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

***HORIZON-MISS-2026-05***

## Overview of this call[1]

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

| Topics | Type of Action | Budgets (EUR million) | Expected EU contribution per project (EUR million)[2] | Indicative number of projects expected to be funded |
|---|---|---|---|---|
| | | 2026 | | |
| Opening: 04 Feb 2026<br>Deadline(s): 23 Sep 2026 | | | | |
| HORIZON-MISS-2026-06-SOIL-01: Living labs to enhance soil health in managed forests and in natural/semi-natural lands | RIA | 24.00 [3] | Around 12.00 | 2 |
| HORIZON-MISS-2026-06-SOIL-02: Enabling user-centred and open innovation initiatives to enhance soil health in Ukraine | CSA | 3.00 [4] | Around 3.00 | 1 |
| HORIZON-MISS-2026-06-SOIL-03: Monitoring soil health in practice: equipping stakeholders to sample, analyse, and interpret soil health indicators | CSA | 5.00 [5] | Around 5.00 | 1 |

1 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 2026 and 2027

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

3 Of which EUR 24.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

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

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

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|---|---|---|---|---|
| HORIZON-MISS-2026-06-SOIL-04: Boosting EU competitiveness: advancing food system transformation through innovative soil health solutions | IA | 6.00 [6] | Around 6.00 | 1 |
| HORIZON-MISS-2026-06-SOIL-05: Antimicrobial resistance and antibiotic biosynthesis in soils – a One-Health perspective | RIA | 14.00 [7] | Around 7.00 | 2 |
| HORIZON-MISS-2026-06-SOIL-06: Long-term drivers and consequences of soil degradation: the past as key to the future | RIA | 7.00 [8] | Around 7.00 | 1 |
| Overall indicative budget | | 68.00 | | |

| **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. |

Proposals are invited against the following topic(s):

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

[7] Of which EUR 14.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

[8] Of which EUR 7.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget.

**HORIZON-MISS-2026-06-SOIL-01: Living labs to enhance soil health in managed forests and in natural/semi-natural lands**

| **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 24.00 million. |
| *Type of Action* | Research and Innovation Actions |
| *Procedure* | The procedure is described in General Annex F. The following exceptions apply:<br>Proposals must focus on one of the two designated land uses: forests (managed forests) or natural/semi-natural, i.e., all living labs of each proposal must be located in one of these two land uses. Proposals must clearly indicate which land use they focus on. To ensure that both managed forests and natural/semi-natural land uses are covered, grants will be awarded to applications not only in order of ranking but also to at least one project focusing on each of the mentioned land uses, provided that proposals attain all thresholds.<br>* land uses according to the CORINE land cover classification (CLC) at Home :: Corine Land Cover classes |
| *Eligibility and admissibility conditions* | Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part. |

Expected Outcome: Activities under this topic respond directly to the goal of the Mission 'A Soil Deal for Europe' (Mission Soil) to set up 100 living labs and lighthouses to lead the transition to healthy soils by 2030. They support the specific objectives of the Mission Soil (see the Mission implementation plan).

Activities should also contribute to the Common Agricultural Policy, the EU's Soil Monitoring Law, the EU Forest Strategy, and the EU's biodiversity and climate policies.

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

- increased capacities for participatory, interdisciplinary and transdisciplinary R&I to co-create, and co-implement economically viable soil health solutions tailored to managed forests or natural/semi-natural lands, including improved monitoring and standardized soil data at local and regional levels;

- increased availability of practice-oriented knowledge and tools for land managers and land users, such as foresters, leading to better adoption of effective soil health solutions across diverse managed forest or natural/semi-natural land contexts;

- better understanding of processes driving soil health in managed forests or natural/semi-natural lands, where the living labs are implemented, including climate mitigation through carbon removals and continuing supplying materials and services for the development of a sustainable forest bioeconomy;

- policy makers are more aware of local needs regarding soil health including the economic sustainability of solutions, and use this knowledge to design and implement more effective policies to enhance soil health.

Scope: The Mission Soil proposes the deployment of living labs as a novel approach to research and innovation in soil health[9]. Living labs have the potential to facilitate a green transition by involving multiple actors in real-life sites within a local/regional setting to co-create soil health solutions and achieve large-scale impacts on soil health and soil governance. Projects funded under this topic should deploy a number of living labs to expand and complement the network of soil health living labs initiated in previous Mission Soil topics to gradually establish 100 living labs and lighthouses to lead the transition towards healthy soils by 2030[10].

Soil health living labs are long-term collaborations between multiple actors to address common soil health challenges in real-life sites at local or regional level[11] (10 to 20 sites in each living lab). Depending on the level at which each living lab operates and the specific context (e.g. land use covered, or soil health challenge addressed), applicants can exceptionally propose living labs with fewer sites. Living labs under this topic can address soil health challenges in or across two land uses: managed forest or natural/semi-natural lands). Individual sites can be farms, forest holdings, park plots, natural/semi-natural lots, etc., where work is carried-out and monitored under real-life conditions. Sites that are exemplary in their performance in terms of soil health improvement and serve as places for demonstration of solutions, training and communication are lighthouses. Lighthouse sites can be part of a living lab or be situated outside a living lab. Projects funded under this topic are expected to kick-start participatory process or build on existing ones. While normally projects run for four years, the duration of the projects should accommodate longer timescales required to establish participatory processes and/or for soils processes to take place.

Actors working on common soil health challenge(s) of the selected land use within and across the living labs of the same project, will be able to compare results, exchange good practices, validate methodologies, replicate actions and solutions and benefit from cross-fertilisation, thereby accelerating the transition towards the shared objective of improving soil health.

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9 Implementation Plans for the EU Missions - European Commission

10 Catalogue 2024 - Mission Soil Living Labs and Lighthouses| Mission Soil Platform

11 In this topic, it is recommended to define the living labs location using the NUTS2 division (Eurostat Statistical Atlas).

Proposals should:

- support the establishment of four to five living labs to work together on shared soil health challenge(s) affecting either managed forests or natural/semi-natural lands[12]. Proposals should clearly indicate which of one of these two land uses they focus on. Living labs under each proposal should work on common soil health challenge(s) relevant to the selected land use. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should explain the rationale and mechanism for cooperation within and across the living labs and how the work undertaken will contribute to one or more of the Mission's specific objectives[15];

- establish an interdisciplinary, participatory and multi-actor approach in the living labs to co-design, co-develop, and co-implement locally adapted solutions (practices, tools, strategies, etc.) for the common soil health challenge(s) on managed forests or natural/semi-natural soils, taking into account relevant soil health drivers and pressures[13]. 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 of the soil conditions to allow for an accurate monitoring over time of soil health improvements as well as the effects of the proposed solutions on soil health and associated ecosystem services in the different sites of the living labs. The set of soil health indicators/descriptors presented in the proposal for a Directive on Soil Monitoring and Resilience should be used as a basis. Proposals may complement with additional indicators tailored to the addressed soil health challenge(s), pedoclimatic conditions, and other local/regional factors within the chosen land use;

- demonstrate their technical, social, economic, cultural and environmental viability of the proposed solutions, as well as their potential scalability and transferability to diverse contexts;

- identify high performing sites that may be converted into lighthouses, either at proposal stage or later, during the project implementation. Engage with SOILL[14] project to assess the growth and development of these lighthouses and to support the establishment of a labelling process that could formally recognize these exemplary sites as lighthouses;

- propose strategies (e.g., financial, organisational) to ensure the long-term sustainability of the established living labs beyond the Horizon Europe funding. Strategies should include the identification of possible business models and actions involving a mix of public or private funding schemes, financial instruments, cooperation with local authorities,

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12 An ecosystem with most of its processes and biodiversity intact, though altered by human activity in strength or abundance relative to the natural state (IPBES)

13 See Soil Needs and Drivers of Change Across Europe and Land Use Types - Booklet from PREPSOIL project

14 www.soill2030.eu/about-us

engagement of social economy entities, social enterprises, business communities, SMEs, as well as attracting investors and entrepreneurs.

In line with the nature of living labs, projects must adopt the multi-actor approach. The actors involved in each living lab may vary, based on its unique characteristics and may include, among others, researchers, landowners or land managers, foresters, industry representatives (e.g., SMEs), public administrators and civil society representatives (e.g., consumers, residents, environmental NGOs, youth or other community organisations). Care should be taken to describe the capabilities, roles and resources of the different actors involved in the living labs. An effective contribution of social sciences and humanities and the arts (SSHA) is expected to foster social innovation, knowledge transfer and socio-cultural and behavioural change.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe. This includes not only beneficiaries (or their affiliated entities) but also associated partners, third parties giving in-kind contributions, subcontractors, and recipients of financial support to third parties. Financial support to third parties (FSTP) to facilitate active involvement of small actors (e.g. land managers and landowners such as farmers, foresters, SMEs or civil society) in one or more of the living labs of a project, can be provided through calls 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.

Dedicated tasks and appropriate resources should be envisaged to collaborate with SOILL, the structure created to support soil health living labs and lighthouses with a wide range of actions that include dedicated capacity building, knowledge exchange, promotion, dissemination, networking opportunities, regular monitoring activities on living labs performance and lighthouses growth assessment. The details of the collaboration will be further defined during the grant agreement preparation phase.

Proposals are expected to build on existing knowledge (e.g. data from national soil health monitoring, LUCAS) and solutions developed and tested at national scale or in the frame of other Horizon projects including those funded under the Mission 'A Soil Deal for Europe'. Proposals should therefore include dedicated tasks, appropriate resources and a plan on how they will collaborate with relevant projects and initiatives carrying out relevant activities under other initiatives in Horizon Europe, including those funded under the topic HORIZON-CL6-2025-02-FARM2FORK-06: Improving grassland management in European livestock farming systems and topic HORIZON-CL6-2025-01-BIODIV-01-two-stage: Living labs co-creating innovative solutions for forests and freshwater ecosystems restoration. Proposals are also encouraged to engage in relevant Mission Soil clustering activities and to cooperate with the Horizon Europe Partnerships on Agroecology and on Forests and/or relevant networks active at local level, such as the EIP-AGRI operational groups to promote the involvement of key local stakeholders. Lastly, proposals should consider, where relevant, the data, expertise and services offered by European research infrastructures (ESFRI).

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-2026-06-SOIL-02: Enabling user-centred and open innovation initiatives to enhance soil health in Ukraine**

| **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 3.00 million. |
| *Type of Action* | Coordination and Support Actions |

Expected Outcome: Activities should contribute to meeting the international dimension of 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, to the EU international commitments (Global Approach to Research and Innovation), as well as to the United Nations Sustainable Development Goals (SDGs), in particular in the areas of sustainable agriculture, food and nutrition security, biodiversity, and climate.

Moreover, the activities will contribute to the EU efforts to address Ukraine's longer-term reconstruction and will support the implementation of the Ukraine Plan in particular related to reducing Ukraine's soil pollution and to supporting its restauration. The activities should also support Ukraine's alignment with the EU acquis.

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

- increased capacities for participatory, interdisciplinary and transdisciplinary R&I approaches, allowing for effective cooperation between research, practice and policy to tackle soil health challenges in Ukraine arising from military actions and other indirect pressures;
- state of the art on soil-related practice oriented knowledge and tools are available to relevant stakeholders and contribute to an enhanced uptake of solutions for soil health and related ecosystem services;
- policy makers are more aware of local needs with regard to soil health including those arising from the impact of military actions and can use this knowledge to design more effective policies.

Scope: During military activities, soil is one of the most heavily affected components of the environment, undergoing mechanical, chemical, and physical degradation[15]. In Ukraine, soils are exposed to degradation due to nutrient mismanagement, acidification, erosion, compaction, salinisation, and contamination, while the war contributed to devastation by releasing toxic elements, causing long-term damage to both ecosystems and human health[16].

Before the war, the innovation landscape in Ukraine was already in decline, due to weak institutional support, relative absence of supportive political, regulatory and legislative frameworks and an undeveloped, underfunded innovation infrastructure[17]. The war has further worsened Ukrainian long-standing underinvestment in research and innovation and accelerated the loss of skilled professionals. For the future reconstruction, stronger innovation ecosystem could play a crucial role in Ukraine's green transition[18].

Proposals should:

- provide capacity-building aimed at enhancing the ability of stakeholders to engage in and contribute to user-centred, place-based transdisciplinary research and innovation ecosystems, dealing with soil degradation, including soil health issues arising from the impact of military actions[19];
- collaborate with relevant Horizon Europe projects including those funded under the Mission 'A Soil Deal for Europe', in particular with the Mission Soil Living Labs. Additionally, projects should consider cooperation with the Living Lab Support Structure SOILL;
- support relevant actors with soil-related knowledge transfer, including soil health monitoring, and exchange of best practices through e.g. twinning, trainings, workshops, networking activities, conferences, field trips, events. These activities should take place in areas with no ongoing and active military actions to ensure the safety of all participants;
- create regional knowledge hubs to enable rapid peer-to-peer learning and to provide a platform for networking and further exchange of knowledge and practices beyond the project, ensuring synergies and making effective use of other existing similar initiatives in Ukraine.

15 See https://www.mdpi.com/2073-445X/13/10/1614
16 See https://publications.jrc.ec.europa.eu/repository/handle/JRC141480
17 See https://op.europa.eu/en/publication-detail/-/publication/2cf0bd05-fbe1-11eb-b520-01aa75ed71a1/language-en
18 See https://www.oecd.org/en/publications/building-back-a-better-innovation-ecosystem-in-ukraine_85a624f6-en.html
19 See https://www.mdpi.com/2073-445X/13/10/1614

**HORIZON-MISS-2026-06-SOIL-03: Monitoring soil health in practice: equipping stakeholders to sample, analyse, and interpret soil health indicators**

| **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 will help progress towards the objectives and targets of the Mission 'A Soil Deal for Europe'. Activities should also contribute to meeting the ambitions and targets of the EU Soil Strategy for 2030 and support the implementation of the Soil Monitoring and Resilience Directive. Activities should thereby contribute to meeting the objectives on improving soil management and environmental performance of the Vision for Agriculture and Food and the Common Agricultural Policy.

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

- **enhanced reliability and accessibility of soil health data** by/for laboratories, land managers, advisors and policymakers;
- **improved understanding by practitioners and policymakers** of the conditions, limitations and uncertainties of soil data and **use of Mission Soil** (among others) **outputs and tools** (datasets, indicators, methodologies, pedo-transfer functions, cross calibration of soil sensors…);
- increased **collaboration and interaction** among stakeholders around soil heath data issues;
- support to the development of standards and norms as well as national and international guidelines of soil sampling and monitoring and promote best practices.

Scope:

Soil analyses are subject to several uncertainties arising from a diversity of factors that impact results: inconsistent sampling and inappropriate handling and transport of soil samples; laboratory equipment and calibration differences; absence of standardized testing methods; human errors; and inherent soil properties variability. These uncertainties necessitate rigorous protocols and training to ensure data accuracy and reliability in soil health assessments by laboratories.

On the other hand, many farmers and land managers lack understanding of soil health indicators like organic matter, nutrient levels, and microbial activity. This undermines their ability to accurately interpret soil analysis results and implement necessary interventions, such as fertilization or crop rotation adjustments. Additionally, limited training in proper sampling techniques and the use of modern diagnostic tools further hinders their capability.

Increased soil sampling and analysis will be vital in the EU due to initiatives like the forthcoming Soil Monitoring Law but not only. Regular soil assessments provide critical data, enabling informed decisions and adaptive sustainable management practices that optimize crop yields, resource efficiency and soil health, enhancing farming competitiveness and resilience.

Reliable soil data is also crucial for integration across various locations and scales, allowing for the development of unified insights into soil health trends. For example, georeferenced data deriving by soil proximal and remote sensors need cross calibration, validation and interpretation. Reliable data underpins models predicting future soil health scenarios, supports the formulation of evidence-based policies and enhances decision-making processes for sustainable land management.

Proposals should:

- organise networking and capacity-building activities to equip stakeholders with practical tools and skills to improve soil data quality;
- compile and promote (standardized) methods and protocols for soil sampling (timing, depth, tools, representativity, uncertainties) and analysis (equipment, calibrations, inter-comparisons, uncertainties);
- facilitate and promote the integration of soil data, datasets and databases from different sources and methods allowing for the combination of results from direct sampling, proximal and remote sensing and other state-of-the-art methodologies;
- promote or develop practical tools (such as guides, apps) on soil analysis and monitoring: indicators, sampling and analysis methods, data management and analysis, interpretation of results... based on solid scientific expertise with emphasis on new methods and technologies;
- conduct activities, such as case studies or piloting collaborative platforms to explore opportunities and limitations of soil data sharing (privacy, fragmentation, lack of standardization and reference framework, IPRs, interoperability, restricted access policies);
- engage with relevant standardisation bodies to ensure that standards meet the needs of stakeholders and align with existing regulations and standards.

The resources and opportunities offered by the project must be accessible to stakeholders even if they are not involved in the project as partners, contributing to address existing imbalances in soil analysis and data availability across the EU.

**HORIZON-MISS-2026-06-SOIL-04: Boosting EU competitiveness: advancing food system transformation through innovative soil health solutions**

| **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* | Innovation Actions |

Expected Outcome: Activities under this topic will help progress towards the objectives and targets of the Mission 'A Soil Deal for Europe'. Activities should also contribute to meeting the ambitions and targets of the EU Soil Strategy for 2030 and align with the competitive objectives of the Vision for Agriculture and Food.

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

- innovators developing cutting-edge agri-tech solutions for soil health have more opportunities and support to test, validate, and demonstrate their innovations;
- farmers and landowners have access to a wider toolbox to sustainably manage their land while they are more competitive and resilient and less dependent;
- innovative solutions and new business models for soil health are tested on the ground all throughout the food value chain (particularly involving producers, industry leaders and consumers);
- increased investments from the public and private sectors are driven by practical evidence of how healthy soils contribute to a more competitive EU and Associated Countries.

Scope: To improve soil health, sustainable practices must be economically attractive. Therefore, farmers should be provided with the tools to manage soils effectively, adapt to environmental challenges, and reduce costs, ultimately supporting both economic viability and environmental sustainability. This will contribute to a more competitive agricultural sector, strengthen famers position in the supply chain, while safeguarding soil health for future generations.

Proposals should:

- develop scalable techniques, technologies and practical solutions to enhance soil quality, biodiversity and food security, support sustainable land management, and promote regenerative farming practices;

- identify scalable innovations for soil health and entrepreneurs among Mission Soil projects and support potential business creation and acceleration;
- leverage key enabling technologies including AI, machine learning, and advancements in biotechnology to improve and monitor soil health;
- connect innovators with soil health-related living labs and lighthouses and explore using them as testbeds or dissemination platforms;
- identify and validate the commercial potential of promising IP-backed innovations that improve soil health and competitive agriculture and support the launch of sustainable and scalable ventures;
- design and test financial models or incentives to support farmers and landowners in adopting soil-friendly practices, ensuring economic viability alongside improved soil health;
- provide innovators with access to funders, industrial corporates, experts, research institutions, investors and consumers;

An effective contribution of social sciences and humanities and the arts (SSHA) is expected to foster social innovation, knowledge transfer and socio-cultural and behavioural change.

Beneficiaries must provide financial support to third parties.

**HORIZON-MISS-2026-06-SOIL-05: Antimicrobial resistance and antibiotic biosynthesis in soils – a One-Health perspective**

| **Specific conditions** | |
|---|---|
| *Expected EU contribution per project* | The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. |
| *Indicative budget* | The total indicative budget for the topic is EUR 14.00 million. |
| *Type of Action* | Research and Innovation Actions |

Expected Outcome: Activities under this topic will help progress towards the objectives and targets of the Mission 'A Soil Deal for Europe'. Activities should also contribute to meeting the ambitions and targets of the EU soil strategy for 2030, the zero pollution action plan, as well as the Sustainable Development Goals 15 on life on land and 3 on good health and well-being.

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

- enhanced understanding of antimicrobial resistance development in soils, the contribution of soil to the exposure of humans and animals to antimicrobial resistant genes and organisms, and to antibiotic biosynthesis in soils;
- policy makers and land managers have increased access to evidence-based strategies to lower the risk of antimicrobial resistance development in soils and the exposure of humans and animals to antimicrobial resistant genes;
- improved access to enriched databases of antibiotics-related genes;
- increased societal awareness of the importance of soil and soil biodiversity for human and environmental health issues and as a source of molecules of interest for pharmaceutical purposes.

Scope: Soil biodiversity plays a major role in human, animal and ecosystem health. Soil microorganisms (bacteria and fungi) have been crucial in the discovery of antibiotics used in human and veterinary medicine. However, soils can also be a hotspot for antimicrobial resistance development and can play a key role in the transfer of antimicrobial resistance genes between organisms and environmental compartments. Antibiotic use is expected to increase globally due to an increase in demand for food-producing animals, which can in turn further increase antimicrobial resistance development in soils. The driving forces for antimicrobial resistance development in soils are however understudied, as well as the role of soils in the exposure of humans and animals to antimicrobial resistance determinants. Moreover, our knowledge of antibiotics-related genes is currently limited, making it challenging to identify new compounds of interest. To better understand and combat antimicrobial resistance development in soils, a One Health perspective is needed, integrating human health, animal health and environment health. As such, an interdisciplinary approach is required, bringing together life sciences, environmental sciences, health sciences and veterinary sciences.

Proposals should:

- study the source and dynamics of antimicrobial resistance and antibiotic biosynthesis in soils across all relevant land use types, and identify the role of land use, land management practices and other environmental and anthropogenic driving factors;
- study the role of soils in the transfer of antimicrobial resistance genes among organisms and environmental compartments and in the exposure of humans and animals to antimicrobial resistance genes;
- expand databases of antibiotics-related genes;
- develop concrete guidelines to policy makers and land managers to better address the exposure of humans and animals to antimicrobial resistant genes and to facilitate the discovery of new molecules of pharmaceutical interest;

- carry out activities for communication and awareness raising on the importance of soil and soil biodiversity for human, animal and environmental health and as a source of molecules of interest for pharmaceutical purposes.

In carrying out the activities, consortia should work in an interdisciplinary way bringing together life sciences, environmental sciences, health sciences and veterinary sciences.

Projects should also 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 project.

**HORIZON-MISS-2026-06-SOIL-06: Long-term drivers and consequences of soil degradation: the past as key to the future**

| **Specific conditions** | |
|---|---|
| *Expected EU contribution per project* | The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts. |
| *Indicative budget* | The total indicative budget for the topic is EUR 7.00 million. |
| *Type of Action* | Research and Innovation Actions |

Expected Outcome: Activities under this topic will help progress towards the objectives and targets of the EU soil strategy for 2030 as data and insights in the long-term drivers of soil degradation will help to better protect soils and to achieve healthy soils by 2050. Moreover, the results of this topic will contribute to progress the Mission 'A Soil Deal for Europe' objectives, by leading to an increased uptake of knowledge on soil health and an increased valorisation of soil health by society.

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

- improved access to knowledge and quantitative data on changes in soil degradation over the past centuries to millennia across different pedo-climatic regions in the EU and Associated Countries, and to projections for future trends of soil health under various scenarios;

- enhanced understanding of the long-term drivers (and the equalities and differences with short-term drivers) and long-term consequences of soil degradation including on the role of soil degradation in the climate and biodiversity systems and in the water and nutrient cycles, both in the past and in the future;

- enhanced understanding of the social and cultural factors driving historical soil degradation and of the perception of soil degradation and soil health by past societies, and

in turn an enhanced understanding of how human behaviour can change to adopt measures to increase soil health;

- Enhanced understanding of the long-term socio-economic consequences of soil degradation processes, e.g. in terms of EU's agricultural competitiveness, both in the past and in the future;

- increased citizen awareness on the impact of soil degradation on societies and on the long timescale of soil recovery processes, as well as an accelerated societal acceptance of sustainable soil management practices.

Scope: Since the beginning of agriculture, human activities have contributed to soil degradation. This caused problems to farmers and landowners, as well as to society in general. However, our knowledge of changes in soil health over the past centuries to millennia in the EU and Associated Countries is limited, and available datasets spans only the past two or three decades. This hinders a throughout understanding of the long-term drivers and consequences of soil degradation, as well as creating projections for future trends under various scenarios. An improved understanding of the long-term changes and driving forces of soil degradation should lead to a better understanding of past and improved projections for future trends of soil health under various scenarios, an enhanced understanding of the long-term effects of soil management practices, as well as an accelerated societal acceptance of sustainable soil management practices.

Proposals should:

- study past soil degradation processes and its (socio-economic, cultural and natural) drivers and consequences based on, for instance, historical documents, historical records, archaeological data, sediment archives, buried fossil soils and archived soil and plant samples;

- apply and advance the development of technologies to study past soil health, such as ancient eDNA analysis, pollen, spores, environmental radionuclides and other proxies;

- make use of numerical models and digital tools to make reconstructions of past and predictions for future trends in soil degradation and to make trajectories for sustainable soil management;

- carry out activities for communication and awareness raising on the long-term changes of soil health and on the impact of soil degradation on societies. Encourage citizens to take part of the data collection.

In carrying out the activities, consortia should work in an interdisciplinary way bringing together environmental sciences and social sciences and humanities (such as history, archaeology and social geography).

Proposals are expected to collaborate with and build on the results of the projects funded under HORIZON-MISS-2025-05-SOIL-02: Social, economic and cultural drivers, and costs of land

degradation. Proposals should also 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 project.

**Call - Joint Call between the Soil Deal for Europe Mission and the Adaptation to Climate Change Mission**

***HORIZON-MISS-2026-07***

**Overview of this call**[1]

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

| Topics | Type of Action | Budgets (EUR million) 2027 | Expected EU contribution per project (EUR million)[2] | Indicative number of projects expected to be funded |
|---|---|---|---|---|
| Opening: 04 Feb 2026<br>Deadline(s): 23 Sep 2026 | | | | |
| HORIZON-MISS-2026-08-CLIMA-SOIL: Joint demonstration of solutions to build soil resilience to extreme weather events and support food security | IA | 20.00 [3] | Around 10.00 | 2 |
| Overall indicative budget | | 20.00 | | |

| **General conditions relating to this call** | |
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| *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. |

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| *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. |

Proposals are invited against the following topic(s):

**HORIZON-MISS-2026-08-CLIMA-SOIL: Joint demonstration of solutions to build soil resilience to extreme weather events and support food security**

| **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 20.00 million. |
| *Type of Action* | Innovation Actions |

Expected Outcome:

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

1. regions and local authorities improve the monitoring and resilience of soils with regard to extreme weather events, in particular soils' capacity to withstand and recover from floods, droughts, heatwaves and broader temperature fluctuations;

2. food security is strengthened by testing and demonstrating land use and soil management practices that are tailored to local pedoclimatic, agro-ecological and socio-economic contexts, improving soil health, promoting sustainable land management, and enhancing the overall resilience of agricultural systems to current and future climate extreme events.

Scope: Developing and scaling practical solutions to enhance soils' resilience to extreme weather events is crucial for climate change adaptation. As extreme weather events like droughts, heavy rainfall and flooding, heatwaves and other temperature anomalies (e.g. unseasonal frosts) become more frequent, widespread and severe, they pose significant threats to soil health, agricultural productivity, and food security at large (due to, *inter alia*, soil erosion,

nutrient leaching, increased salinisation, loss of soil organic carbon, reduction or loss of microbial activity, waterlogging and oxygen depletion, depending on the type of extreme weather event considered). Strengthening soils' resilience at farm, and landscape levels, considering also the preconditions, e.g., in terms of governance, is vital to cope with these challenges. Creating a framework that suits different pedoclimatic conditions and local/regional authorities should help ensure that the best approaches are put in place to maintain food security, promote sustainable farming practices, and that overall landscape resilience to these events is enhanced.

Successful proposals under this topic should support the EU Vision for Agriculture and Food, the EU Soil Strategy for 2030 (including implementation of the Soil Monitoring Law), and the future European Climate Adaptation Plan.

Proposals should:

1. develop, test and demonstrate a range of solutions that improve the soils' resilience to extreme weather events, while applying a systems-thinking approach and addressing interactions across farm, landscape, and governance levels. The proposals should also describe how such solutions would support food security, for example by preserving soil productivity and reducing yield volatility caused by extreme weather events;

2. develop a transdisciplinary framework to facilitate replication of solutions. This includes enhancing the involvement of relevant public authorities and stakeholders (including to integrate local knowledge) at different management levels, from farm to river basin, and exploring innovative and scalable business models that support food security also in the longer term;

3. develop a replicable methodology to assess the impact of extreme weather conditions on soil ecosystem services, including water retention and quality, in the regions and local authorities involved, and on the different [river-basin] stakeholders and land managers using those services;

4. assess the regions and hotspots in EU territory where the probability of extremes events is high and soils are more vulnerable. Develop future scenarios and trends of extreme events based on climate change projections.

**Demonstration sites and related activities**

Under the Missions approach, collaborations to develop and test effective solutions between regions/local authorities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. For this purpose, while the required demonstrations are expected to take place in at least three regions / local authorities, the proposals should already identify other regions and local authorities, where reapplication of the proposed solutions will be suitable as they share common challenges. Inclusion already in the proposal of at least three such "replicating" regions/local authorities, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories, is required.

**Links to the Missions and to other projects and initiatives**

Proposals should build (when relevant) upon existing knowledge[4] and solutions designed and developed from previous projects addressing the nexus between climate change adaptation, soil and food, funded by EU and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe[5] under their different pillars and clusters), and the LIFE programme.

**Other Actions not subject to calls for proposals**

**. Improving soil health and resilience in UNESCO designated sites**

Expected impact: global soil health and resilience to climate change is improved.

Expected outcomes:

- soil health and soil resilience to climate change are improved in UNESCO designated sites through innovative and sustainable soil management practices;
- new knowledge and FAIR[20] data on soil health are generated, shared and made available, in particular in and among UNESCO designated sites;
- national soil policies supporting sustainable land management practices are strengthen;
- general awareness on the importance of soil health and resilience, as well as soil literacy are increased.

Scope:

This indirectly managed action contributes to the implementation of the Mission Soil, by strengthening its international dimension, as well as to the achievement of the United Nations Sustainable Development Goals (SDGs), in particular SDG 15 – life on land, SDG 2 – zero hunger, and SDG 13 – climate action.

Considering its unique and powerful role in promoting sustainable development through science, education, culture, and knowledge sharing across the world, and its initiatives under the Man and the Biosphere (MAB) Programme aimed at improving human livelihoods and safeguarding natural and managed ecosystems, which include soils, the United Nations Educational, Scientific and Cultural Organization (UNESCO) is the designated beneficiary of this indirectly managed action.

The aim of this indirectly managed action is to improve global soil health and resilience through research, monitoring and capacity building in UNESCO designated sites.

UNESCO should:

- pilot, monitor and evaluate innovative and sustainable land management initiatives aimed at improving soil health and resilience, while contributing to foster sustainable agriculture, biodiversity, and climate mitigation and adaptation;
- generate new knowledge and FAIR data on soils, soil health and soil biodiversity. Information should be shared among UNESCO networks and made accessible to the general public;

[20] Findable, Accessible, Interoperable and Reusable.

- create a multi-stakeholder expert group to engage the necessary expertise and mobilise relevant organisations to contribute to the achievement of the expected outcomes;
- engage with a representative number of UNESCO Member States (at least one for each global region) to strengthen national policies for the protection and restoration of soil health;
- provide policy advise, guidelines and capacity building activities to encourage policymakers to adopt policies aimed at supporting sustainable land management practices;
- organise training, peer-to-peer learning and capacity building activities to share knowledge and sustainable land management practices among UNESCO site leaders and communities;
- develop awareness raising campaigns and educational materials on the importance of soil, and to encourage actions for the protection and restoration of soil health and resilience.

UNESCO should collaborate with the Mission Soil Secretariat. It should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant Horizon Europe projects and initiatives funded under the Mission "A Soil Deal for Europe", including engagement with the relevant cluster activities.

UNESCO 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 SoilWise.

Legal entities:

United Nations Educational, Scientific and Cultural Organization (UNESCO), 7 place Fontenoy 75007 Paris, France

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 2.53 million from the 2026 budget

**. Technical and scientific support for the development of an EU soil monitoring framework**

**Scientific and technical services by the Joint Research Centre**

- **Technical and scientific support for the implementation of Mission Soil**

The JRC will:

- Support the Mission Soil Secretariat in co-ordinating and achieving the outputs and outcomes of the Mission Implementation Plan, in particular the building block "Monitoring and indicators".
- Continuously update the EUSO Soil Degradation Dashboard, incorporating data coming from Mission Soil projects and other sources, and monitor, assess and report the evolution of soil health in the EU over time.
- Building on the EUSO Dashboard, develop a tool to assess progress against the Mission's specific objectives.
- Support the Mission Soil Secretariat in working with the Mission Soil Platform.
- Integrate Mission Soil project outputs (data, knowledge) in the EU Soil Observatory (EUSO) and in the Mission Soil Platform as relevant, and support feedback to policy.
- Provide technical expertise and operational capacity to support the Mission Secretariat's exchanges with Member States, Associated Countries, other policymakers, the scientific community and other stakeholders.
- Provide methodological support and technical guidance for the Living Labs' implementation, in particular for monitoring and reporting on soil health.

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

Indicative timetable: from 3rd quarter of 2026 to 2030 (four years)

Indicative budget: EUR 2.00 million from the 2026 budget