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FACTSHEET

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

Funded by
the European Union

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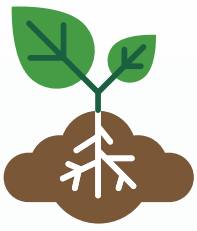
Soil Health Objectives & Particularities Agricultural Land Use



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** in rural and urban areas to drive 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

1. Reduce desertification
2. Conserve soil organic carbon stocks
3. Stop soil sealing & increase re-use of urban soils
4. Reduce soil pollution and enhance restoration
5. Prevent erosion
6. Improve soil structure to enhance soil biodiversity
7. Reduce the EU global footprint on soils
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.

CHALLENGE

Agricultural soil challenges (ASC) depend strongly on site-specific conditions in relation to climate, soil type, soil management and socio-economics. ASC are primarily related to Mission objectives 1–6, but the local conditions determine which are most relevant. Meeting the ASC will benefit from acting on the Mission's objectives 7 and 8 and requires stakeholder interaction. Living labs allow tackling complex challenges in a structured approach: Actors, citizens and end-users are involved from the very first moment to co-design innovations and promote rapid upscaling as well as achieving broader and faster social acceptance. Governmental institutions are included to address and overcome regulatory barriers for the uptake of promising new solutions. Agricultural soil health living labs need to take offset in regional soil challenges that typically cover several of the Missions objectives.

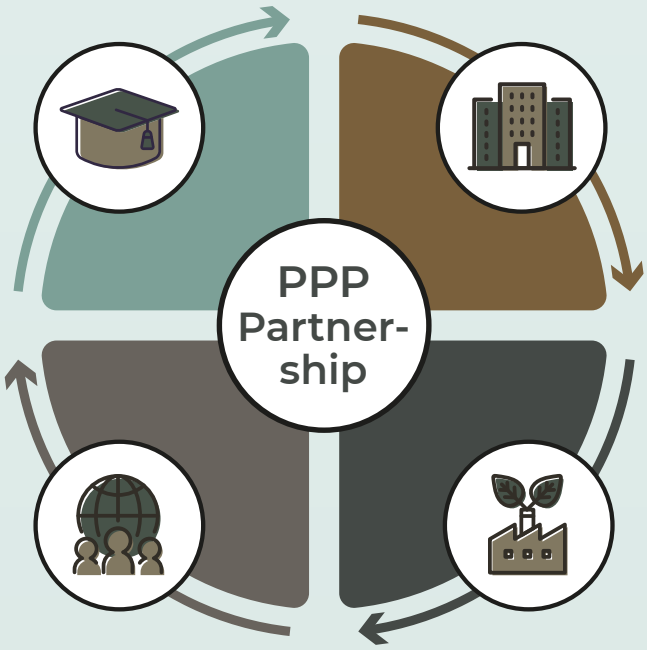
*For more information on the Soil Mission Implementation Plan

Who can be involved?

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.



Some examples of stakeholders of Agricultural Living Labs include:

Industry
Farmers and landowners, agricultural advisors, contractors, researchers (e.g. from private foundations, companies, innovative labs), agribusiness companies (e.g. agricultural engineers, food engineers, manufacturers of seeds and inorganic fertilizers, retailers) ranging from major European players to innovative startups, investors.

Citizens, Civil Society & Users
NGOs (e.g. nature conservation and water protection organizations), citizen groups, and movements (local, regional, and national).

Academia
Researchers from universities, governmental organizations, research institutes.

Government & Public Sector
Local, regional, and national (e.g. authorities, regulators, researchers)

What Agricultural Living Labs can do

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

Agricultural Living Labs can accelerate the development of new solutions to tackle soil health problems by bringing together innovative farmers and citizens, researchers and companies. Solutions can for instance be new climate smart sustainable soil management practices to mitigate and/or adapt to climate change, or adaptations of existing practices needed to deal with local constraints. Further, a structured collaboration with potential investors as well as regulators and authorities fosters a faster development and upscaling of solutions and removal of barriers of their implementation.

Look after your soil and prevent contamination.

Pilar Bernal (Spain)
Expert from the EIP-AGRI Focus Group on protecting agricultural soils from contamination

Which type of activities can an Agricultural Soil Health Living Lab perform in this field?

Foster collaboration on the co-design of new solutions by:

- Supporting experiments under real-life conditions in field experiments on research field stations and lighthouse farms
- Initiating and supporting focused scientific work in controlled laboratories and field experiments

Promote faster uptake of solutions by:

- Supporting demonstration activities on e.g. lighthouse farms
- Foster collaboration between private partners (farmers, industry etc.) and investors
- Integrate governmental regulators in the co-design process to design more socio-economically sustainable solutions and overcome regulatory barriers

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

Criteria to identify

Living Labs*

Aims	• **Innovation, co-creation**, formal learning • Contribution to **societal challenges** • **Improving soil health and related ecosystem services** (mission objectives)
Activities	• **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	**Public Private People Partnership**: • **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	• 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

Lighthouses

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

How to participate? Two Living Lab Open Calls

1 Soil health (0108) HORIZON-MISS-2023-SOIL-01-08: Co-creating solutions for soil health in Living Labs.

2 Carbon farming (0109) HORIZON-MISS-2023-SOIL-01-09: Carbon farming in living labs

- Deadline for applications: **20 September 2023** 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)

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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.