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EU MISSIONS



Concrete solutions for our greatest challenges

A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030

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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 mission characteristics and elements of governance, and **5 missions areas**.



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EU
MISSIONS

Five EU missions

Adaptation to
Climate Change



Cancer



Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



Soil Deal
for Europe





Life on Earth depends on healthy soils



- Healthy soils are the **basis for nutritious and safe food**
- Soils deliver **vital, interconnected ecosystem functions**: water regulation, hosting biodiversity, nutrient cycling, climate mitigation and adaptation, carrying landscapes and cultural services
- **Green Deal Targets** on climate, biodiversity, zero pollution and sustainable food systems depend on healthy soils
- Soil is a **scarce, non-renewable resource**: it takes hundreds of years to generate 1 cm of top soil but only a couple of years or less to destroy it
- **Soils are threatened: 60-70% of all soils in Europe are unhealthy** as due to current management practices, pollution, urbanisation and the effects of climate change

Soil health has been defined as “**the continued capacity of soils to support ecosystem services**”.



We need to act now

Soils need our attention! EU Examples:

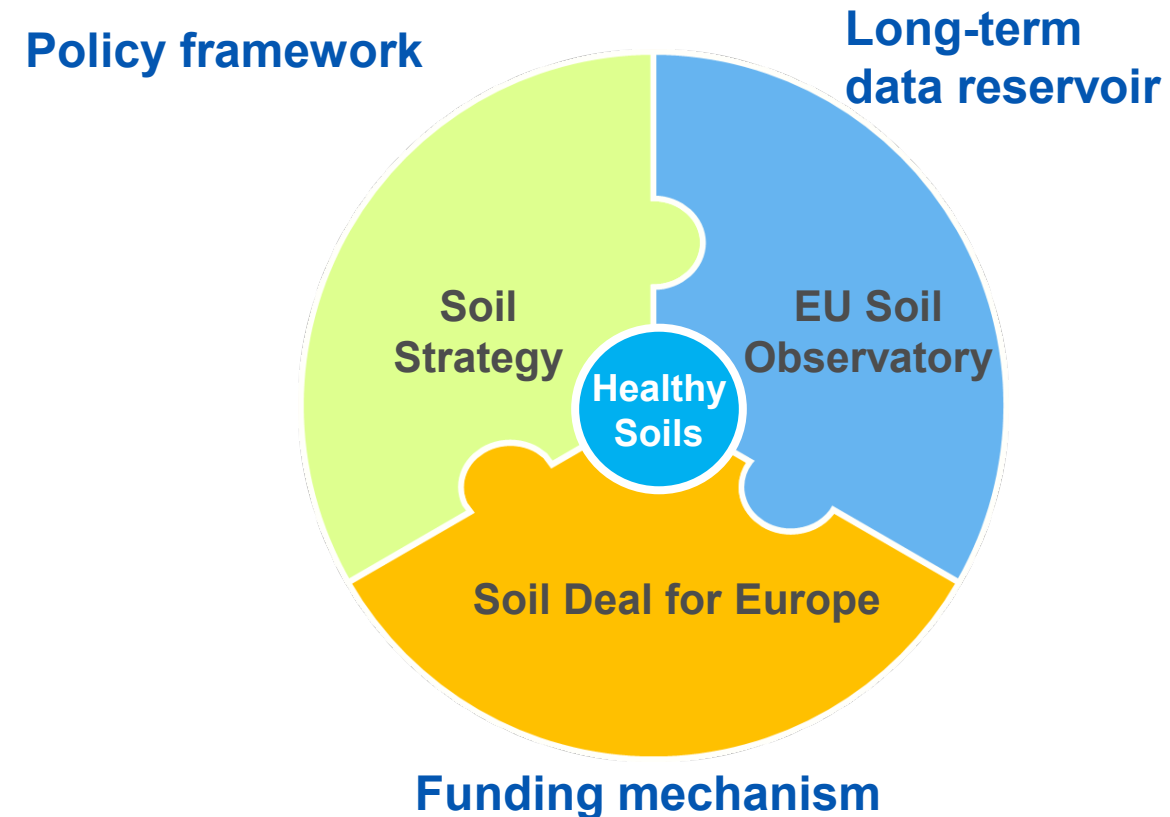
- 2.8 million potential **contaminated sites** (only 24% inventoried) posing major health risks
- 65-75% of agricultural soils with nutrient inputs at levels risking **eutrophication of soils and water** and affecting biodiversity
- Cropland soils **losing carbon** at a rate of 0.5% per year; 50% of peatlands drained and losing carbon – this is contributing to the climate crisis
- 24% of land with **unsustainable water erosion rates**
- 25% of land at High or Very High risk to **desertification** in Southern, Central and Eastern Europe in 2017
- The **costs associated with soil degradation in the EU exceed 50 billion € per year**

The effects of climate change put further pressure on soils and accelerate land degradation!



Added value of mission Soil Deal for Europe

- **Novel approach to R&I:** Combination of R&I activities, local testing grounds, monitoring and training activities in a joined up manner that could not be implemented by individual parts of Horizon Europe or other instruments at EU or Member State level
- **Mobilisation of diverse actors** across EU, Member State and society in ways that would not happen otherwise
- New Soil Strategy, European Soil Observatory and Mission together build an **effective framework for soil protection and restoration**





The mission contributes to the Green Deal

Mission is integrated in:

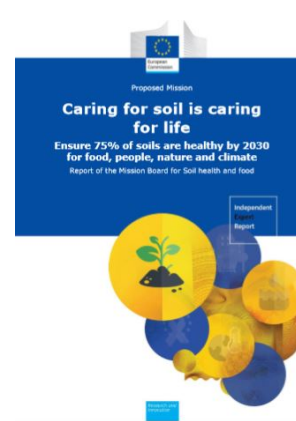
- Farm to Fork Strategy
- EU Biodiversity Strategy for 2030
- Climate Adaptation Strategy
- Forest Strategy
- Zero Pollution Action Plan for air, water and soil
- Organic Action Plan
- Long term vision for rural areas
- new Soil Strategy (to come)





Co-creating the soil mission - from the MB report to the COM

Mission Board "Soil health and food"



R&I days 2020

the Mission Board hands over its report **"Caring for soil is caring for life"**



September 2019

R&I days 2019

creation of the Mission Board and the Mission Assembly Soil health and food

until September 2020

the Mission board prepares its recommendation for a mission with involvement of Member States, the Mission Assembly as well as stakeholders and citizens: more than 60 events to promote and co-create the mission all around Europe

September 2020

until June 2021

Commission services prepare the **mission implementation plan (IP)** with the advise of the Mission Board

29 Sept 2021

Official launch of the missions through a **Commission Communication**



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A Soil Deal for Europe – Goal: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030

1. Reduce **desertification**

2. Conserve **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

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



Specific targets (as specified in other Strategies and Plans)

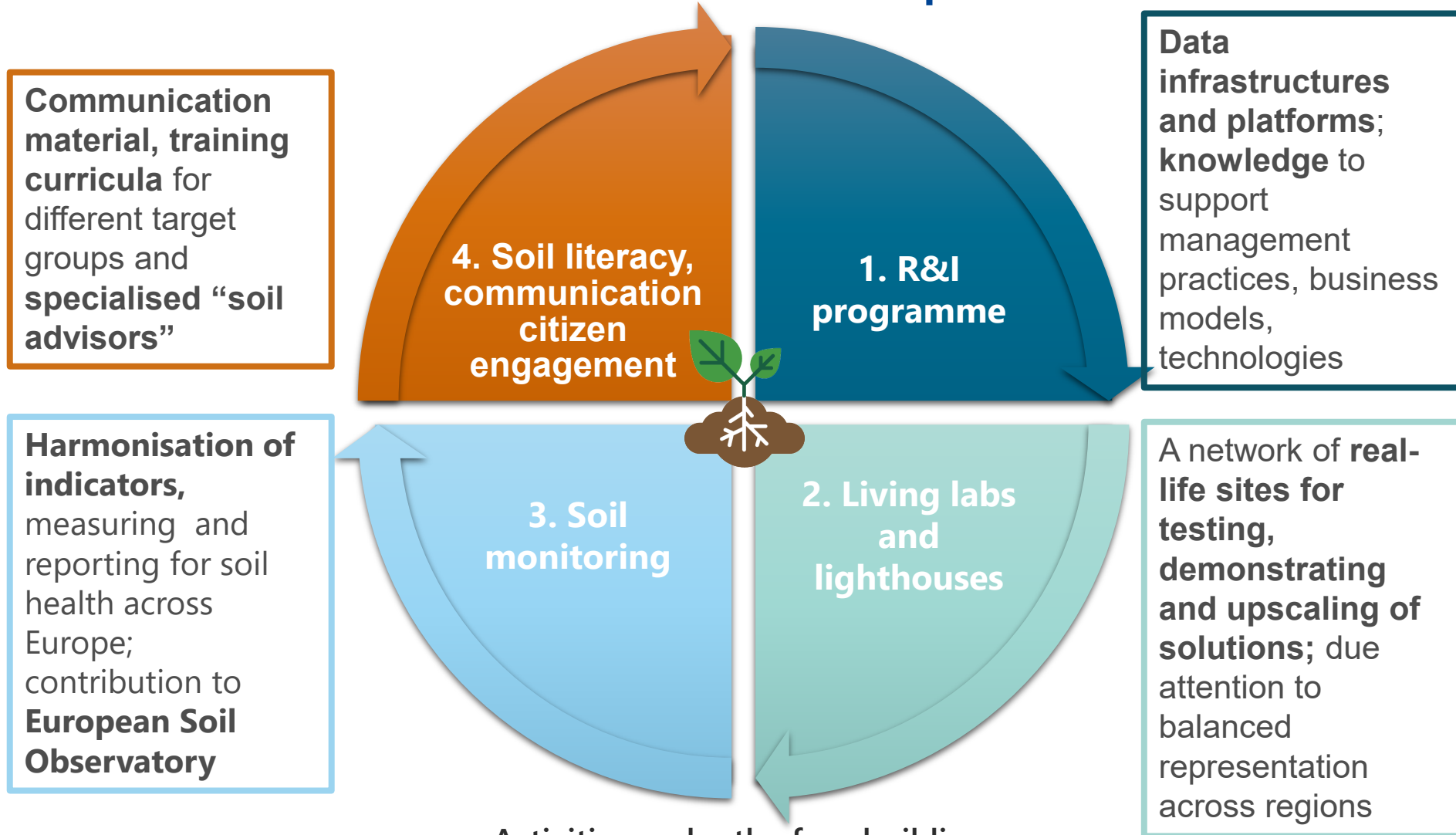


1. Halt desertification and start restoration (-25% in specific areas)
2. Reverse soil carbon losses to an increase of 0.1 to 0.4% pa on cultivated land and increase the natural sink of peatlands
3. Stop soil sealing (-2.4%) and increase re-use of urban soils
4. Reduce soil pollution and enhance restoration (-50% pesticides; -50% nutrients; -20% fertilizer; -30% microplastics; achieve 25% organic)
5. Prevent and stop erosion to sustainable levels (-25%)
6. Reduce compaction of soils (-23 to 33%);
7. Reduce the global footprint of EU's food and timber imports on land degradation
8. Improve soil literacy in all Members States

... to be achieved via actions across all types of land use



How will the mission be implemented?



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

Who will act?

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





Details are in the Mission Implementation Plan

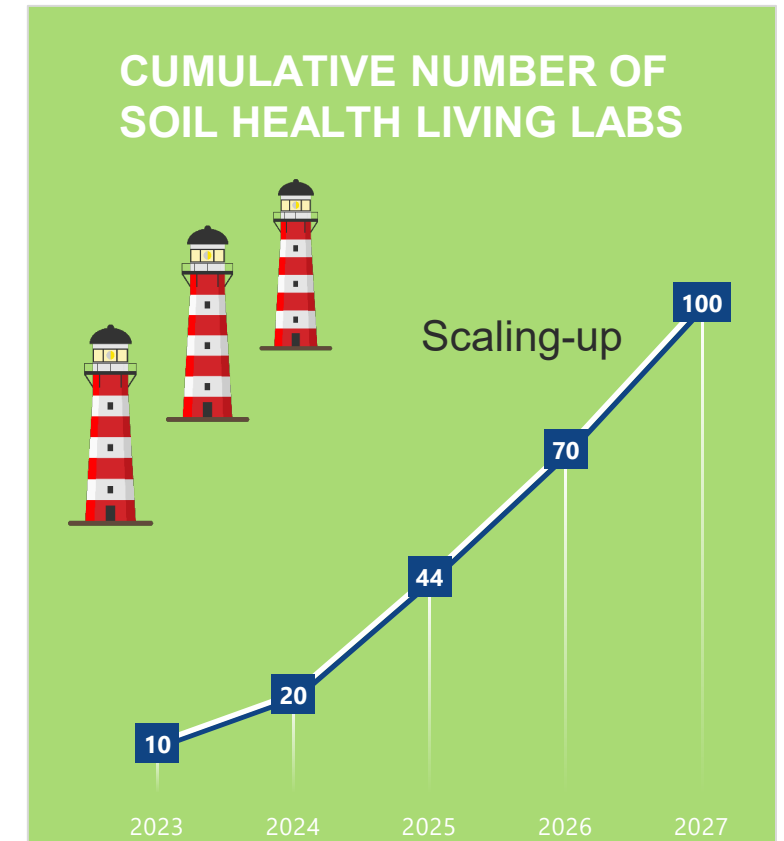
- Do read this for details as to topics likely to come up in mission calls
- There are a lot of specific topics outlined - too many to list here....





Creation of 100 Living Labs and Lighthouses

- **Living labs are a core element of the mission** – it reflects the ambition to “do research in new ways”: participatory, interdisciplinary, intersectoral.
- **Living labs (LLs)** are “real-life” places for experiments and innovation: each living lab corresponds to a cluster of sites working together at regional or sub-regional level.
- **Lighthouses** are individual places to showcase good practices. Can be from within or outside LLs.
- **Network of living labs** to be gradually established through consecutive calls for living labs under the various Work Programmes of Horizon Europe.
- Specific criteria for living labs have been developed under the mission to ensure **common approach and comparability of data and experiences**.





Useful links

- **Mission Soil Deal for Europe webpage** - <http://ec.europa.eu/mission-soil>
- **EU mission Soil Deal for Europe – Implementation Plan** https://ec.europa.eu/info/files/eu-mission-soil-deal-europe-implementation-plan_en
- **Press release – missions launch:** https://ec.europa.eu/commission/presscorner/detail/en/IP_21_4747
- **EU missions** https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe_en
- **Video** https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb_logo
- **Mission report handover to the European Commission (EU R&I Days 2020)** <https://youtu.be/oAG5-CQIOoc>
- **Soil mission session (EU R&I Days 2020)** <https://research-innovation-days-conference.online/hubs/mission>
- **On a mission to save our soils - the EU's plan to rebuild the land (Futuris episode, euronews)** <https://www.euronews.com/2020/09/21/on-a-mission-to-save-our-soils-the-eu-s-plan-to-rebuild-the-land>



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Thank you!



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