



Soil Mission Support: Towards a European research and innovation roadmap on soils and land management

Project

Research Program

[Horizon 2020](#)

Duration

Nov 2020 - Oct 2022

[SMS Website](#)

Land and soils are essential for life on Earth. They supply humanity with food, purify water, store carbon and support a rich biodiversity. Yet one third of the global land is considered as degraded and this process is continuing due to higher food production, urbanization and industrial activity. Research and innovation can play a key role in reversing this trend. In a new Horizon 2020 project, Ecologic Institute develops a roadmap for research and innovation on soil systems and land management – jointly with stakeholders. The Soil Mission Support project will thus improve coordination in this field and support the EU Mission on Soil Health and Food, the European Green Deal, and contribute to reach the Sustainable Development Goals (SDGs).

Main objectives

The Soil Mission Support (SMS) pursues the following objectives:

- It facilitates the coordination of R&I activities in Europe and globally by mapping and assessing of R&I and identifying major gaps of existing R&I on soil and land management.
- It contributes to the demonstration of good practices for land and soil management research using Living Labs and Lighthouses.*
- It brings together communities from various disciplines and sectors to develop a European roadmap for R&I on soils and land management.

* Living Labs are spaces for co-innovation through participatory, transdisciplinary and systemic research in a real-life context, and Lighthouses are places for the demonstration of solutions, training and communication context.

Methodology

SMS applies a multi-actor approach involving all relevant stakeholder groups (e.g. researchers, practitioners, young professionals, policy makers and informed citizens), sectors (e.g. agriculture, forestry, spatial planning, land remediation, climate action and disaster control) as well as policy fields.

The project will apply a transdisciplinary method to compile, review and summarize the state of the art, identify knowledge gaps and priority areas for soil and land management-related R&I across land uses and soil functions. In addition, the SMS project will define and set strategic criteria for Living Labs and Lighthouses. Based on the gathered knowledge gaps and priority areas, an EU R&I roadmap for sustainable soil and land management will be co-designed. A living platform will facilitate the continuing development and implementation of the roadmap.

Ecologic Institute's role in the project

In the SMS project, Ecologic Institute leads the work on the development of the co-designed roadmap for R&I on soil systems and land management. This Roadmap will describe the route towards getting the right R&I available for the actor group. For this purpose, the roadmap provides actions at certain points in time, short-, mid- and long-term targets, as well as key performance indicators. Ecologic Institute also contributes to the mapping of relevant soil and land management actors and their needs as well as stakeholder engagement activities.

Background

Healthy soils are fundamental for sustainable development and play a major role in food security, biomaterial provision, climate change mitigation and adaptation, resource efficiency, flood control and biodiversity maintenance. The achievement of many SDGs depends either directly or indirectly on land management and soil functions.

However, the increasing demands for soil-based production (food, feed and fibre), along with urbanization increase, competition for land and very often result in overexploitation of land, land use change and soil degradation. The European Commission has expressed the need and asked to take action for maintaining soil health and soil functions, and initiated the Mission on Soil Health and Food.

The key challenge for sustainable soil and land management is associated with mitigating the trade-offs and improving synergies between the SDGs. This requires that all key stakeholders are involved and that communities active in soil-related science, policy and practice all work together.

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Partner

[Federal Office of Agriculture and Food](#) (BLE), Germany
[Leibniz Centre for Agricultural Landscape Research](#) (ZALF), Germany
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[Deltares](#), Netherlands
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[National Research Institute for Agriculture, Food and Environment](#) (INRAE), France
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