



Soil Health Objectives & Particularities Forestry Land Use



EU Mission 'A Soil Deal for Europe'

Life on Earth depends on healthy soils. Soils are not only the foundation of our food systems. They also provide clean water and habitats for biodiversity while contributing to climate resilience. Between 60 and 70% of EU soils are unhealthy; one centimetre of soil can take hundreds of years to form but can be lost in just a single rainstorm or industrial incident.

European
Commission

The European Commission launched the Mission 'A Soil Deal for Europe' - Horizon Europe programme - **to create 100 Living Labs and Lighthouses** to lead the transition to healthy soils by 2030*.

The Mission will

- Create knowledge and solutions for soil health,
- Advance the development of a harmonised framework for soil monitoring in Europe,
- Increase people's awareness of the vital importance of soils,
- Support the EU's ambition to lead on global commitments, notably the Sustainable Development Goals (SDGs), and contribute to the **European Green Deal** targets.

The 8 Mission Objectives

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|--|---|
| 1 Reduce desertification | 5 Prevent erosion |
| 2 Conserve soil organic carbon stocks | 6 Improve soil structure to enhance soil biodiversity |
| 3 Stop soil sealing & 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 |

The Soil Health Living Labs are...

User-centered, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and codesign, testing, monitoring, and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption.

Forest soil health challenges are driven by natural processes, socio-economical conditions and forest management practices. Soil carbon storage (2), reducing desertification (1) and erosion (5) are only three examples of soil health related challenges. Maintaining the ecosystem services provided by forest soils is essential for sustainable forest management. To tackle these challenges and find solutions, there is a need for interaction and co-creation among stakeholders. Living Labs aim to tackle these challenges by involving representatives from all members of society to work and together. Forest soil health living labs will need to take offset in regional soil challenges which most likely cover more than the 8 Soil Mission objectives.

CHALLENGE



*For more information on the Soil Mission Implementation Plan



Check out for updates

Join the community

We will publish contents and materials and host training sessions to support the submission of high-quality application forms for the EU Mission Soils Open Calls.

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FACTSHEET

EU Soil Mission Living Labs and Lighthouses for Soil Health: Forestry Land Use





Who can be involved?



What Forestry Living Labs can do

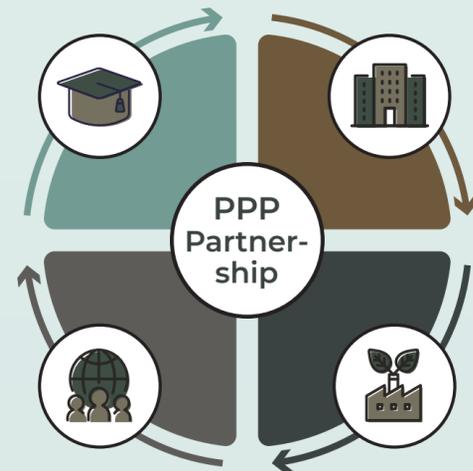


Criteria of LLs and LHs & How to Engage in Soil Mission

The Quadruple Helix

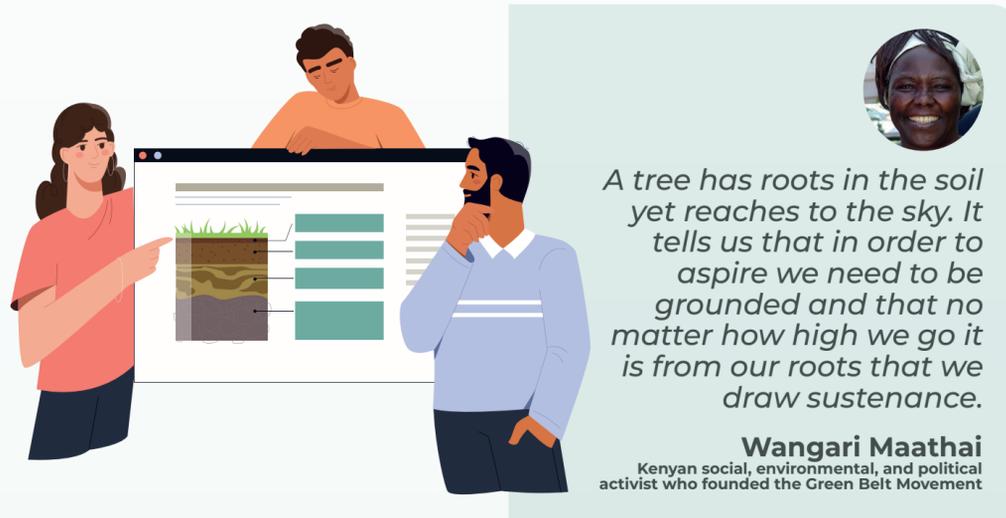
An essential characteristic of the Living Lab methodology is the **user-centric approach**, with the involvement of all relevant actors and end-users. While the specific actors will differ according to the Living Lab focus, objective, and context, all the actors can be classified according to the Quadruple Helix Model which is an extension of the typical Public Private Partnership.

The Quadruple Helix Model involves representatives from all members of society. These together form what we call **Public Private People Partnership (PPPP)** that enables real co-creation and impact.



Which added value can co-creation bring in this specific field?

Forestry Living Labs have the potential to accelerate the development towards sustainable forest soil management by finding and developing solutions to tackle soil health issues. Living Labs do this by bringing together innovative forest owners, researchers, companies and citizens. Soil health challenges vary on national/regional and local scale and need to be adapted within the local constraints. Living labs will provide a platform for all levels of stakeholders to contribute with knowledge, experience and solutions. Solutions can for instance be new climate smart sustainable soil management practices to mitigate and/or adapt to climate change or to conserve soil biodiversity. Adaptations of existing practices needed to deal with local constraints.



Which type of activities can a Forestry Soil Health Living Lab perform in this field?

Living Labs will through collaboration and co-design foster new solutions by:

- supporting experiments under real-life conditions in field experiments within Living labs and lighthouses
- initiating and supporting research in controlled laboratories and field experiments

Living labs will provide a platform for

- development of new solutions for soil health challenges
- demonstrating activities for soil health discussions
- fostering collaboration between landowners, managers and researchers
- co-design processes to design more socio-economically sustainable solutions and overcome regulatory barriers



Living Labs*

Lighthouses

Aims	<ul style="list-style-type: none"> • Innovation, co-creation, formal learning • Contribution to societal challenges • Improving soil health and related ecosystem services (mission objectives)
Activities	<ul style="list-style-type: none"> • Co-creation, co-development & experimentation of innovations improving soil health and related ESS • Research on the impact of these innovative practices on ecosystems • Networking and knowledge exchange • Demonstration (in particular Lighthouses)
Participants	<p>Public Private People Partnership:</p> <ul style="list-style-type: none"> • Real soil managers (farmers, advisors, foresters, city greens managers, allotment holders, etc.) to be at the center of the innovation process. • Other stakeholders: Associations and organizations with interest in soil health, local or regional government, scientists from variety of fields outside soils (natural sciences, social and behavioral sciences), wider public.
Context	<ul style="list-style-type: none"> • Multiple disciplines (transdisciplinary, inc. social sciences), methods, dimensions (technical, economic, social) • Place-based approach and real-life context = real farms/forest/urban sites • Robust scientific setup for ecosystem assessment • Openness, communication, dissemination

Criteria based on **exemplary performances** in terms of soil health and related ecosystem services

Some examples of stakeholders of Forestry Living Labs include:

Industry
Landowners and forest managers, forest companies, forest owner associations, industries.

Academia
Researchers in forest and soil sciences, social science researchers, Universities, and research institutions.

Citizens, Civil Society & Users
Urban and local citizens, community and citizens representatives, NGOs (e.g. nature conservation protection organizations).

Government & Public Sector
Local, regional, national authorities, regulators, governmental organisations, public authorities, agencies and land managers.

How to participate? Two topics under the 2024 call for proposals

1 Soil health (0101)
HORIZON-MISS-2024-SOIL-01-01:
Co-creating solutions for soil health in Living Labs

2 Urban Areas (0102)
HORIZON-MISS-2024-SOIL-01-02:
Living Labs in urban areas for healthy soil

- Deadline for applications: **8 October 2024** 17:00:00 Brussels time.
- Single-stage submission via the Funding & Tenders Portal.
- Research and Innovation Actions: 100% funding for any actor.
- **4-5 Living Labs** for each application **in at least three** different Member States and/or Associated Countries.
- More information available in the Factsheet "EU Soil Mission Living Labs and Lighthouses for Soil Health: Funding Opportunities".

*adapted from McPhee et al. (2021)