



EUROPEAN UNION



# EU MISSIONS

**SOIL DEAL FOR EUROPE**

**FOREST/WILDERNESS INNOVATION CAMP 23**

13 December 2023

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**#EUmissions #HorizonEU #MissionSoil**



## Horizon Europe R&I Missions

Linking EU's research and innovation to major societal needs;  
with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines **5 missions areas**:

Adaptation to  
Climate Change



Cancer



Climate-neutral  
and Smart Cities



Restore our  
Ocean and Waters



Soil Deal  
for Europe





# Policy framework

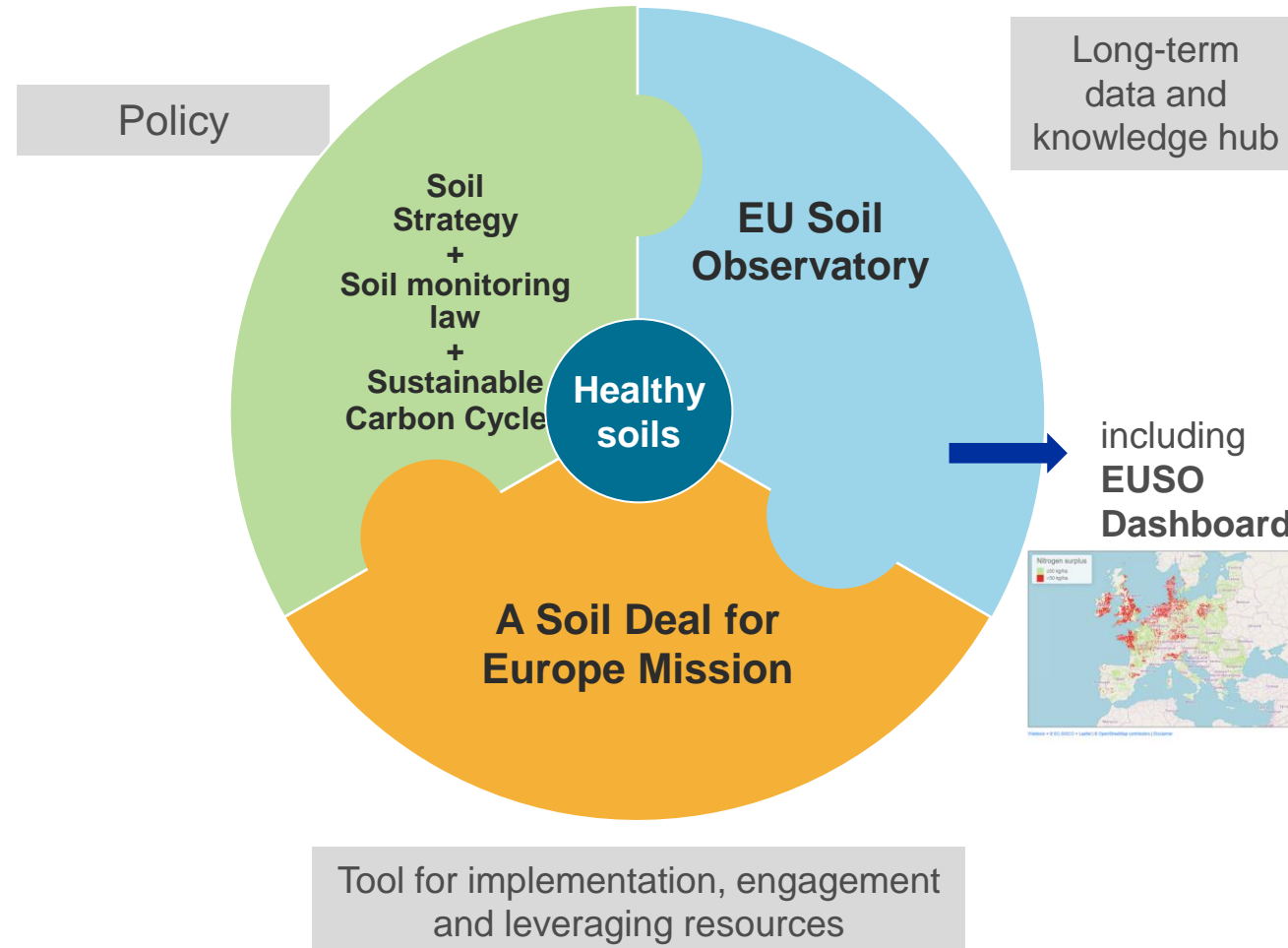
	• Farm to Fork Strategy
	• <b>EU Biodiversity Strategy for 2030</b>
	• Climate Adaptation Strategy
	• Forest Strategy
	• Zero Pollution Action Plan for air, water and soil
	• Organic Action Plan
	• Long term vision for rural areas
	• <b>EU Soil Strategy for 2030</b>
	• Proposal for a <b>Soil Monitoring Law (5/7/23)</b>
	• Communication on sustainable carbon cycles
	• Communication on food security Communication on fertilisers
	• Communication on the European Citizens' Initiative (ECI) to save bees

The **Mission Soil** is embedded in

**12 Green Deal strategies,**  
communications or action plans  
which identify its contribution to  
meeting targets and objectives.



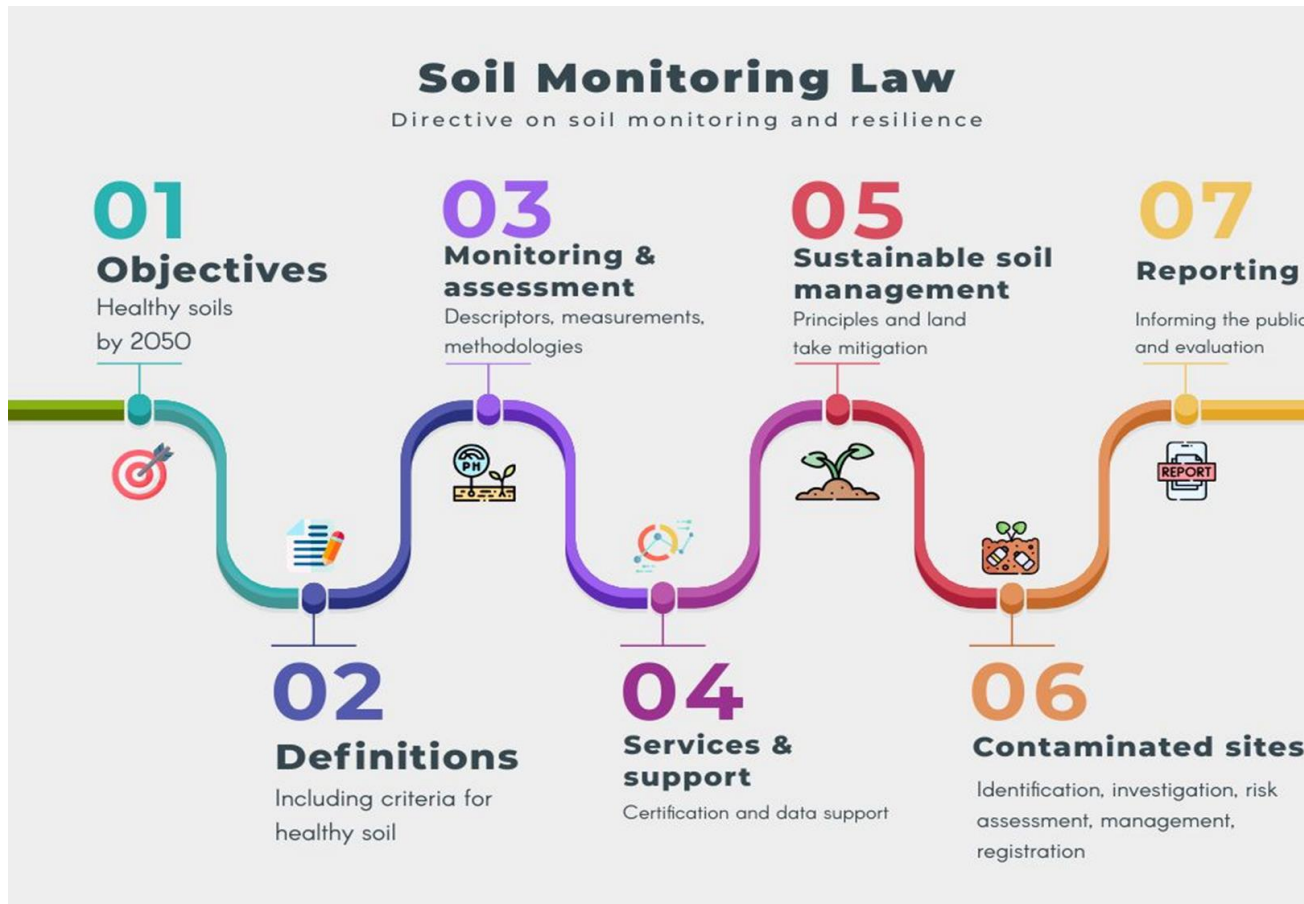
# The Mission Soil is the right instrument at the right time





## Directive on Soil Monitoring and Resilience (Soil Monitoring Law)

This proposal for the first-ever EU legislation on soils provides a harmonised definition of soil health, puts in place a comprehensive and coherent monitoring framework and fosters sustainable soil management and remediation of contaminated sites.



### Where are we now

First reading of Council and European Parliament questions from Member States and upcoming draft opinion from European Parliament rapporteur





## The Mission Soil: a key instrument for the implementation of this Directive

As they have common/complementary objectives:

- to lead the transition to healthy soils
  - to advance the development of a harmonized soil monitoring framework
  - to increase the awareness of the importance of soil
- The Mission will provide additional funding for a network of real-life sites for testing, demonstrating and upscaling of solutions (living labs and lighthouses)
  - Member States will take into account latest existing scientific knowledge and results coming out of the Mission

### Examples of policy needs for the implementation of the SML:

- Harmonization of monitoring framework
  - Transfer functions and interlaboratory calibration
  - Increased knowledge on soil health indicators (when soil's capacity of delivering Ecosystem Services is lost) for SML evaluation (6 years after entry into force)

### SSM

- Knowledge on which practices in specific soil types, climatic conditions and land uses translate SML SSM principles and regenerate soil to healthy conditions
- most cost-effective remediation techniques
- practical tools for advisors to best inform soil managers on how to move to SSM practices



*“Today, we are filling a major legal gap to bring soil under our legal acquis. This will become the first EU law on soil. Our ultimate objective is to achieve healthy soils by 2050.”*



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# Mission goal: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030

## Specific objectives:

1. Reduce desertification

2. Conserve and increase soil organic carbon stocks

3. Stop soil sealing and 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

Objectives apply to **all types of land use and all territories** and are relevant for a **range of sectors**.



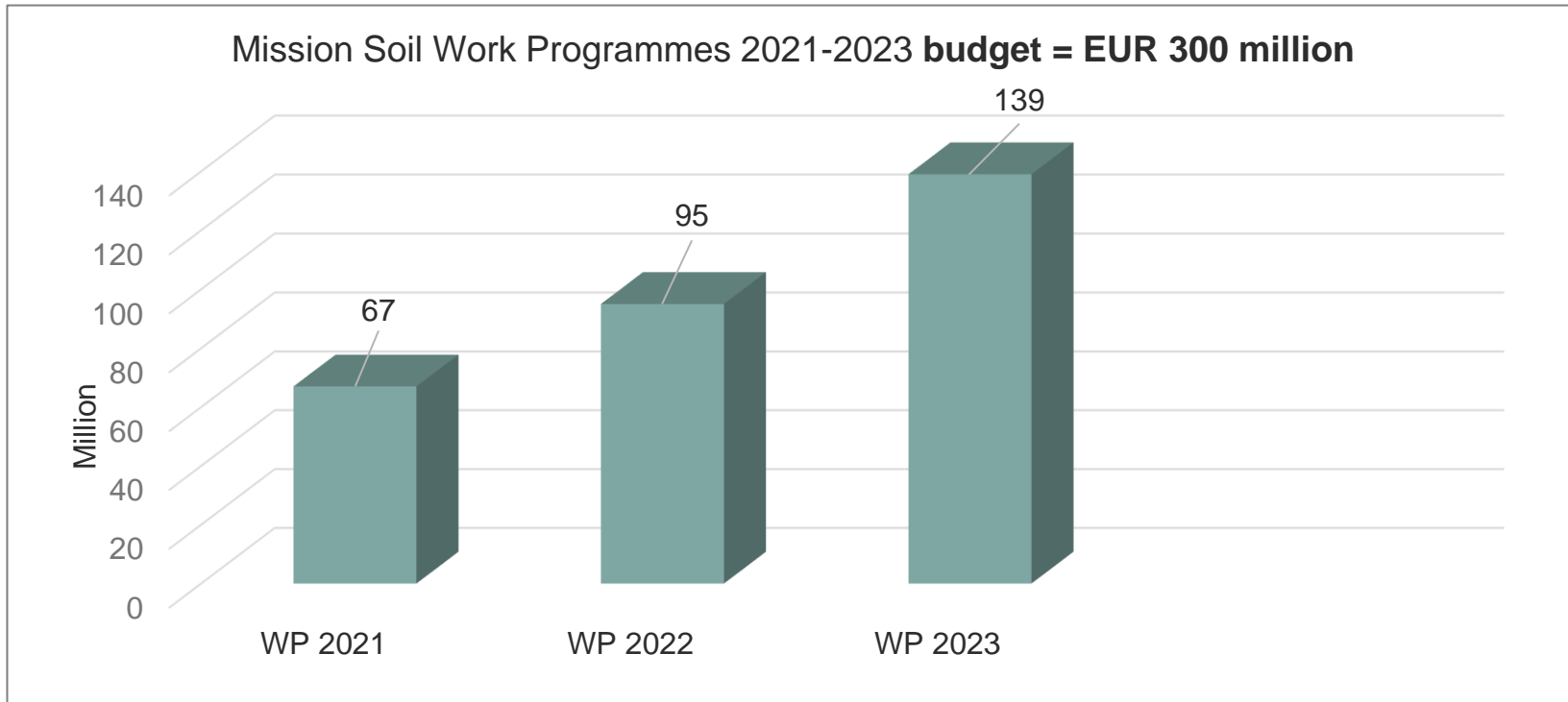
## Building blocks:



Main vehicle for addressing the diversity of conditions and generating locally adapted solutions



# Mission Soil: state of implementation



**WP 2021 – 2022**

**WP 2023**

**WP 2024**

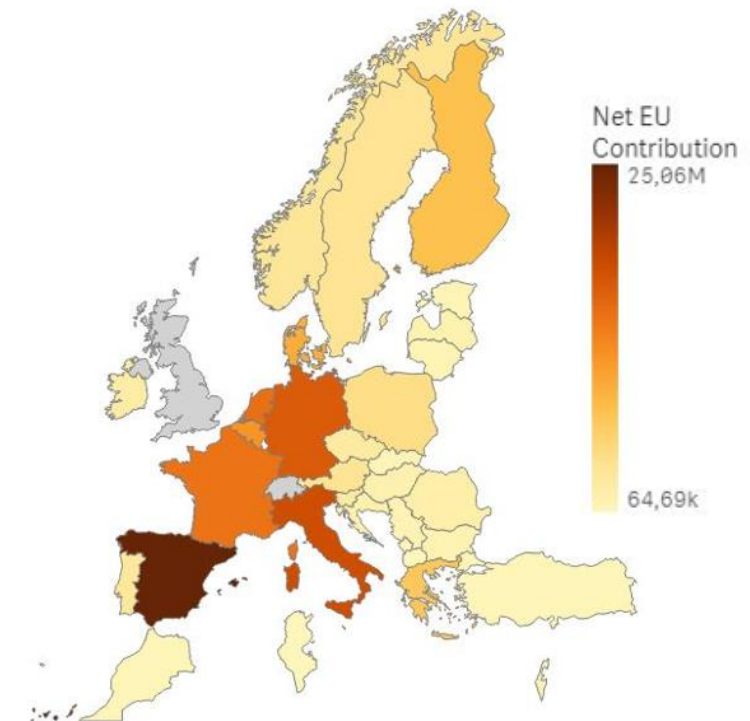
27 signed grants

EU contribution EUR 154.2 million

Average per project: € 5.7 m / 18 partners

Proposals under  
evaluation

Under preparation







## 2021 Work Programme projects

- The project [PREPSOIL](#) is identifying “**soil needs**” in 21 regions providing direction and capacities for the future national soil health **monitoring mechanisms**, as well as mapping and preparing the implementation of regional LLs.
- [SOLO](#) identifies knowledge gaps, drivers, bottlenecks, and novel R&I approaches to be considered in the European Soil Mission research and innovation **roadmap**.
- [SOIL O-LIVE](#) develops a holistic analysis of the **influence of land management** on olive oil quality and safety.
- Projects [InBestSoil](#), [Novasoil](#) and [SoilValues](#) are developing new **business models** for soil health
- [HuMUS](#) project is developing more than **30 Territorial Management Agreements** for soil health
- The Project [Nati00ns](#) is holding **engagement sessions** (in a “roadshow” format) in all Member States and Associated Countries to promote the calls for **Living Labs** as well as inform and inspire potential applicants.
- Project [NBSoil](#) provides technical support for the training of **specialised soil advisors**





# 2022 Work Programme projects

## Structures for Mission implementation

- Living lab support structure – **SOILL**

## Mission Building Blocks

R&I supporting mission objectives and Knowledge management

- Mission's knowledge repository – **SoilWISE**

Monitoring

- Soil carbon and GHG balance monitoring – **MaRVIC / MRV4SOC**
- Citizen science for soil health – **ECHO**

Citizen engagement

- Soil education across society - **LOESS**

## Mission Hotspots and cross- cutting dimensions

Carbon farming

- Network on carbon farming – **Credible**

Soil pollution and restoration

- Decontamination and reuse of land – **ARAGORN / EDAPHOS / ISLANDR**

Soil biodiversity

- Soil biodiversity and ecosystem services – **BIOSERVICES / SOB4ES**

Circular economy solutions

- Food processing residues for soil health Innovations for soil improvement – **DeliSoil / WASTE4SOIL & BIN2BEAN / FELIX / SOILUTIONS**



# 2023 Work Programme topics

## first call for Living Labs

- Co-creating solutions for soil health in Living Labs
- Carbon farming in living labs

## Mission Building Blocks & hotspots

- Discovering the **subsoil**
- **Soil pollution** processes modelling
- **Digital** tools for soil and plants monitoring
- Innovations to prevent and combat **desertification**
- Soil-friendly practices in **horticulture**
- Soils in **spatial planning**
- communities and **citizens engagement**

## Synergies between EU Missions

- Joint topic with **Mission Ocean** (on **reduction of nutrient** flows)
- Joint topic with **Missions Ocean & Climate Adaptation** (on increasing landscape **water retention** capacity)

High number of proposals received (currently under evaluation).

19 new projects to be funded >>> **46 total n. of Mission Soil projects running by 2024**



# Mission Soil Living Labs and Lighthouses

Work Programme 2023 launched the 1st call for a gradual establishment of a transnational network of 100 Living labs (LL)

## Living labs – sites for experimentation

- **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 is composed of a group of sites (e.g., farms, forest stands, urban green areas) working together at regional or sub-regional level

## Lighthouses – sites for demonstration of solutions

- **Individual sites**, such as a single farm, to showcase good practices
- Places for **demonstrations**, training and communication



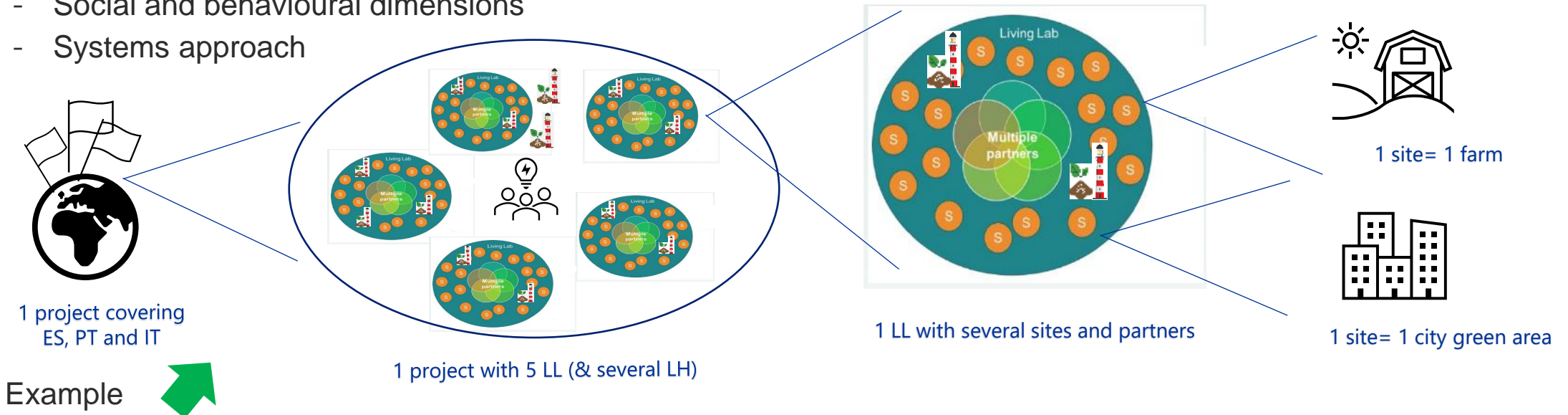
WP 2023 calls (Closed on 20/09/2023)	Budget (EUR m)	Projects
Co-creating solutions for soil health in Living Labs	36	3
Carbon farming in living labs (CF LL)	12	1





## Core elements of the Mission Soil: living labs and lighthouses

- To empower a **rapid green transition**
  - Living labs have the potential to accelerate and scale up uptake of solutions
- **No ‘one-side-fits-all’**: diversity of pedo-climatic conditions, cropping/production systems, cultural-socio-economic contexts
  - Solutions need to be co-created, tested, adapted and showcased on the ground
- Sustainable farming management practices **fit well with living labs principles**:
  - Adapted to local ecosystems → « Real-life testing»
  - Closing the knowledge-practice divide
  - End-users centric: involving actors at territorial level to achieve large scale impact (multi-actor approach)
  - Social and behavioural dimensions
  - Systems approach





# Soil literacy, communication citizen engagement

Over the past 3 years, the Mission has:

- participated in **over 350 national and international events**
- disseminated **informative materials** (articles, press releases, newsletter (2nd issue published this month), videos, factsheets, podcasts, publications, reports)
- been consistently covered on **social media**
- launched of the **Mission Soil Manifesto** in April 2023
- created a **Mission Soil Platform** operational in 2023
- organised a **Mission Soil Photo** competition





# 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 is composed of a group of sites (e.g. farms, forest stands, urban green areas) working together at regional or sub-regional level.

## Lighthouses are sites of exemplary performance with regards to a certain practice

- They are individual sites, such as a single farm, to showcase good practices.
- They are places for demonstrations, training and communication.



**Living labs and lighthouses are key to accelerate the adoption of sustainable practices by users and co-developed methods adapted to the local conditions.**



# Soil literacy, communication and citizen engagement

Over the past 3 years, the Mission has:

- invested in projects focusing on
  - **engaging with and activating municipalities and regions to protect and restore soil health**
  - **fostering soil education across society**
  - **citizen science for soil health**
  - **next generation of soil advisors**



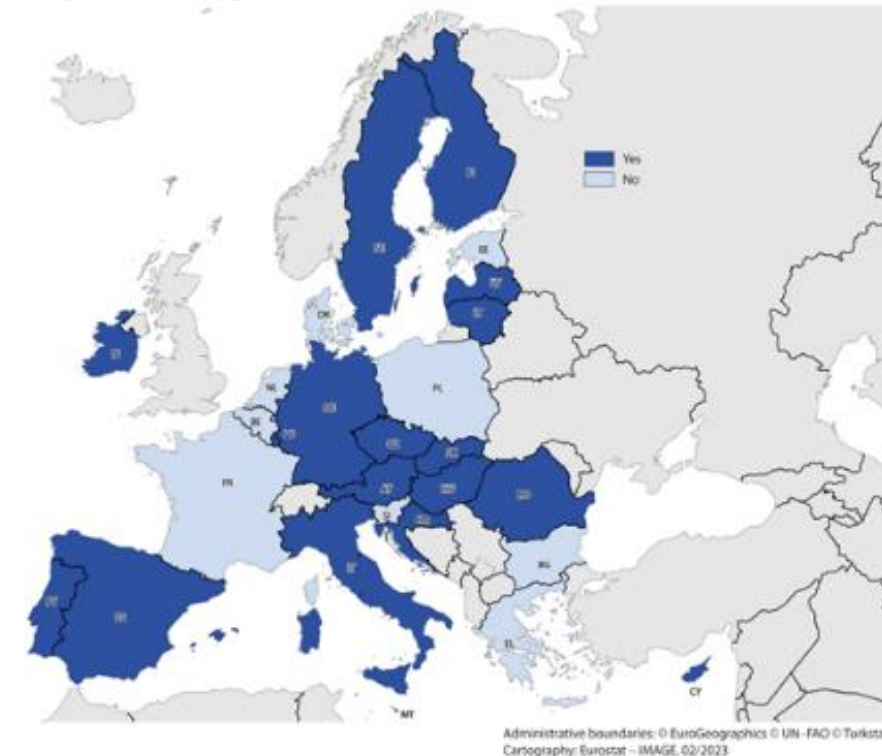




# Mission Soil assessment: achievements after 2 years

- **The first Living Labs under the Mission will start in 2024**, leading to more than 200 test sites for local experimentation in urban and rural areas
- **The Mission is integrated in 18 out of 28 Member State CAP Strategic Plans**. CAP allocating about EUR 50 billion for sustainable soil management
- **Around 1,000 CAP Network Operational Groups** (EUR 350m) will contribute to the Mission objectives. EIP AGRI upscaling Mission results
- **The Mission receives support from other EU sources** such as the LIFE programme, the Circular Bioeconomy Europe JU, PRIMA and the EIC
- **Member States** have reported **more than 200 complementary activities** in support of the Mission's objectives
- **The EIB is developing a large-scale soil investment pipeline** to mobilise additional financial resources
- The Mission has become **an important flagship for international cooperation** with the Global Soil Partnership, the Agriculture Innovation Mission for Climate initiative and with international R&I partners such as Japan, the USA, Canada and African countries

EU Mission: 'A Soil Deal for Europe' in the CAP Strategic Plans  
Strategic Plans linking up with the Mission





# Missions' Assessment main conclusions

- Existing Missions are **on track** to achieve 2030 goals; implementation will **continue**
- Five Mission **areas** – incl. "soil health and food" – remain **relevant**
- Proposed **budget increase** from 10% to 11% Mission share in Horizon Europe Pillar 2
- Proposed **additional Mission** "New European Bauhaus"

## The way forward

Among the stated challenges and opportunities, all Missions have taken steps to :

- strengthen and have a better coordinated administrative governance
- secure more and better co-investment beyond Horizon Europe, including from the private sector
- Enhance synergies with other EU instruments
- Improve the communication efforts and outreach to stakeholders and citizens.

In particular, the Mission Soil will mobilise additional effort to boost its level of investment and involvement of **private** sector and **philanthropic organisations**





# The Mission Soil Manifesto

## Objective:

non-legally binding document to formalize stakeholder and citizen participation in and support to Mission activities

**Protecting soils is a societal undertaking**

## Who can sign it?

Regional and local public authorities, private and public organisations, NGOs, philanthropic organisations, schools, universities, research institutes, associations, individuals

## Why to sign it?

become part of a community, gain visibility, access to Mission-led knowledge, involvement in Mission activities beyond Horizon Europe calls

**+2000 signatories**  
**15% organisations**

*of which*  
**25% local and regional  
authorities,  
associations and NGOs**

**Sign it!**

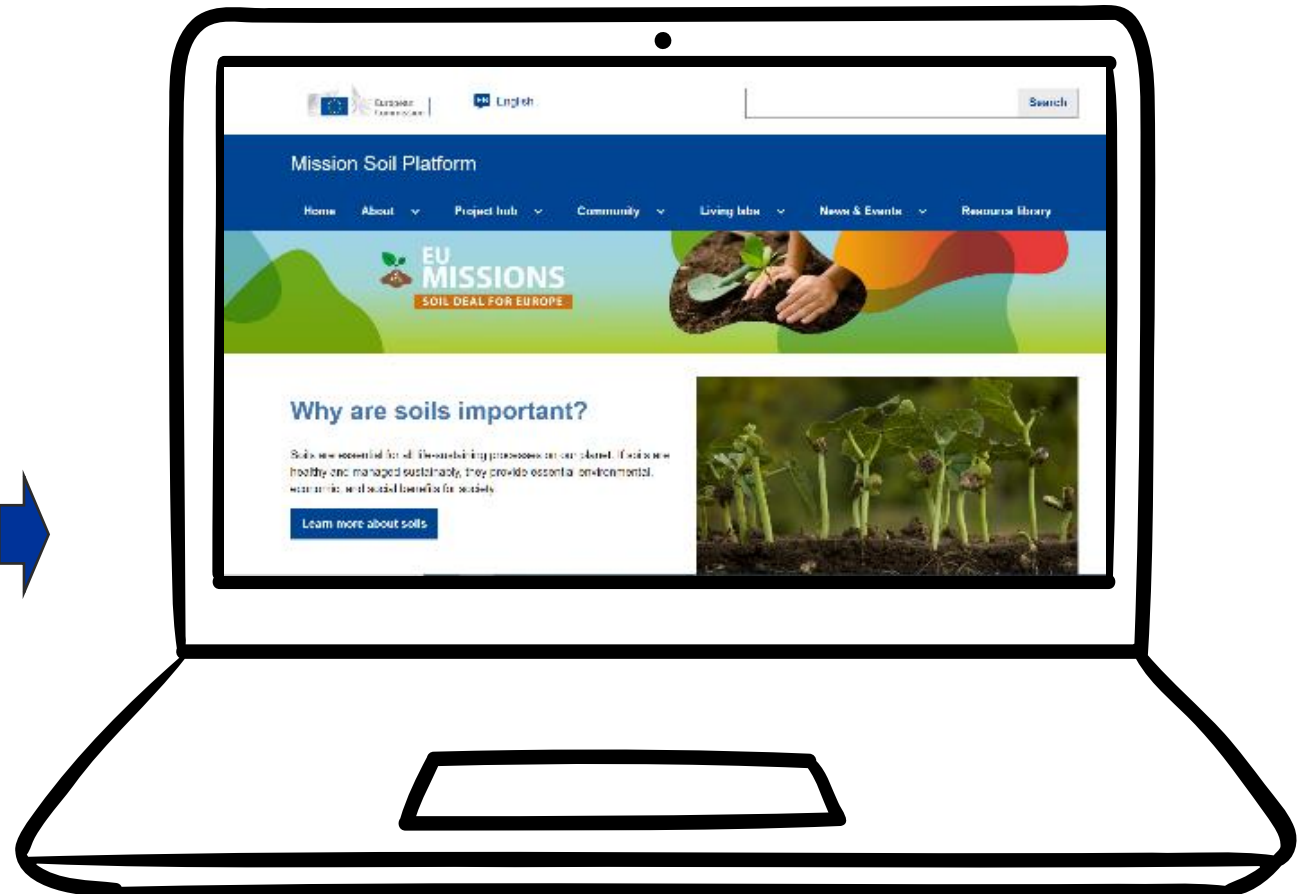




# Visit the Mission Soil Platform

- **discover** Mission Soil projects
- **check** who is taking action for soil health
- **add** your events related to soil

<https://mission-soil-platform.ec.europa.eu/>



For questions about research and Horizon Europe, you can contact the **Research Enquiry Service** via the webform: [Research Enquiry Service \(europa.eu\)](https://research-enquiry-service.europa.eu/)





# Useful links

- **Mission Soil Platform** <https://mission-soil-platform.ec.europa.eu/>
- **Official webpage** Mission A Soil Deal for Europe - [EU Mission: A Soil Deal for Europe \(europa.eu\)](https://europa.eu/eu-missions/soil-deal-for-europe)
- **Implementation Plan** Mission A Soil Deal for Europe - [EU Mission Soil Deal for Europe Implementation Plan \(europa.eu\)](https://europa.eu/eu-missions/soil-deal-for-europe/implementation-plan)
- **Factsheet** Mission A Soil Deal for Europe - [EU missions - Publications Office of the EU \(europa.eu\)](https://europa.eu/eu-missions/soil-deal-for-europe/factsheet)
- **Factsheet** Mission A Soil Deal for Europe - Living Labs - [EU mission, soil deal for Europe - Publications Office of the EU \(europa.eu\)](https://europa.eu/eu-missions/soil-deal-for-europe/living-labs)
- **Webpage** EU Missions - [EU Missions in Horizon Europe | European Commission \(europa.eu\)](https://europa.eu/eu-missions)
- **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 | \(europa.eu\)](https://www.foodforeurope.eu/podcast/15-soils-in-danger-europe-fights-back)
- **Podcast episode** Behind the Scenes - [S02/E05: A blossoming career as a soil keeper | Behind the Scenes on Acast](https://www.foodforeurope.eu/podcast/behind-the-scenes-s02-e05)
- **News article** On a mission to save our soils - the EU's plan to rebuild the land - [Futuris episode Euronews](https://www.euronews.com/futuris/2021/05/20/mission-to-save-our-soils-the-eus-plan-to-rebuild-the-land)



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# Thank you!

For further information visit the [Mission Soil Platform \(europea.eu\)](https://europea.eu)

or contact the Mission Secretariat at [EU-HORIZON-MISSION-SOIL@ec.europa.eu](mailto:EU-HORIZON-MISSION-SOIL@ec.europa.eu)

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