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

New instrument under Horizon Europe to address major societal challenges. Expected to have strong visibility and impact.

Commission’s Communication on European missions (29 September 2021) marks the official launch of the missions:

- Adaptation to Climate Change
- Cancer
- Climate-neutral and Smart Cities
- Restore our Ocean and Waters
- Soil Deal for Europe
A Soil Mission to support the Green Deal

Examples of Green Deal Targets related to soil health

**By 2030**

- 25% of land under organic farming
- Reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50%
- Reduce fertilizer use by at least 20%
- Reduce nutrient losses by at least 50%
- Reduce by 30% microplastics released into the environment
- Reduce net greenhouse gas (GHG) emissions by at least 55% compared to 1990 levels.

**By 2035**

- the EU should aim to reach climate neutrality in the land use, forestry & agriculture sectors

**Mission part of:**

- 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 (end of 2021)
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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 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.
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- According to an analysis by the Mission Board and the JRC, **60-70% of all soils in Europe are “unhealthy”, i.e. fail critical thresholds** with regard to proposed soil health indicators;
- **Cropland soils are losing carbon** at a rate of 0.5% per year; 50% of **peatlands** are drained and losing carbon;
- Mission **targets**:
  - Current carbon concentration losses on cultivated land are reversed to an increase by 0.1-0.4% per year;
  - The area of peatlands and wetlands losing carbon is reduced and the natural sink is significantly increased to help meet GHG reduction targets by 2030 and the Climate law goal by 2050.
The mission’s building blocks

1. R&I programme
2. Living labs and lighthouses
3. Soil monitoring
4. Soil literacy, communication and citizen engagement

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

Overall Timeline: 2021 – 2027 (2030)
Horizon Europe budget: 320m€ for period 2021-2023

CUMULATIVE NUMBER OF SOIL HEALTH LIVING LABS
The mission’s building blocks and activities/outcomes in relation to carbon farming

1. R&I programme
   - Knowledge, data platforms and technologies to support practices and business models for carbon farming.

2. Living labs and lighthouses
   - A network of real-life sites for testing, demonstrating and upscaling of solutions, incl. on carbon farming*.

3. Soil monitoring
   - Harmonisation of EU soil health monitoring, reporting and verification. Basis for developing a robust system for carbon credits

4. Soil literacy, communication citizen engagement
   - Communication material, training curricula for different target groups; development of specialised “soil (carbon) advisors”

Carbon farming identified as an R&I “hotspot”. e.g. Organic Action Plan highlights the role of the Soil mission to contribute to climate neutral holdings, incl. through its network of LLs and LHs.

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Useful links

- Video [https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb_logo](https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb_logo)
- Soil mission session (EU R&I Days 2020) [https://research-innovation-days-conference.online/hubs/mission](https://research-innovation-days-conference.online/hubs/mission)
Thank you!

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