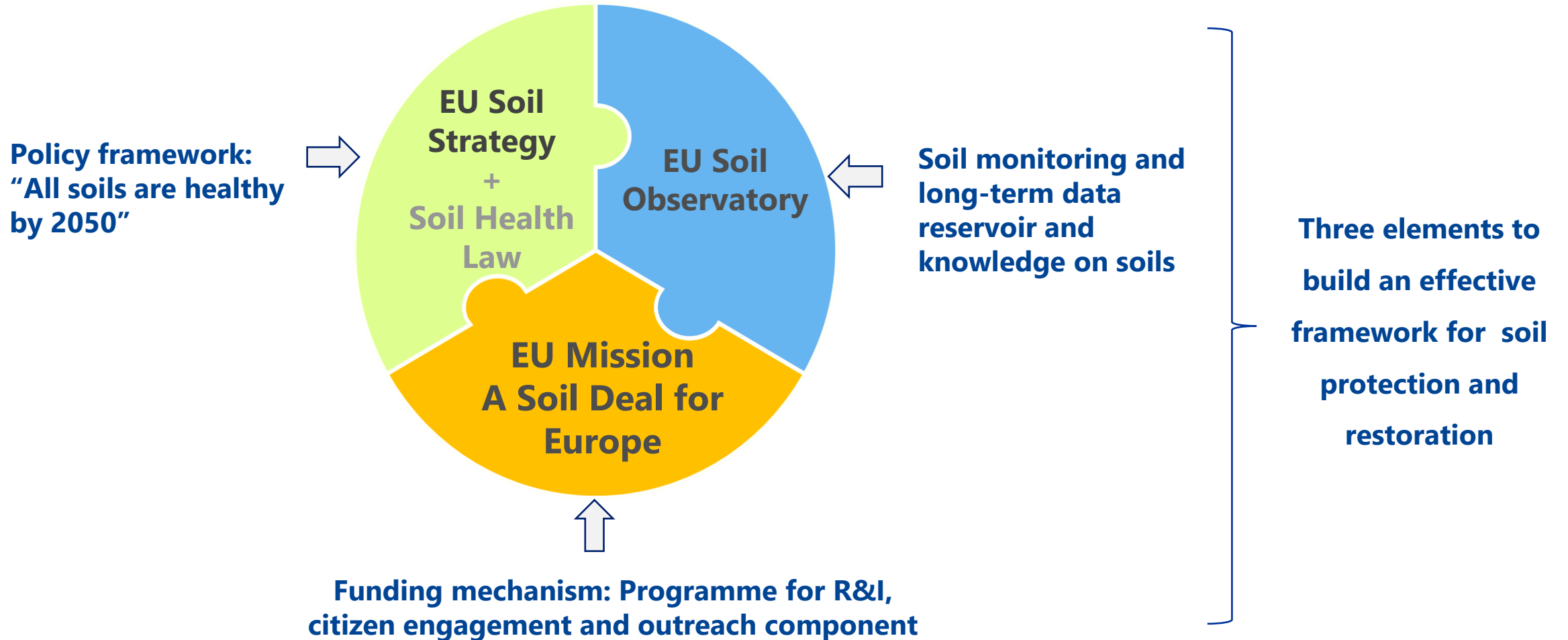
At the EU level, the Mission supports a number of **Green Deal** strategies **as well as the SDGs**

- Farm to Fork strategy
- EU Biodiversity Strategy for 2030
- Climate Adaptation Strategy
- Zero Pollution Action Plan
- Sustainable Carbon Cycles
- Forest Strategy
- Long-term Vision for Rural Areas
- Organic Action Plan
- Soil strategy





European pathway to healthy soils





Goal of the Mission :

100 living labs and lighthouses to lead the transition towards healthy soils by 2030

Specific objectives:

1. Reduce **desertification**

5. Prevent **erosion**

2. Conserve **soil organic carbon stocks**

6. Improve soil structure to enhance **soil biodiversity**

3. Stop **soil sealing** and increase re-use of **urban soils**

7. Reduce the **EU global footprint on soils**

4. Reduce **soil pollution** and enhance **restoration**

8. Improve **soil literacy** in society

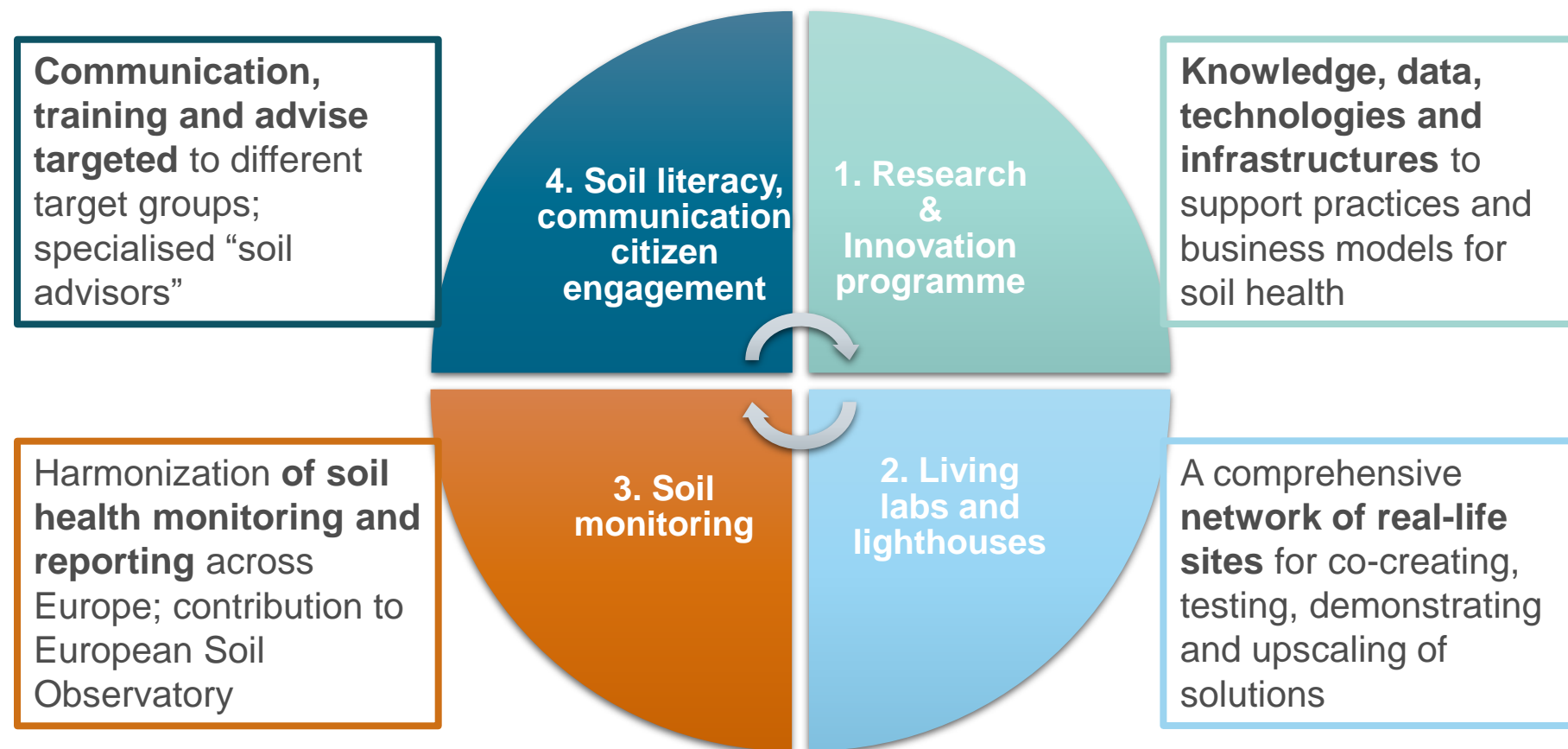


Each specific objective is backed by **one or more quantified targets** and **measurable indicators**.
Objectives apply to **all types of land use**.



How will the Mission be implemented?

Activities under the **four building blocks** to address **soil health** and the **drivers of soil health**



Co-implementation of mission by:
researchers, land managers, regions, businesses, policy makers, citizens and international partners





The Soil Mission living labs and lighthouses

Living labs are a core element of the mission

- They are **real-life sites** in **rural or urban** areas in which people from **various sectors and backgrounds** experiment and test solutions in a **co-creative** manner.
- Each living lab contains a **group of sites and partners** working together at **regional or sub-regional level**.
- Specific **criteria** for LL have been developed under the mission (*section D of implementation plan**) to ensure common approach and comparability of data and experiences.

Lighthouses are individual sites of exemplary performance

- They are places for **showcasing good practices, training** and **communicating**.
- They help with the adoption of sustainable practices by **inspiring land users**

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



Living Labs - Selection Criteria

- Specific criteria for living labs have been developed under the Soil Mission.
- Process for selecting lighthouses will be clarified as work on living labs develops and will be further defined by the Support Structure

Type of Criteria	Description
AIMS	<ul style="list-style-type: none"> • Innovation and co-creation. • Contributing to societal challenges, sustainability, and resilience. • Improving soil health and related ecosystem services, thereby achieving the Soil Mission's objectives.
ACTIVITIES	<ul style="list-style-type: none"> • Co-design/co-development/co-creation of innovations improving soil health. • Measurement/monitoring/evaluation of impact of innovative practices/approaches on soil health and related ecosystem services • Evaluation of socio-economic impacts and behavioral drivers and lock-ins related to the adoption of the innovations by soil managers. • Networking and knowledge exchange. • Demonstration (in particular for lighthouses).
PARTICIPANTS	<ul style="list-style-type: none"> • Public-private-people partnership involving if possible 4 groups: science, policy, practice, citizens. • Real soil managers (farmers, advisors, foresters, city greens managers, allotment holder, etc.) to be at the center of the innovation process. • Other stakeholders: associations and organizations with an interest in soil health, local or regional government, scientists from a variety of fields outside soils (natural sciences, social and behavioral sciences). The list of users may depend on the specificities of the places and challenges.
CONTEXT	<ul style="list-style-type: none"> • Transdisciplinary (incl. Social Sciences and Humanities) and participatory approach. • Multi-method and multi dimensions (technical, economic, social) approach. • Place-based approach and real-life context = real farms/forest or urban/industrial sites. • Long-term set-up. • Robust scientific set-up for ecosystem assessment. • Openness, communication and dissemination and connection with networks.

*Link: [Soil Mission Implementation Plan](#)



LL - A gradual development of the network

Phase 1 (2021-2024)

Preparatory actions in WP21:

Mapping LL and soil needs & knowledge sharing.

Engagement sessions & other capacity building.

LL Support Structure in WP22

FPA for a structure to cater for the needs of the emerging living labs.

Creation of Living Labs in WP23:

Launch of 1st call for establishing transnational clusters of soil health LL.

Phase 2 (2025-2026)

Expansion of LL:

Launch of successive calls for expanding the network of LL

→ wide coverage of:

- Geographies
- Themes (Mission's objectives)
- Land uses (agricultural, forest, urban, industrial).

Phase 3 (2027 onwards)

Scaling up of LL:

Launch of last calls for setting LL.

(measures to facilitate sustainability of the LL beyond the Mission timeframe)

PREPSOIL: preparing the ground for the deployment of living labs.
NATI00NS: targeting the engagement with regional and local authorities



Soil literacy, communication and engagement

- **Foster soil education** across society to bring soils closer to citizens' values.
- **Engage and activate regions and municipalities** to design their own strategies and actions for the protection of soil
- **Engage with the private sector and consumers** to embed soil health in business practices
- Strengthen soil health advice and **improve access to training for practitioners** in line with AKIS Agricultural Knowledge Innovation Systems
- Create **citizen-led soil stewardship** and **citizen science**

Examples:



200+ co-creation and engagement events since September 2019



Social media campaigns, 2 campaigns #EIPAgriSoil, new one launched in 2022



Several articles, press releases, newsletters, 4 videos, 2 factsheets



2 Podcast episodes



1 Soil health results pack



Interactive games for kids and adults, including composting training



Survey sent to **7000+** contacts across Europe and 2500+ contributions received



[Mission Soil Panorama](#) - European Research and Innovation Exhibition 2022

#MissionSoil: best practices to keep our soils healthy

→ [composting](#) & [desertification](#)

Presentation Work Programme 2023 Soil Mission calls





Overview of Work Programme 2023 topics

	Topics	ToA; budget
2023-SOIL-01-01	Discovering the subsoil	RIA; 12 m€ (2)
2023-SOIL-01-02	Soil pollution processes – modelling and inclusion in advanced digital decision-support tools	RIA; 14 m€ (2)
2023-SOIL-01-03	Onsite digital technologies to monitor nutrients and chemical or biological stressors in soil and plants with relevance for food safety and nutrition	IA; 12 m€ (2)
2023-SOIL-01-04	Innovations to prevent and combat desertification	IA; 14 m€ (2)
2023-SOIL-01-05	Soil-friendly practices in horticulture , including alternative growing media	IA; 13 m€ (2)
2023-SOIL-01-06	Soils in spatial planning	RIA; 7 m€ (1)
2023-SOIL-01-07	Back to earth: bringing communities and citizens closer to soil	CSA; 6 m€ (1)
2023-SOIL-01-08	Co-creating solutions for soil health in Living Labs	RIA; 36 m€ (3)
2023-SOIL-01-09	Carbon farming in living labs	RIA; 12 m€ (1)
<i>Other Actions</i>	<i>SGA: Specific Grant Agreement for a Living Lab Support Structure</i>	SGA; 3.2 m€ (1)



Joint topics

	Topic	Instrument	Budget	No of projects	Budget per project
O/C/S	Mission Climate adaptation, Mission Ocean & waters and Mission Soil Deal for Europe – Joint demonstration of an integrated approach to increasing landscape water retention capacity at regional scale	IA	15	1	15
O/S	Mission Ocean and Waters and Mission A Soil Deal for Europe – Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin	IA	16	2	8

- **17 Jan 2023 : Opening WP 2023 calls**
- **20 Sep 2023 : Application deadline**

Details WP2023 Soil Mission topics (Living Labs & Joint Topics)



HORIZON-MISS-2023-SOIL-01-08:

Co-creating solutions for soil health in Living Labs



POLICY CONTEXT

- **European Green Deal and several strategies**, such as those related to soil, food and nutrition security, climate, biodiversity, environment and rural areas:
 - Soil strategy
 - Farm to Fork strategy
 - EU Biodiversity Strategy for 2030
 - Climate Adaptation Strategy
 - Zero Pollution Action Plan
 - Long-term Vision for Rural Areas
 - Forest Strategy
 - Organic Action Plan
- **Soil Deal Mission goal** of setting up 100 living labs to lead the transition to healthy soils by 2030.
- **Soil Deal Mission objectives**, except number 2
- **Sustainable Development Goals**



EXPECTED OUTCOMES

- **Living labs** (LL) across Europe are **fully operational** and have established themselves as **places for co-creation and testing of solutions for soil health in rural and urban areas**;
- Increased capacities for **participatory, interdisciplinary and transdisciplinary** R&I approaches;
- Practice oriented **knowledge and tools** are **more easily available** to land managers and **contribute to an enhanced uptake of solutions** for soil health and related ecosystem services.
- **Strengthened collaborations** between actors across territories and sectors;
- **Policy makers** in the EU and Associated Countries are more **aware** of local needs with regard to soil health and can use this knowledge to design more effective policies.

HORIZON-MISS-2023-SOIL-01-08



SCOPE

- Set up **four to five LL** to work together on thematically **related soil health challenges**, addressing **the same or several land use types**;
- Establish a detailed **work plan** with the activities to be undertaken ensuring the **co-design, co-development, and co-implementation of solutions**;
- Carry out **participatory and transdisciplinary R&I** in LL, taking into account the relevant **drivers and pressures** as well as the **scaling up** and the **transferability of solutions**;
- **Establish** for each LL **a baseline** for the selected soil health challenge(s), in order to allow **for an accurate assessment and monitoring** of progress towards the objectives of the LL and the objectives of the project overall;
- **Monitor** and carry out an **assessment** of the **effects** of the innovative solutions **on soil health and related ecosystem services**. This should include a **demonstration of the viability** of the proposed solutions.
- Propose **strategies to ensure long-term sustainability** and continuity of the living labs beyond the Horizon Europe (e.g. possible business models);
- **Document** in an easy and accessible way the **developed solutions** in order to facilitate their uptake and transfer to relevant actors



KEEP IN MIND

- Multi-actor approach
- Beneficiaries may provide financial support to third parties (max. to each third party is EUR 200 000)
- Capitalize from projects such as PREPSOIL, NATI00NS, NBSSOIL and the future Support Structure under the SGA
- Interact with networks active at local level, such as EIP-AGRI OG
- Close collaboration with EUSO
- Agricultural activities should benefit both conventional and organic farming

HORIZON-MISS-2023-SOIL-01-09



SCOPE

- Set up **four to five LL** to work together **on carbon farming**, covering one or several land use types. Proposals should **describe the rationale for cooperation** across the various LL.
- Establish a detailed **work plan** with the activities to be undertaken ensuring the **co-design, co-development, and co-implementation of solutions**;
- Carry out **participatory and transdisciplinary R&I** in LL, taking into account the relevant **drivers and pressures** as well as the **scaling up** and the **transferability of solutions to carbon farming challenges**;
- Establish for each LL a **baseline for carbon farming**, in order to allow for an **accurate assessment and a monitoring** of progress towards the objective of the respective LL and of the project overall. Make use of relevant accounting methodologies for quantification of carbon removals;
- **Monitor** and carry out an **assessment** of the innovative practices for carbon farming, taking into account the effects of ongoing climate change on carbon sequestration potential and dynamics.
- Propose **strategies to ensure long-term sustainability** and continuity of the living labs beyond the Horizon Europe (e.g. possible business models);



KEEP IN MIND

- Multi-actor approach
- Beneficiaries may provide financial support to third parties (max. to each third party is EUR 200 000)
- Capitalize from projects such as PREPSOIL, NATI00NS, NBSSOIL and the future Support Structure under the SGA
- Interact with networks active at local level, such as EIP-AGRI OG
- Close collaboration with EUSO
- Agricultural activities should benefit both conventional and organic farming

Specific Grant Agreement



TASKS under the ACTION PLAN

- Set up a '**one stop shop**' to cater for the needs of LL & LH funded under the Soil Mission and provide tailor made advice to participants of the LL & LH
- Support LL in their **day-to-day operations** and help to **harmonise approaches** within and across LL.
- Provide guidance on **how to apply the criteria for living labs specified in the Implementation Plan to funded LL** projects and propose adjustments if needed.
- Develop a methodology and procedure for the validation of LL & LH to **establish "quality standards"**, as these are gradually established under the Soil Mission. This should support harmonisation and comparability of approaches across LL working in different settings and on different themes.
- Identify existing LL & LH **initiatives funded outside the Soil Mission that would meet the criteria/standards for a Soil Mission LL**, as a basis for their integration into the wider LL network. For this, cooperate with PREPSOIL project.
- Help LL in developing strategies to sustain their activities beyond the lifetime of the Horizon Europe project. This will include the **development of financial strategies, long-term management plans and strengthening connections.**
- **Monitor and assess the activities** of LL & LH in a systematic way and report on the main outcomes and experiences.
- Facilitate the exchange of knowledge, data, findings and experiences within and across LL & LH.
- **Disseminate** solutions created, tested and demonstrated so that these are widely known and can be **accessed by potential users outside the LL areas.**

Joint Topics

HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01

Mission Climate adaptation, Mission Ocean & waters and Mission Soil Deal for Europe – Joint demonstration of an integrated approach to increasing landscape water retention capacity at regional scale

HORIZON-MISS-2023-OCEAN-SOIL-01-01

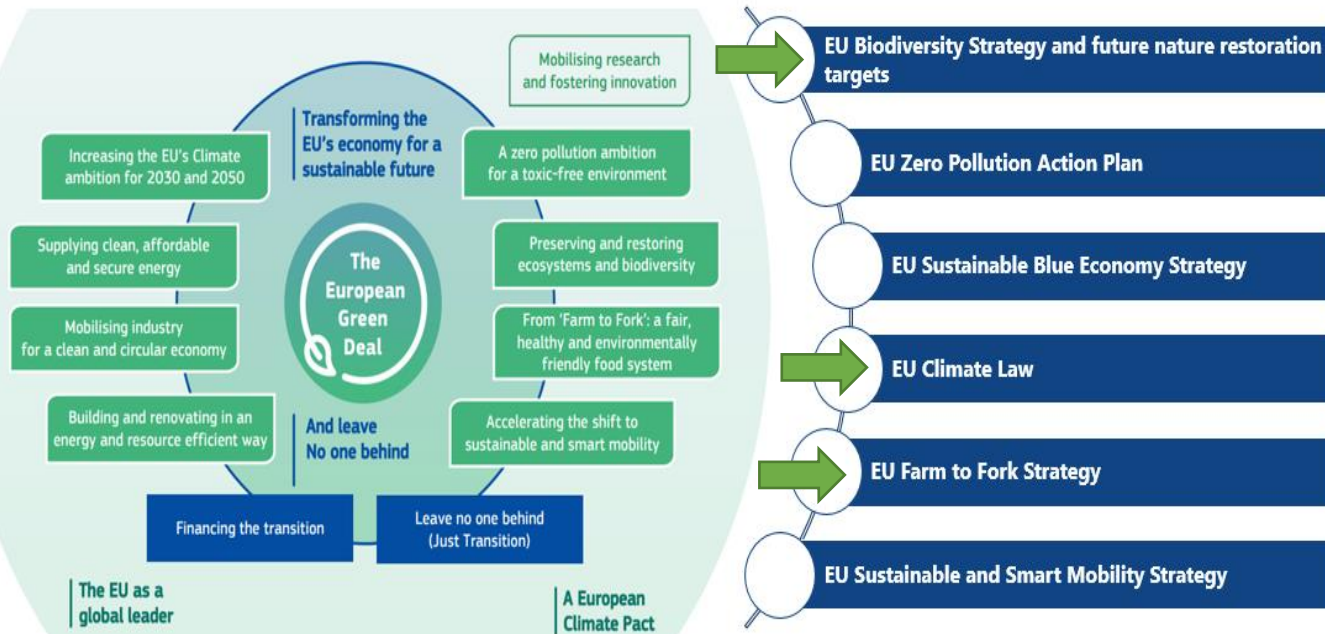
Mission Ocean and Waters and Mission A Soil Deal for Europe – Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin

HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01

Joint call – Joint demonstration of an integrated approach to increasing water retention capacity at regional scale



POLICY CONTEXT



EXPECTED OUTCOMES

- ✓ Increased resilience to climate change impacts on soils, waters, habitats and biodiversity
- ✓ Increased landscape/soil water retention capacity
- ✓ Enhanced mobilization of relevant actors (e.g.: local/regional authorities, planning bodies, farmers, foresters, land owners, economic operators, citizens)
- ✓ Enhanced implementation of EU legislation/policies: EGD, Adaptation Strategy, Biodiversity Strategy, Water Framework and Groundwater Directives, Soil Strategy

HORIZON-MISS-2023-CLIMA-OCEAN-SOIL-01-01



SCOPE

- Full-scale **demonstration** of socio-ecological approaches and NBSs to increase the landscape and soil **water retention capacity**, resilience to climate change, surface and ground water quality, soil health and biodiversity protection/conservation
- Demonstration activities at the level of socio-ecological **territorial units** covering different living/non-living systems (soil, waters, vegetation/biota, human communities)
- Planning, implementation and management of effective **measures** with the **involvement** of relevant authorities, stakeholder and local communities



KEEP IN MIND

- Additional **eligibility** conditions:
 - Demo activities in min. 3 MS/Acs
 - Multi-actor approach
 - Use of Copernicus/Galileo/EGNOS
- Third-party cascaded grants: 5 **Associated regions**
- **Dissemination** of best practices to end-users as well as action plan for replication/scalability
- FAIR approach to **data** to be made available via EMODNet

INDICATIVE BUDGET

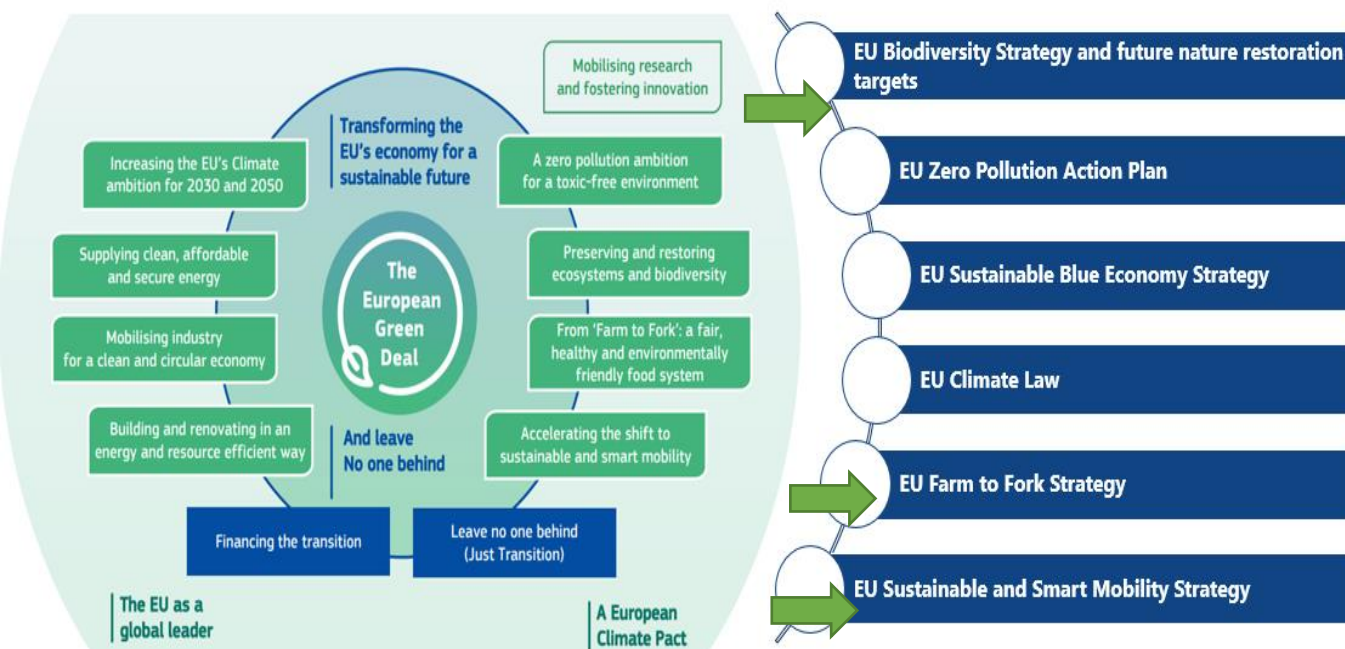
Total: EUR 15 million
(one project)

HORIZON-MISS-2023-OCEAN-SOIL-01-01

Joint call– Joint demonstration of approaches and solutions to address nutrient pollution in the landscape-river-sea system in the Mediterranean sea basin



POLICY CONTEXT



EXPECTED OUTCOMES

- ✓ Uptake of innovative and reproducible approaches to prevent/minimize/remediate soil and water pollution from excess nutrients
- ✓ Reduced use of fertilisers
- ✓ Reduced inland and ocean eutrophication
- ✓ Empowered citizens to take action
- ✓ Support the implementation of the Marine Strategy, Water Framework and Maritime Spatial Planning Directives

HORIZON-MISS-2023-OCEAN-SOIL-01-01



SCOPE

- Demonstration activities addressing the **landscape-river-catchment-sea** system, including coastal ecosystems in the **Mediterranean** sea basin
- Focus on:
 - Upstream prevention and reduction of **nutrient losses** from soil (reduction and substitution of traditional fertilisers; improved retention capacities, use efficiency, and integrated landscape and soil management)
 - **Prevention/reduction** of entry of nutrients in rivers, catchment areas and estuary/sea (green filters, wastewater treatment)
- Demonstration activities at the level of **territorial units** (rural areas, urban communities, region, river basin, estuary) and considering local conditions
- Involvement of **users** (land owners, soil/water managers, river manager authorities)



KEEP IN MIND

- Additional **eligibility** conditions:
 - Demo activities in min. 3 MS/ACs in the Med
 - Use of Copernicus/Galileo/EGNOS
- Third-party cascaded grants: 5 **Associated regions**
- **Dissemination** and training/communication activities to potential users
- FAIR approach to **data** to be made available via EMODNet
- Cooperation with **JRC** European Soil Observatory

INDICATIVE BUDGET

Total: EUR 15 million

Per project contribution: EUR 8 million



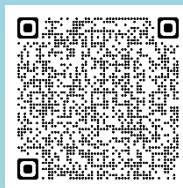
Useful links

- **Official webpage** Mission A Soil Deal for Europe - <http://ec.europa.eu/mission-soil>
- **Implementation Plan** Mission A Soil Deal for Europe - [EU Mission Soil Deal for Europe Implementation Plan \(europa.eu\)](#)
- **Factsheet** Mission A Soil Deal for Europe - [EU missions - Publications Office of the EU \(europa.eu\)](#)
- **Factsheet** Mission A Soil Deal for Europe - Living Labs - [EU mission, soil deal for Europe - Publications Office of the EU \(europa.eu\)](#)
- **Webpage** EU Missions - [EU Missions in Horizon Europe | European Commission \(europa.eu\)](#)
- **Video** EU Mission “A Soil Deal for Europe” - <https://youtu.be/3hPIZqwwhhM>
- **Podcast episode** Food for Europe - Ep. 15 Soils in danger: Europe fights back - [The Food for Europe podcast | \(europa.eu\)](#)
- **Podcast episode** Behind the Scenes - [S02/E05: A blossoming career as a soil keeper | Behind the Scenes on Acast](#)
- **News article** On a mission to save our soils - the EU's plan to rebuild the land - [Futuris episode Euronews](#)



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Thank you!

For further information and questions please contact the Mission Secretariat:

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