

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

Deliverable D5.2 EU Horizon Europe.

4. Number of soil health related trainings per type of stakeholder target and per level of learning outcomes

QUANTITATIVE



Funded by
the European Union

SOLO receives funding from the European Union's Horizon Europe Research and Innovation programme under grant agreement No. 101091115. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the EU nor the EC can be held responsible for them.

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.

Number of soil health related trainings per type of stakeholder target and per level of learning outcomes

DESCRIPTION AND IMPORTANCE

Assess the capacity of the Mission Soil R&I funded projects to transfer knowledge across sectors, by measuring the number of soil health related training sessions per type of stakeholder target and per level of the learning outcomes.

Training sessions refer to all activities designed to achieve particular learning objectives (UNESCO Institute of Statistics, n.d.) about soil health.

To better assess the training sessions' impact, the number of participants per type of stakeholder will also be assessed, as well as the duration of the training and level of the learning outcomes.

Concerning the learning outcomes, the European Qualifications Framework (EQF) will be used as reference. Even though EQF's main purpose is "to make qualifications more readable and understandable across different countries and systems" (CEDEFOP, n.d.) (e.g., determining the correspondence between master's degrees in different countries), it describes levels of learning outcomes expressing "what individuals know, understand and are able to do at the end of a learning process" (CEDEFOP, n.d.).

While adapted to the context of training sessions organised in the scope of Mission Soil projects (and not to formal education degrees), the EQF's levels of learning outcomes are a useful tool to assess how specialised and/or advanced the trainings are. Learning outcomes are also directly connected to the prior level of expertise of the targeted participants (e.g., a training session targeted at participants with no knowledge of soil health is very unlikely to provide learning outcomes beyond level 3; whereas a training sessions targeted at soil health experts may result in learning outcomes of level 7 or 8).

Following the European Qualifications Framework (EQF), the levels of learning outcomes are defined as follows (CEDEFOP, n.d.):

● Level 1:

- Knowledge: Basic general knowledge
- Skills: Basic skills required to carry out simple tasks

● Level 2

- Knowledge: Basic factual knowledge of a field of work or study
- Skills: Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools

● Level 3

- Knowledge: Knowledge of facts, principles, processes and general concepts, in a field of work or study

- Skills: A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information

● Level 4

- Knowledge: Factual and theoretical knowledge in broad contexts within a field of work or study
- Skills: A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study

● Level 5

- Knowledge: Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge
- Skills: A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems

● Level 6

- Knowledge: Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles
- Skills: Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study

● Level 7

- Knowledge: Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research; Critical awareness of knowledge issues in a field and at the interface between different fields
- Skills: Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields

● Level 8

- Knowledge: Knowledge at the most advanced frontier of a field of work or study and at the interface between fields
- Skills: The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice

DEFINITION

Number of training sessions on soil health per type of stakeholder target and per level of learning outcomes.



MEASUREMENT

This indicator is measured by the number of training sessions on soil health organised within the scope of projects funded by the Mission Soil.

The KPI is disaggregated by:

🕒 Number of participants per type of stakeholder:

- Government / Public Administration representatives
- Land managers / Practitioners
- Researchers
- Private Sector / Industry
- Non-Governmental Organisations
- Civil Society / Citizens

🕒 Duration of the training sessions:

- ≤ 4 hours (≈ half-day)
- 5 – 8 hours (≈ 1 day)
- 9 – 16 hours (≈ 2 days)
- 17 – 24 hours (≈ 3 days)
- 25 – 40 hours (≈ 1 working week)
- 41 – 80 hours (≈ 2 working weeks)
- 81 – 160 hours (≈ 1 month)
- > 160 hours (> 1 month)

🕒 Level of learning outcomes:

- Level 1
 - Level 2
 - Level 3
 - Level 4
 - Level 5
 - Level 6
 - Level 7
 - Level 8

Data is collected from project reports.



LEVEL

NUTS level 2

DATA SOURCE

Project reporting

PERIODICITY

Quadrennial

TYPE

Output

CLASS

Capacity building

REFERENCES

Carayannis, E. G., & Campbell, D. F. J. (2009). "Mode 3" and "Quadruple Helix": toward a 21st century fractal innovation ecosystem. In *International Journal of Technology Management* (Vol. 46, Issues 3–4, pp. 201–234). Inderscience Publishers. <https://doi.org/10.1504/ijtm.2009.023374>

CEDEFOP. (n.d.). *European qualifications framework* (EQF). Retrieved May 21, 2025, from <https://www.cedefop.europa.eu/en/projects/european-qualifications-framework-eqf>

Iackstock, K., Flanigan, S., Creaney, R., Matthews, K., Hopkins, J., Miller, D., Ahmed, A., Chabdu, A., Bacigalupo, A., & Thompson, C. (2022). D4.3 - *Participatory value chain analysis: report on the structure and valorisation of 23 mountain value chains across Europe, including evaluation of tele-coupling, assemblage, and enabling institutions and infrastructure*. www.moving-h2020.eu

Fialho, P., Quintini, G., & Vandeweyer, M. (2019). *Returns to different forms of job related training: factoring in informal learning* (OECD Social, Employment and Migration Working Papers, Vol. 231). <https://doi.org/10.1787/b21807e9-en>

UNESCO Institute of Statistics. (n.d.). *Glossary*. Retrieved May 21, 2025, from <https://uis.unesco.org/en/glossary>

Yacoub, C., Enriquez, S., & Ramirez, A. (2023). *Terms of Reference for the Soil Network of Knowledge Deliverable D2.2*.