

Nóvoa, T., Roca, R. & Naciph, K. (2025). Identification and description of the KPIs to monitor the Mission R&I priorities.

Deliverable D5.2 Horizon Europe.

1. Percent of land managers having changed or adopted one or more of their practices in a direction improving soil health

QUANTITATIVE



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INTRODUCTION

SOLO introduces a comprehensive impact assessment framework designed to evaluate the real-world effects of Mission Soil research and innovation activities across society, the economy, policy, and practice. This adaptable tool supports Mission Soil projects in monitoring and evaluation, with future potential for ex-ante assessment and project design. Beyond defining key components, qualitative indicators, quantitative metrics, and impact narratives, SOLO also outlines the mechanisms needed to effectively implement the framework in practice.

The assessment framework allows for the evaluation of 5 types of impact of Mission Soil Research and Innovation (R&I) activities:

- 1 **Project impact in practice:** focus on impact among land managers, advisors, urban planners and other stakeholders;
- 2 **Project impact on policy and administration:** focus on policy strategies and tools, and other institutional arrangements;
- 3 **Project impact on value chain organisation and practices:** focus on market mechanisms, business models and requirements;
- 4 **Broader societal impact:** focus on literacy, awareness, school programmes and education;
- 5 **Impact on research and innovation:** focus on academic institutions, researchers, publications and funding.

These 5 types of impact correspond to categories under which key performance indicators, both quantitative and qualitative, are grouped.



The other component of the impact assessment framework is the **impact narrative**: a compelling, substantiated statement which reflects the contributions of R&I activities to society, the economy, policy and practice beyond numbers and quantitative targets.

An **impact narrative** must describe the societal challenge to be tackled; identify the stakeholders and beneficiaries who are positively impacted, explaining how they have experienced meaningful change; describe the situation at the start of the project vis-a-vis the goal of the assessment; describe the specific outcomes and results of the R&I activities; describe changes in behaviour, practices and policies; include real-world examples and stories; be supported by quantitative and qualitative evidence; connect the impact to broader societal goals; and provide insights into the potential future implications and opportunities resulting from the developed R&I.

Percent of land managers having changed or adopted one or more of their practices in a direction improving soil health

DESCRIPTION AND IMPORTANCE

Accounting for the number of land managers that changed land management practices towards soil health in a significant share of the soil they manage, indicates the extent to which Mission Soil's initiatives are being up taken by practitioners; consequently, this data is indicative of the Mission's impact in supporting societal change (Pfeifer & Helming, 2024).

Practices identified in literature as regenerative of soil health are (list to be completed):

- **For farming:** no-tillage or reduced tillage, intercropping, diversified crop rotation, cover crop, maintenance of crop residues (used as green manure), cultivation of nitrogen-fixing plants, mulching, and manuring and compost application (Alliance Environnement, 2021).
- **For forestry:** limit the area of compacted soils, limit impacts of roads and landings, limit soil disturbance and control erosion, maintain favourable conditions for forest growth, retain and enhance carbon storage, maintain soil productivity by soil testing and fertilization if needed, identify and retain preferred tree and understory species (USDA, 2019).
- **For urban soils:** innovative urban agriculture methods (e.g., green walls), green spaces sustainably managed, biological connectivity (i.e., blue, green and brown corridors) (BENCHMARKS, n.d.).

DEFINITION

Number of land managers (who participate in Mission Soil projects including Living Labs or activities financed by private investment) that changed practices in at least 25% of the land they manage towards soil health per total number of land managers.

MEASUREMENT

Data is collected through a survey. In the survey, additional information is recorded:

- **Land manager characterisation:** type of land manager (agriculture, forest, nature conservation, urban)
- **Property characterisation:** total area (ha)
- **Soil monitoring procedures**

The survey may be applied by one of the following methods:

- **Determining the baseline assessment:** At the start of the project, assess if land managers are applying practices for soil health and to which rate of the property (0%, 1-25%, 26-50%, 51-75%, 76-100%), at that point in time (question 2A). Towards the end of the project (4-year interval), assess if land managers have changed or adopted practices for soil health and in the rate of property included (question 2B).

- ☒ **No baseline assessment:** Assess if land managers have made changes to their practices, and to which rate of the property (0%, 1-25%, 26-50%, 51-75%, 76-100%), towards the end of the project (question 2C). Allows to bypass the inexistence of a baseline assessment.

Questions 1, 3 and 4 presented below are common to both methods. Only questions 2 (A, B and C) differ.

1 Type of land manager

2 Land management practices (*When determining the baseline assessment*):

- ☒ 2A. Over the last year, did you apply any practices that contribute to soil health? (Circle all that apply)

- Reduced tillage and no-tillage
- Intercropping
- Diversified crop rotation
- Cover crop
- Maintenance of crop residues (used as green manure)
- Cultivation of nitrogen-fixing plants
- Mulching
- Manuring and compost application
- Desealing of soil surfaces
- Installing permeable pavements
- Decontamination
- None

- ☒ 2B. As a result of [project/LL name], did you apply any practices that contribute to soil health over the last 4 years? (Circle all that apply)

LEVEL

NUTS level 3

DATA SOURCE

Project reporting; Survey

PERIODICITY

Quadrennial

TYPE

Impact

CLASS

Practice take-up



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