

# NBSOIL

Nature-Based Solutions  
for Soil Management

## Soil Academy – Webinar Launch 5<sup>th</sup> June 2024

Start of advanced training programme



Co-funded by  
the European Union

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UK Research  
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Research and Innovation SERI

This work has received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).

# Today's agenda

10.00 – 10.10	Welcome and icebreaker	Carolyn Coxé (Soil Association)
10.10 – 10.20	Introduction of the NBSOIL Project and the role of soil advisors	Grzegorz Siebielec (IUNG)
10.20 – 10.30	Mission Soil from a policy perspective	Marialuisa Dal Poz (DG Agriculture and Rural Development, European Commission)
10.30 – 10.40	PREPSOIL project and synergies with NBSOIL	Pablo Gómez Grande (INIA)
10.40 – 10.45	First interactive session	Ana Allamand (Soil Association)
10.45 – 10.55	Introduction of the NBSOIL Academy	Carolyn Coxé (Soil Association)
10.55 – 11.05	NBSOIL Academy advanced modules – co-creation process	Almudena Olivas del Rey (ITAP)
11.05 – 11.10	Second interactive session	Ana Allamand (Soil Association)
11.10 – 11.20	Coffee break	
11.20 – 11.30	What is Module 1 all about?	Vincent Levavasseur, (CNA)
11.30 – 11.40	Academy registration, platform and practical information	Javier Montellano (REVOLVE)
11.40 – 11.55	Q&A	NBSOIL Partners
11.55 – 12.00	Closing remarks	Soil Association



# Mentimeter Activity:

Go to **menti.com** and  
use the code **1868 8538**

# Introduction of the NBSOIL Project and role of soil advisors

**Grzegorz Siebielec (IUNG)**

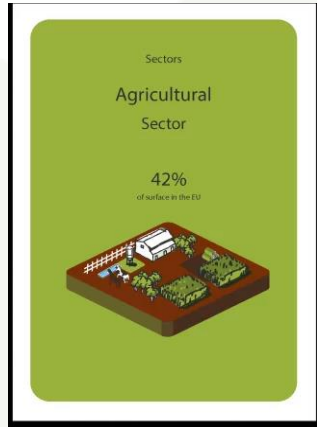




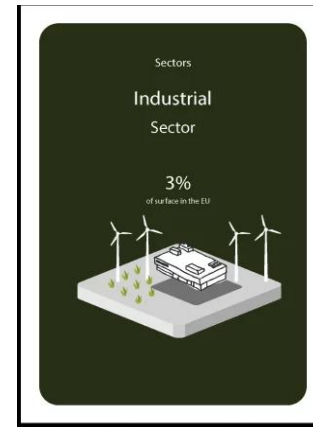
## What does it mean to be a soil advisor?

*Soil Advisors are agents who assist clients in decision making, focused on soil health in agriculture, remediation, forest management, and urban spatial development.*

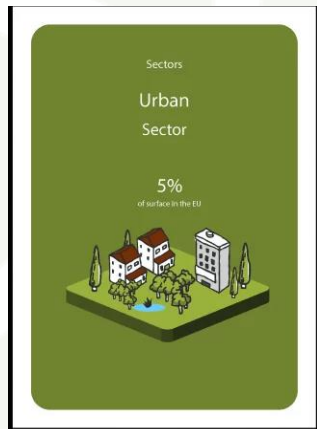
# Why are soil advisors needed?



- ✓ To activate the natural potentials of soil
- ✓ To regenerate soil
- ✓ To take care of soil health whilst creating a financial benefit for farmers
- ✓ To adapt nature-based solutions into land management



- ✓ To use the concept of soil health in soil remediation
- ✓ To provide knowledge on nature-based methods and processes, whilst ensuring these are financially viable



- ✓ To use soil management as a tool to improve living conditions in cities, including temperature and air quality control, mental wellbeing
- ✓ To prioritise soil care in spatial planning



- ✓ To prioritise good forest management and diversification vs carbon stocks
- ✓ To improve resistance to pressure on water bodies

## NBSoil - Nature Based Solutions for Soil Management

*Call: HORIZON-MISS-2021-SOIL-02-08: Next generation soil advisors*

*Duration 48 months: 1 Dec. 2022 – 30 Nov. 2026*

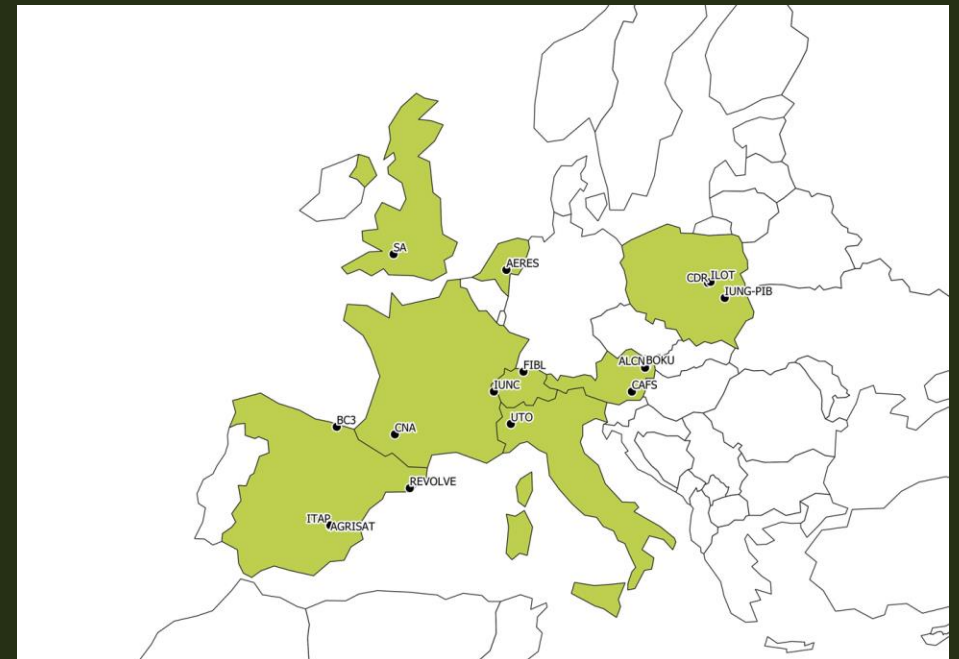
*Coordination: Institute of Soil Science and Plant Cultivation – State Research Institute*

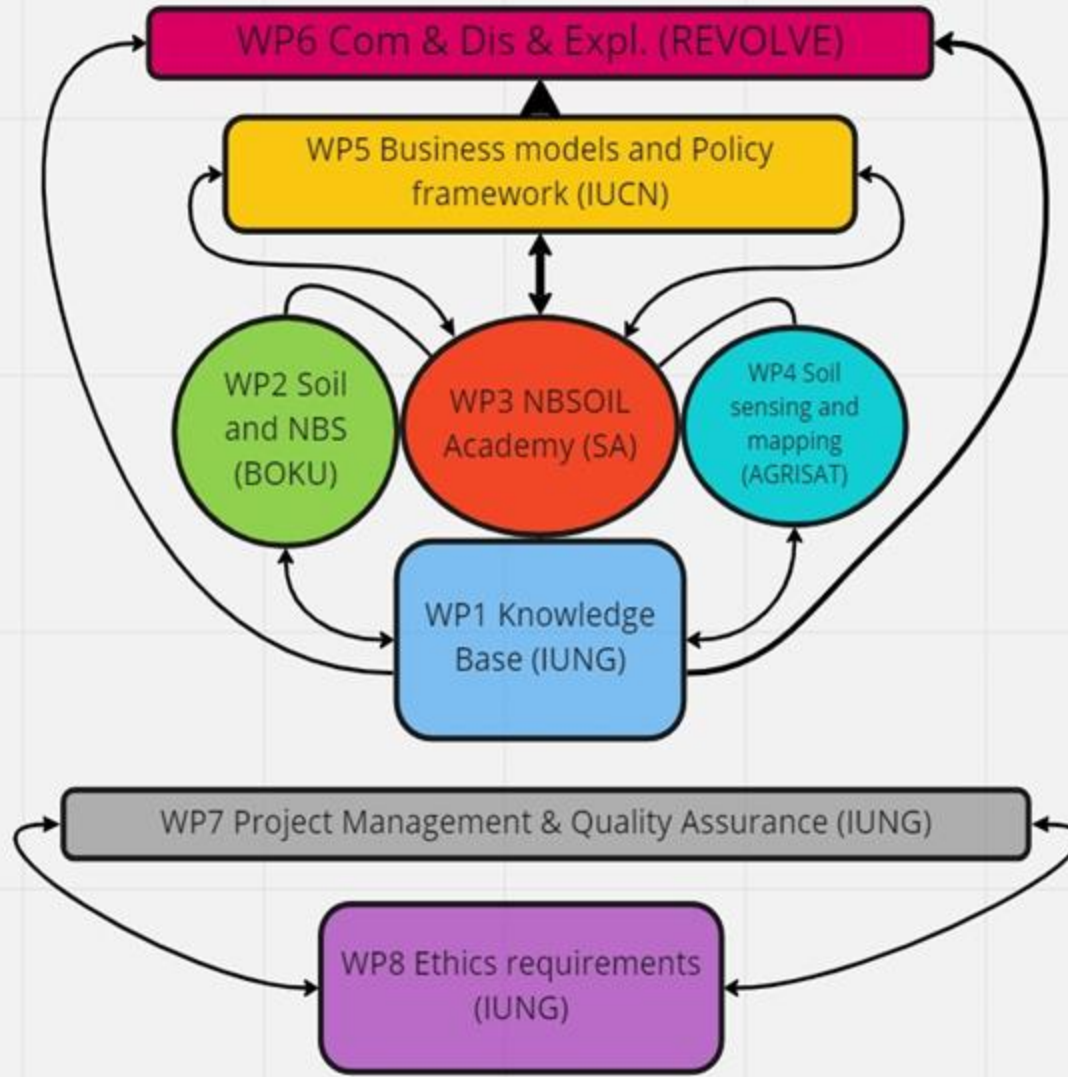
*Partners: BOKU, BC3, AGRISAT, REVOLVE, CDR, CNA, ITAP, CAFS, ALCN, ILOT, UNITO, AERES, IUCN, FIBL, Soil Association*

**NBSOIL is a four-year project which aims to co-create and test a learning pathway for existing and aspiring soil advisors**

The co-creation process will engage stakeholders such as land managers, researchers, soil advisors, community organisers, entrepreneurs, technology developers, local authorities and policy makers.

This leads to approximately 300 participants completing and co-creating training offered in 7 languages (English, Polish, German, Dutch, French, Italian, Spanish)





## NBSoil Project Structure



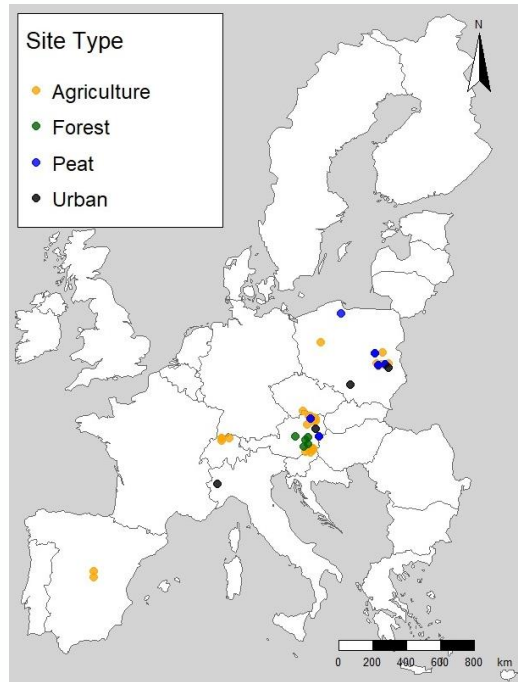
# NBSOIL

- Organic fertilisers from locally available biowastes
- Cover crops
- Paludiculture
- Forest diversification
- Bioremediation
- Blue - green infrastructure in urban and periurban areas.

Image source: IUCN (2020)



## Test areas/ field visits



*No-tillage system to protect soil against erosion (site Steinabrunn; source: Bodner)*



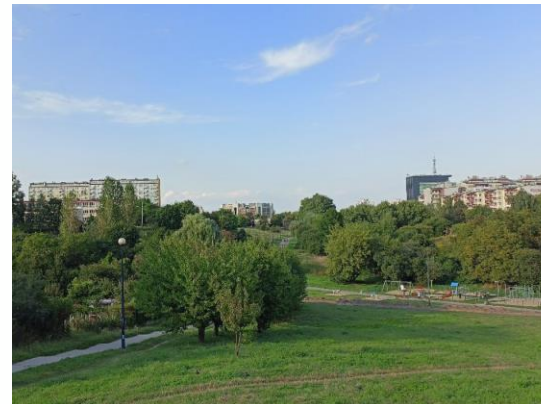
*Temporary grassland, RZD Kępa, Osiny (source: IUNG)*



*Close to nature harvesting system (source: Krogger J., CAFS)*



*Remediation testing site, Austria (source: ALCHEMIA)*

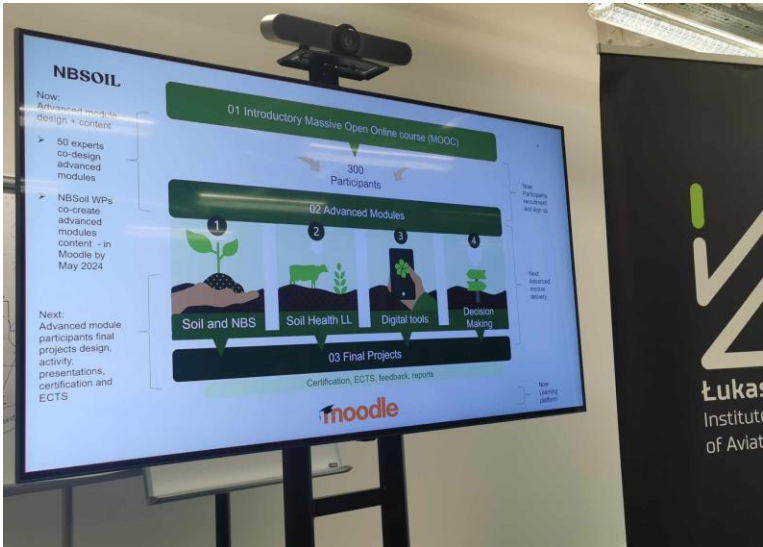
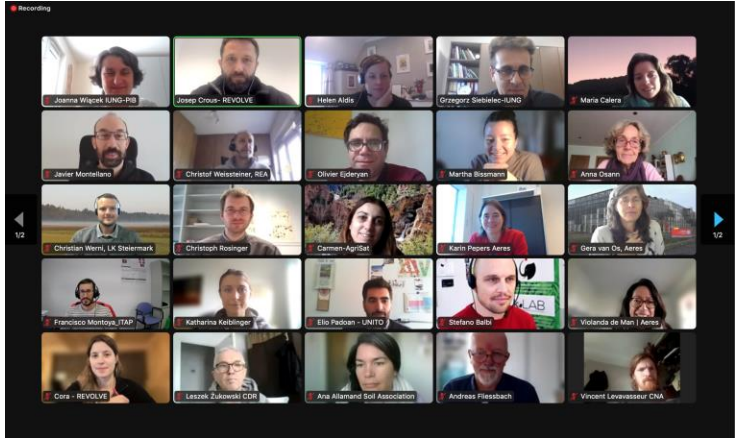


*Gorge adopted for a recreational use (LSM, Lublin) (source: L. Poreba)*



*Living Lab Turin, Italy - New generated soil for urban forestry and urban farming (Source: UNITO)*





Central point - Soil Academy

# Mission Soil from a Policy Perspective

**Marialuisa Dal Poz**

(European Commission, DG Agriculture  
and Rural Development)







EUROPEAN UNION



# EU MISSIONS

**SOIL DEAL FOR EUROPE**

NBSoil Academy Launch - 5 June 2024

**Marialuisa Dal Poz**

Research Programme Officer  
AGRI.F2 Research and Innovation  
DG Agriculture and rural development  
European Commission



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**#EUmissions #HorizonEU #MissionSoil**



## Horizon Europe 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 **5 missions areas**:

Adaptation to  
Climate Change



Cancer



Climate-neutral  
and Smart Cities



Restore our  
Ocean and Waters

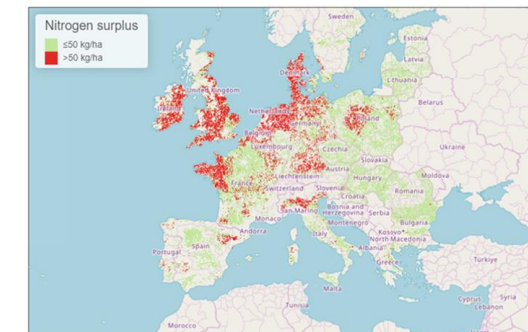
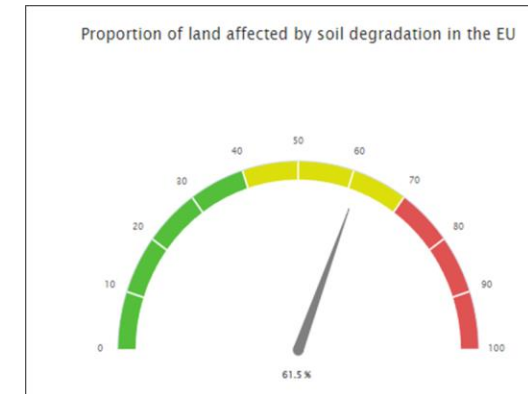
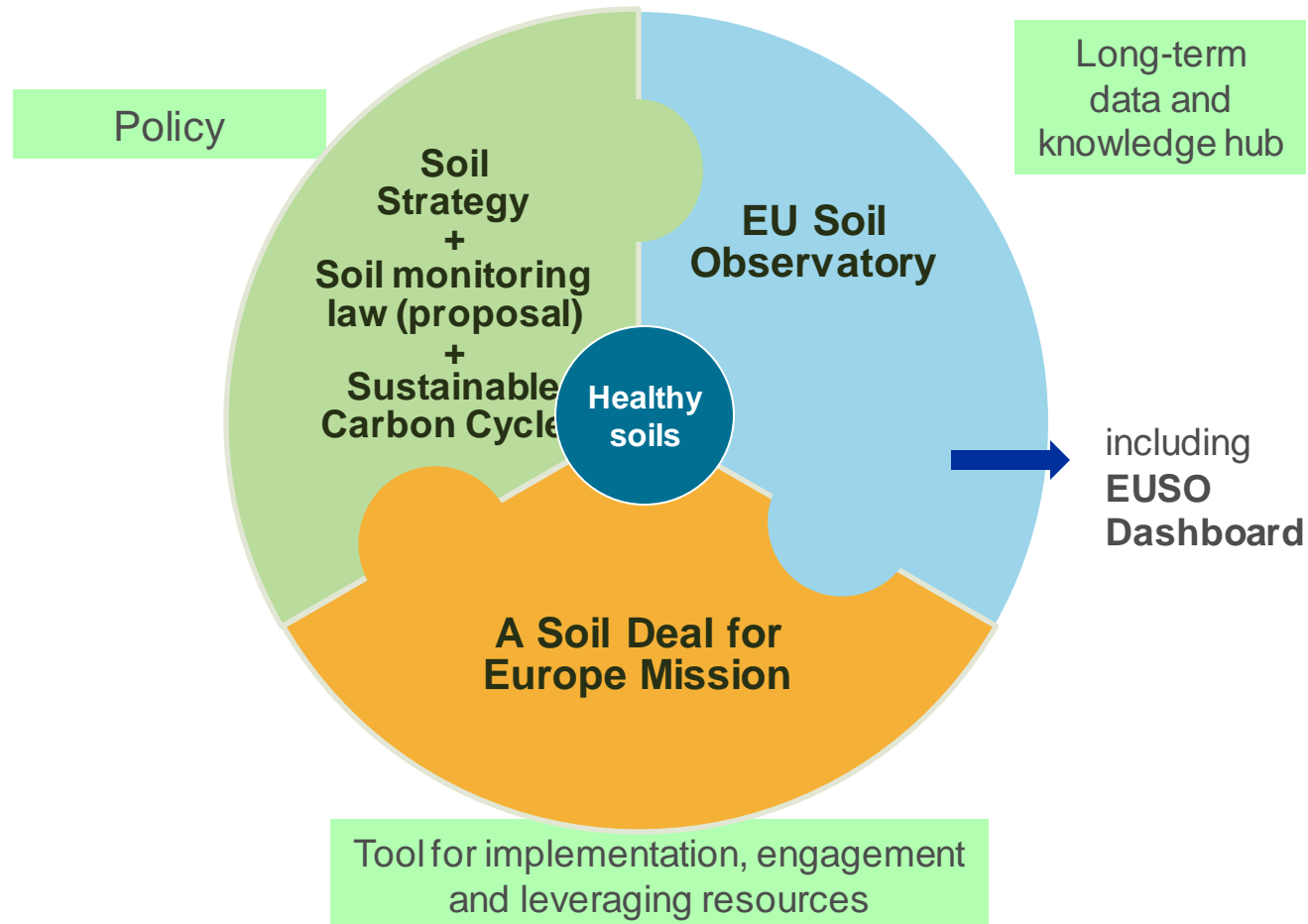


Soil Deal  
for Europe





## Policy context

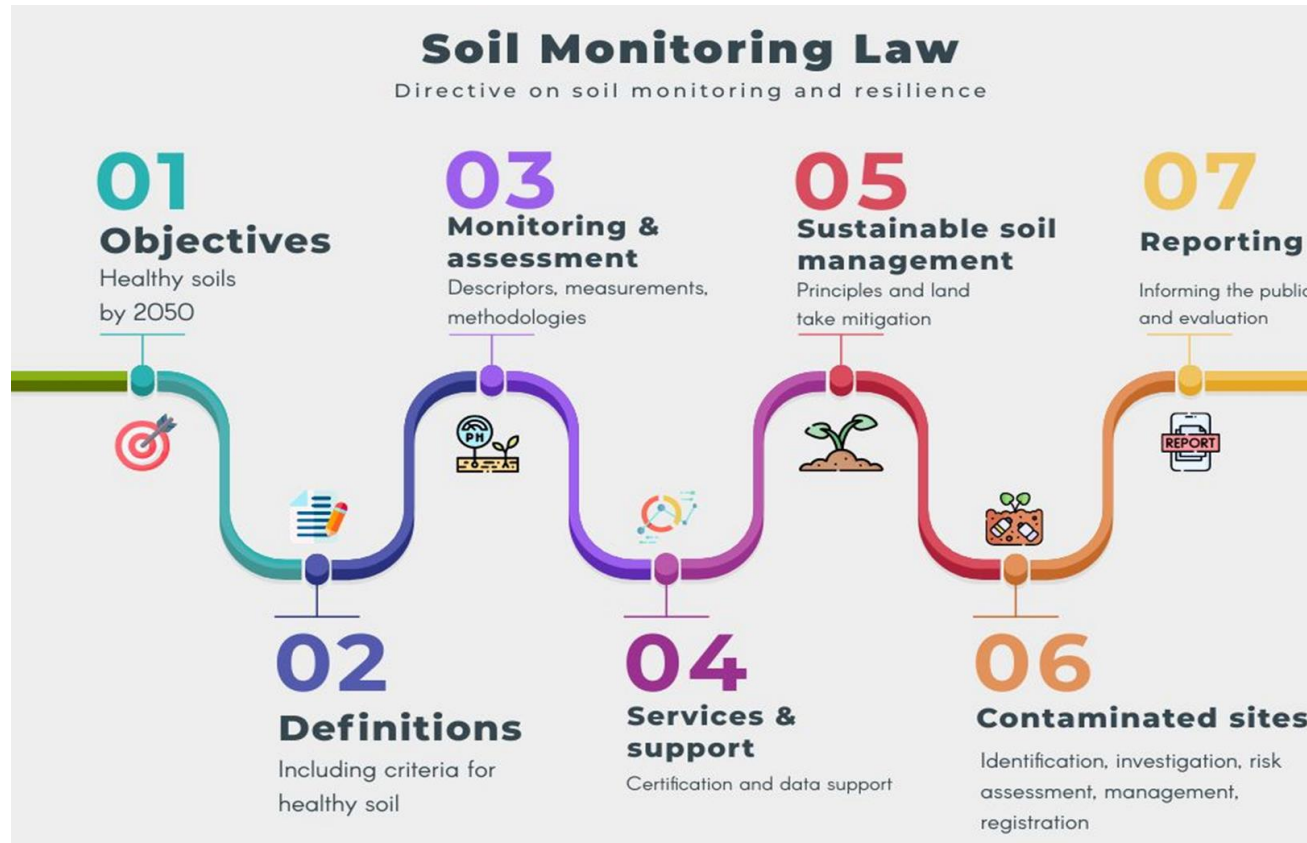


Soil Health Dashboard of the European Soil Observatory



## Directive on Soil Monitoring and Resilience (Soil Monitoring Law)

This proposal for the first-ever EU legislation on soils provides a harmonised definition of soil health, puts in place a comprehensive and coherent monitoring framework and fosters sustainable soil management and remediation of contaminated sites.



**The Mission Soil:**  
a key instrument for the implementation of this Directive





## Mission Soil Goal:

100 living labs and lighthouses to lead the transition towards healthy soils by 2030

### Specific objectives:

1. Reduce desertification

2. Conserve and increase 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

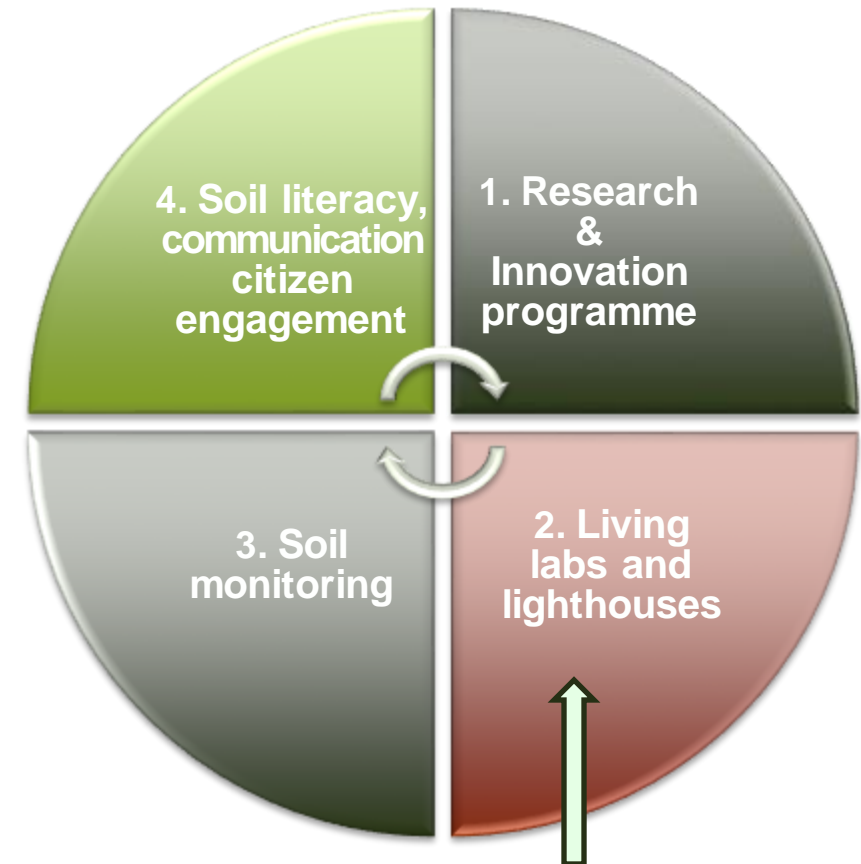
6. Improve soil structure to enhance soil biodiversity

7. Reduce the EU global footprint on soils

8. Improve soil literacy in society

Objectives apply to **all types of land use and all territories** and are relevant for a **range of sectors**.

### Building blocks:



Main vehicle for addressing the diversity of conditions and generating locally adapted solutions



# Mission Soil Living Labs and Lighthouses

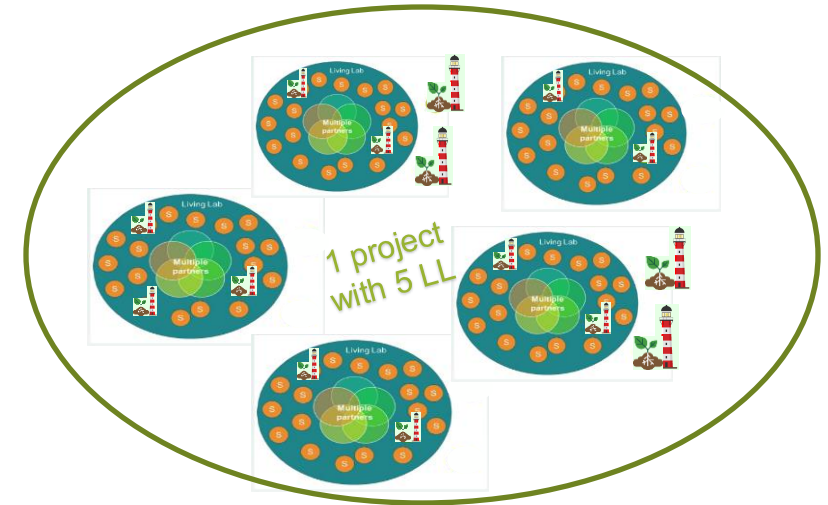
Core elements of the Mission : To empower a rapid green transition  
Living labs have the potential to accelerate and scale up uptake of solutions

## Living labs – sites for experimentation

- **Real-life sites** in rural or urban areas in which **people from various sectors and backgrounds** experiment and test solutions in a **co-creative** manner
- Each living lab is composed of a group of sites (e.g., farms, forest stands, urban green areas) working together at regional or sub-regional level

## Lighthouses – sites for demonstration of solutions

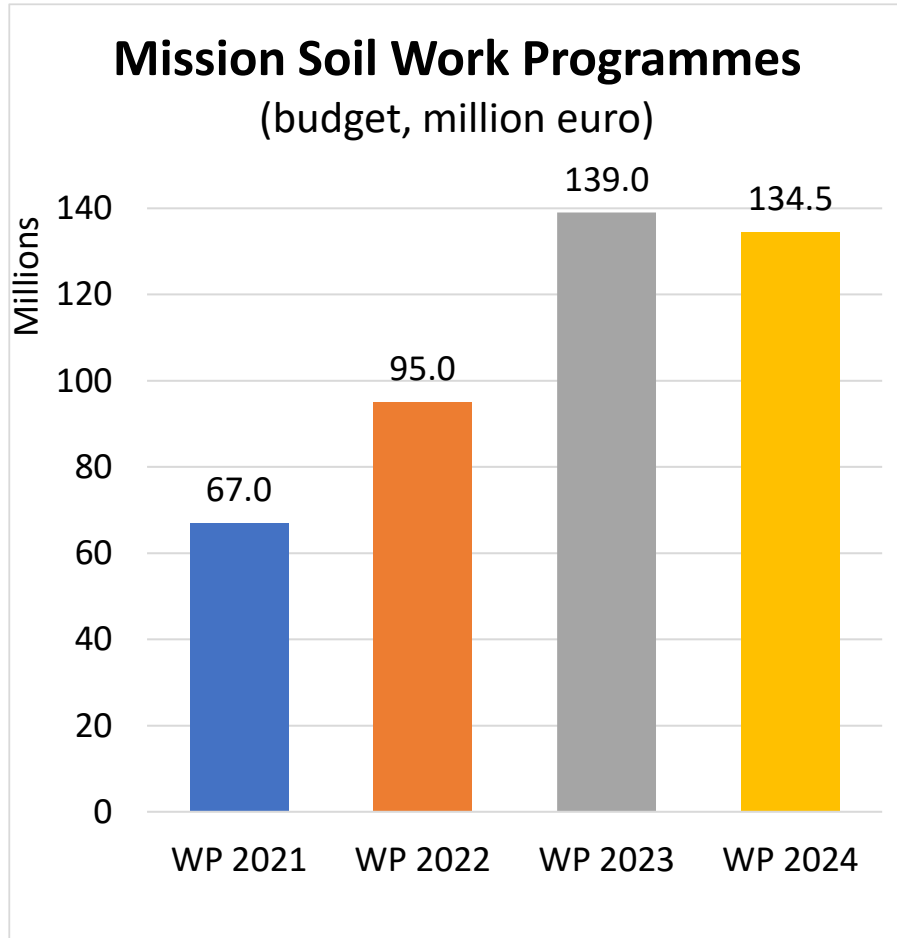
- **Individual sites**, such as a single farm, to showcase good practices
- Places for **demonstrations**, training and communication



**Work Programme 2023** launched the **1st call for a gradual establishment of a transnational network of 100 Living labs (LL)**



## Mission Soil R&I programme state of play



**Calls for proposals 2024 NOW OPEN!**  
deadline for application: 8 October 2024

### BUDGET INVESTED (2021-2023):

≈EUR 320 million

#### ➤ 2021-2022

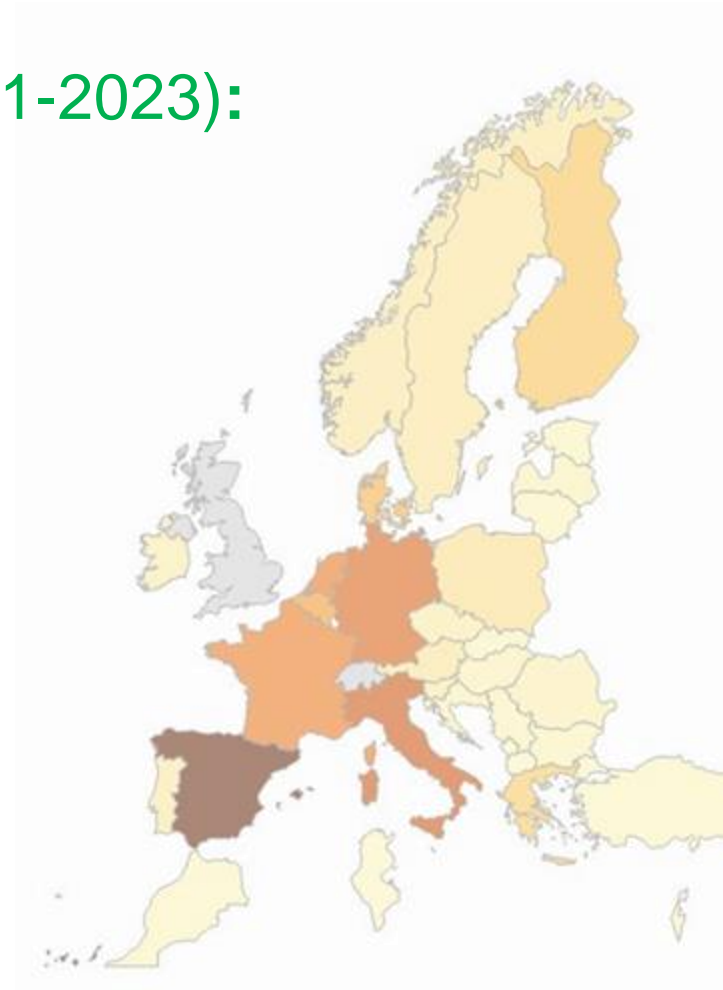
- 29 ongoing projects
- ≈360 participants

#### ➤ 2023

- +19 new projects to start soon
- First 25 living labs

#### ➤ 2024

- WP published on 17 April



> Apply in the EU Funding and Tenders Portal: <https://ec.europa.eu/>





# The next generation of soil advisors

**Mission Soil** have a clear role in **closing this knowledge-practice divide**.

**Gap:** lack of knowledge and tailored advice for land managers/owners on locally adapted practices that maintain and/or restore soil health

**Funded project : NBSOIL**



**Objective:**

- promote the emergence of specialised “soil advisors”
- to strengthen the skills of existing advisors

To promote the uptake of innovations for sustainable land management practices by farmers, foresters and other land managers and owners throughout Europe.





# The Mission Soil Manifesto

## Objective:

non-legally binding document to formalize stakeholder and citizen participation in and support to Mission activities

## Who can sign it?

Regional and local public authorities, private and public organisations, NGOs, philanthropic organisations, schools, universities, research institutes, associations, individuals

## Why to sign it?

become part of a community, gain visibility, access to Mission-led knowledge, involvement in Mission activities beyond Horizon Europe calls

Sign it!

+2926 signatories  
15% organisations

*of which  
25% local and regional  
authorities,  
associations and NGOs*





EUROPEAN UNION

# Next event: European Mission Soil Week 2024

Save the date!

12-13 November 2024

These two days will include engaging activities, keynote interventions, panel discussions, networking, and more!

Location: Brussels

On 14 November, there will be an **exclusive side event**, open to Mission Soil funded projects only, featuring cluster meetings on data and knowledge management, soil indicators and monitoring, as well as communication and stakeholder engagement.

Stay tuned! [European Mission Soil Week 2024 | Mission Soil Platform \(europa.eu\)](#)



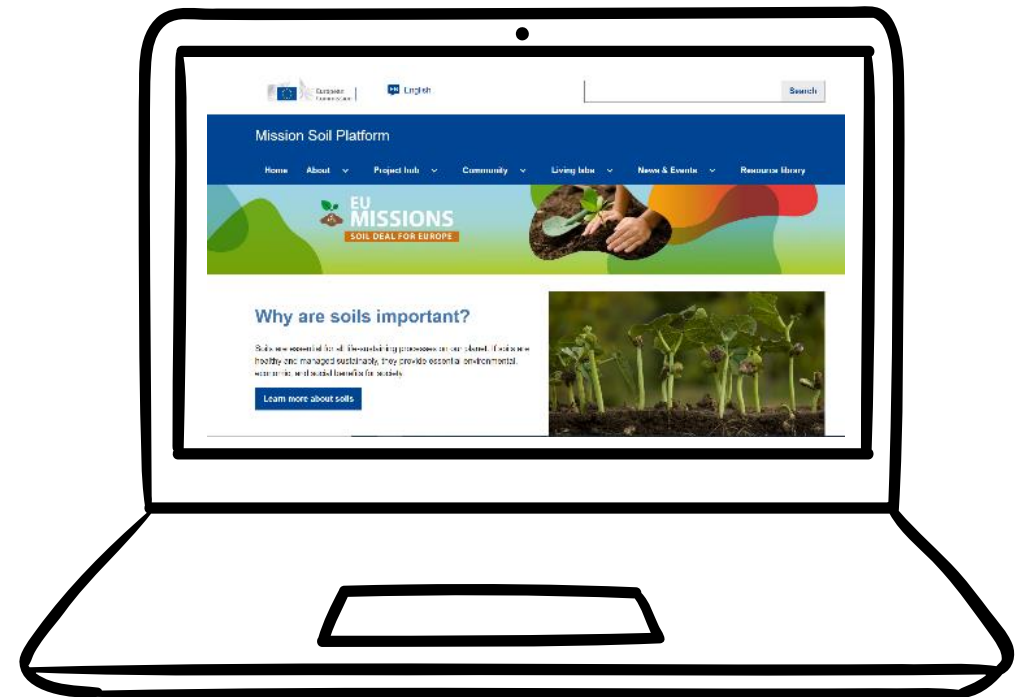




## Mission Soil platform

Visit the mission-soil-platform (<https://mission-soil-platform.ec.europa.eu/>) to

- **discover** Mission Soil projects
- **check** who is taking action for soil health
- **add** your events related to soil



For questions about research and Horizon Europe, you can contact the **Research Enquiry Service** via the webform: [Research Enquiry Service \(europa.eu\)](https://research-enquiry.ec.europa.eu/)



EUROPEAN UNION



**EU MISSIONS**  
SOIL DEAL FOR EUROPE



# Thank you!

For further information visit the [Mission Soil Platform \(europa.eu\)](https://europa.eu/mission-soil)

or contact the Mission Secretariat at [EU-HORIZON-MISSION-SOIL@ec.europa.eu](mailto:EU-HORIZON-MISSION-SOIL@ec.europa.eu)

**#MissionSoil #EUmissions #HorizonEU**

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PREPSOIL project and  
synergies with NBSOIL

**Pablo Gómez Grande**  
(INIA-CSIC), PREPSOIL





NBSOIL

# PREP SOIL

**Preparing the ground for  
healthy soils**

CSA to support the Mission Soil

**NBSOIL Academy**

Launch Webinar

*5 June 2024*



Funded by  
the European Union



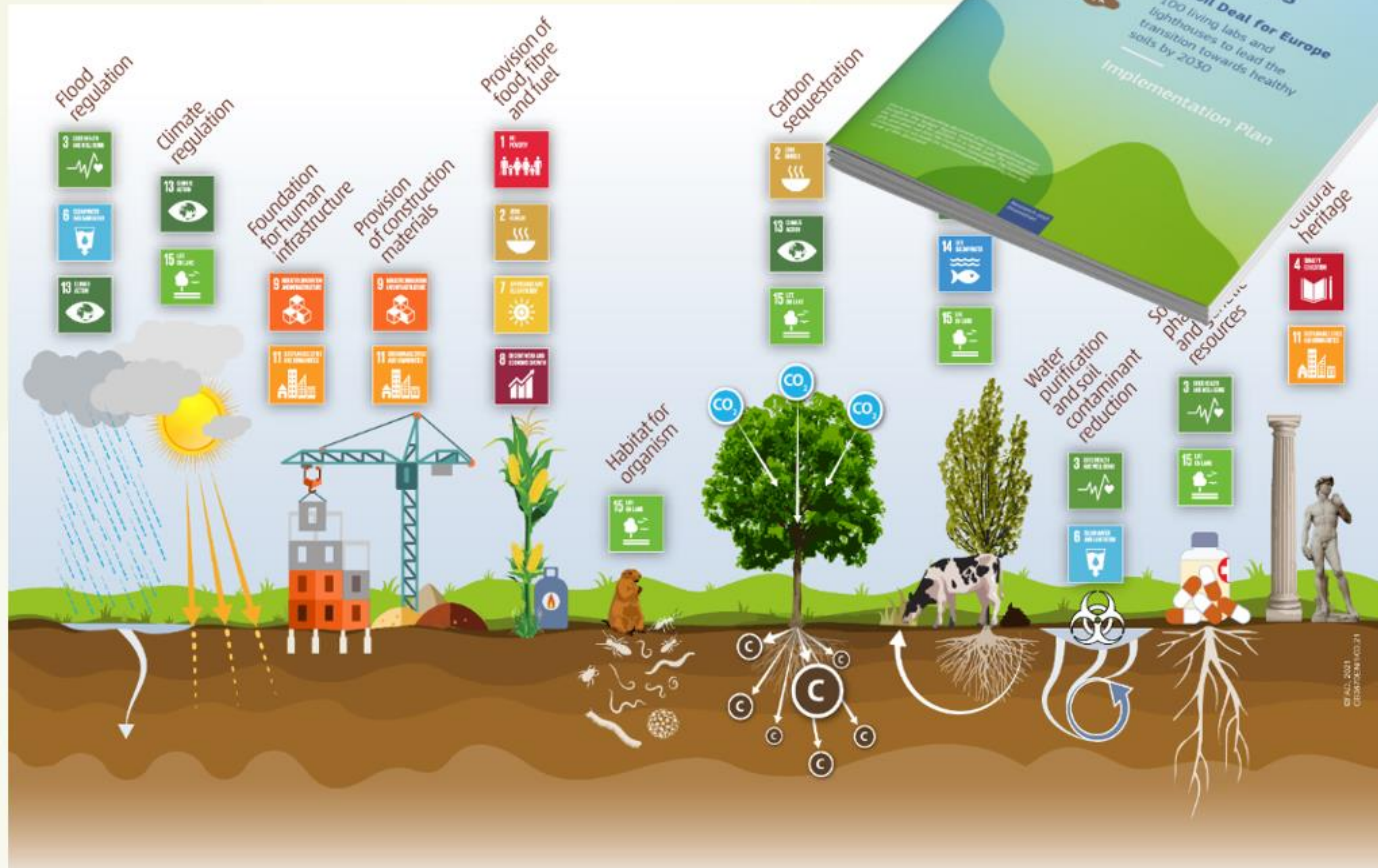
# Setting the scene

Facilitating the deployment of the Mission  
“A Soil Deal for Europe”

## Unhealthy soils

- Soils are threatened because of **human activities**. 2/3 of all soils in the EU are in an **unhealthy state**
- Lack of **knowledge, awareness, education** affects its capacity to **provide ecosystem services**
- Insufficient access** to data and knowledge
- Lack in capacities for monitoring** soil health

PREPSOIL activities support the induction phase and “roll-out” of the Mission (2022-2025)



## Specific objectives

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

**100 Living Labs and LightHouses to lead the transition towards healthy soils by 2030**





# PREPSOIL: *Preparing the ground for healthy soils*

HORIZON-MISS-2021-SOIL-01

***Preparing the ground for healthy soils: building capacities for engagement, outreach and knowledge***

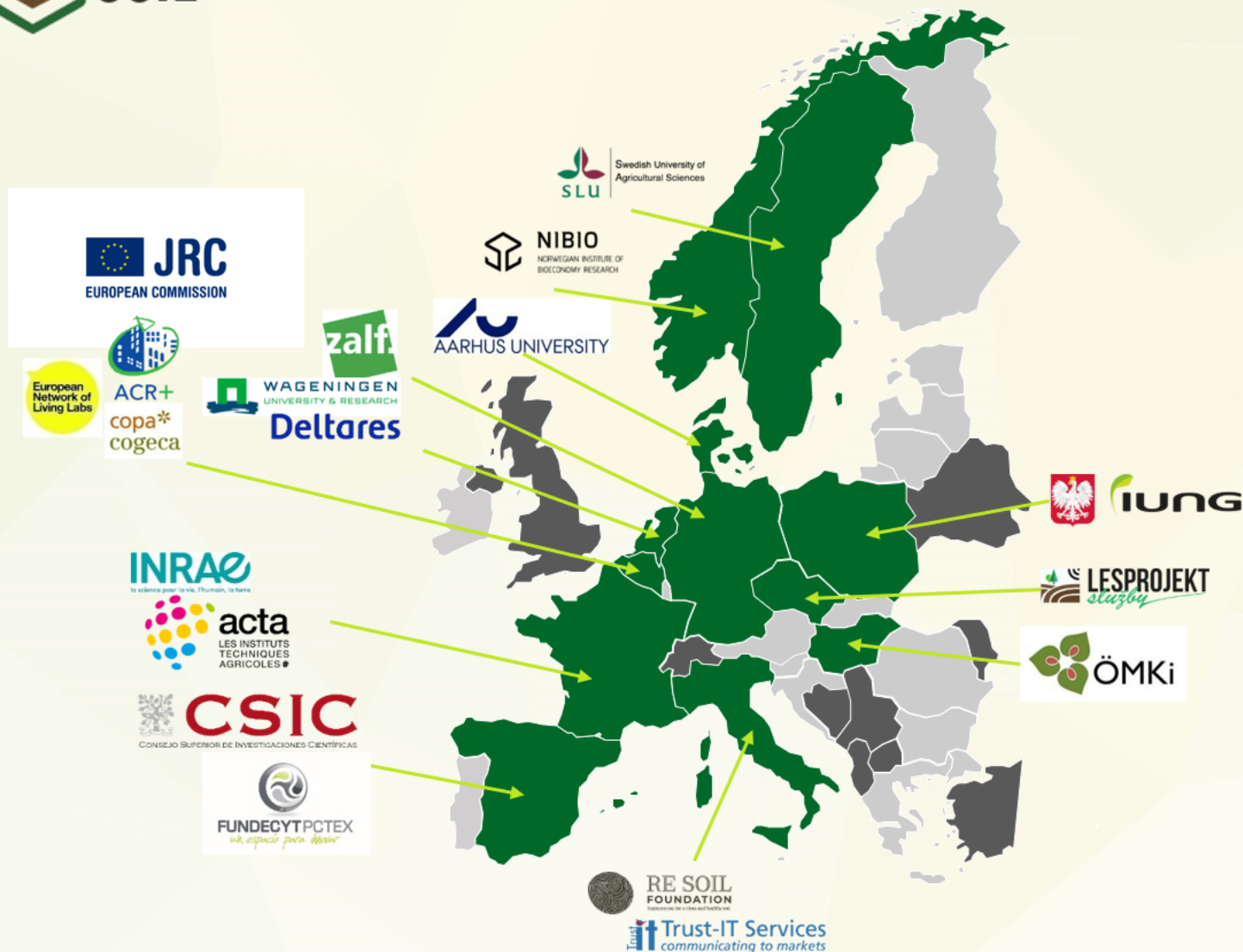
- Coordination and Support Action (CSA)
- 19 Partners (12 countries) + JRC
- Coordinator: Danish Centre for Food and Agriculture - Aarhus University
- 36 months, starting July 1st, 2022

## **Actions linked to WPs**

- ✔ **SOIL NEEDS:** Identification, mapping and evaluation of EU regional soil needs
- ✔ **WEB PORTAL:** Website, online community engagement and training
- ✔ **LIVING LABS:** Knowledge transfer and co-creation in regional Living Labs
- ✔ **MONITORING AND INDICATORS:** Monitoring frameworks and soil indicators
- ✔ **SOIL LITERACY:** Promoting soil education, awareness and engagement of communities of practice



# Consortium & Coverage



## Academic partners

- AU
- WUR
- SLU
- INRAE
- NIBIO
- ZALF
- IUNG
- CSIC
- ÖMKi
- DELTARES
- JRC

## Consulting experts

- LESPROJEKT
- TRUST-IT / COMMPLA

## EU & national associations

- ENOLL
- RE-SOIL
- COPA-COGECA
- ACR+
- F-PCTEX (ERIAFF)
- ACTA

# Supporting the Mission's Implementation Plan

Soil literacy, communication and engagement spaces



**Land Managers,  
Owners &  
Farmers**



**Students &  
Citizens**



**Companies &  
Businesses**



**NGOs**



**Authorities & Soil  
Monitoring  
Agencies**



**Academia &  
Innovation**

**PREPSOIL is reaching out to a wide audience: from universities to citizen scientists; from school students and teachers to soil monitoring agencies; up to society at large!**

**by contributing to...**

- 1) increasing soil literacy, awareness and societal appreciation;**
- 2) improving the knowledge base and access to critical information to take action; and**
- 3) setting up interaction spaces for effective Mission deployment.**

# Main activities

## KEY PRINCIPLES

### STOCKTAKING

From previous initiatives, especially on agricultural soils.

### OPEN SCIENCE

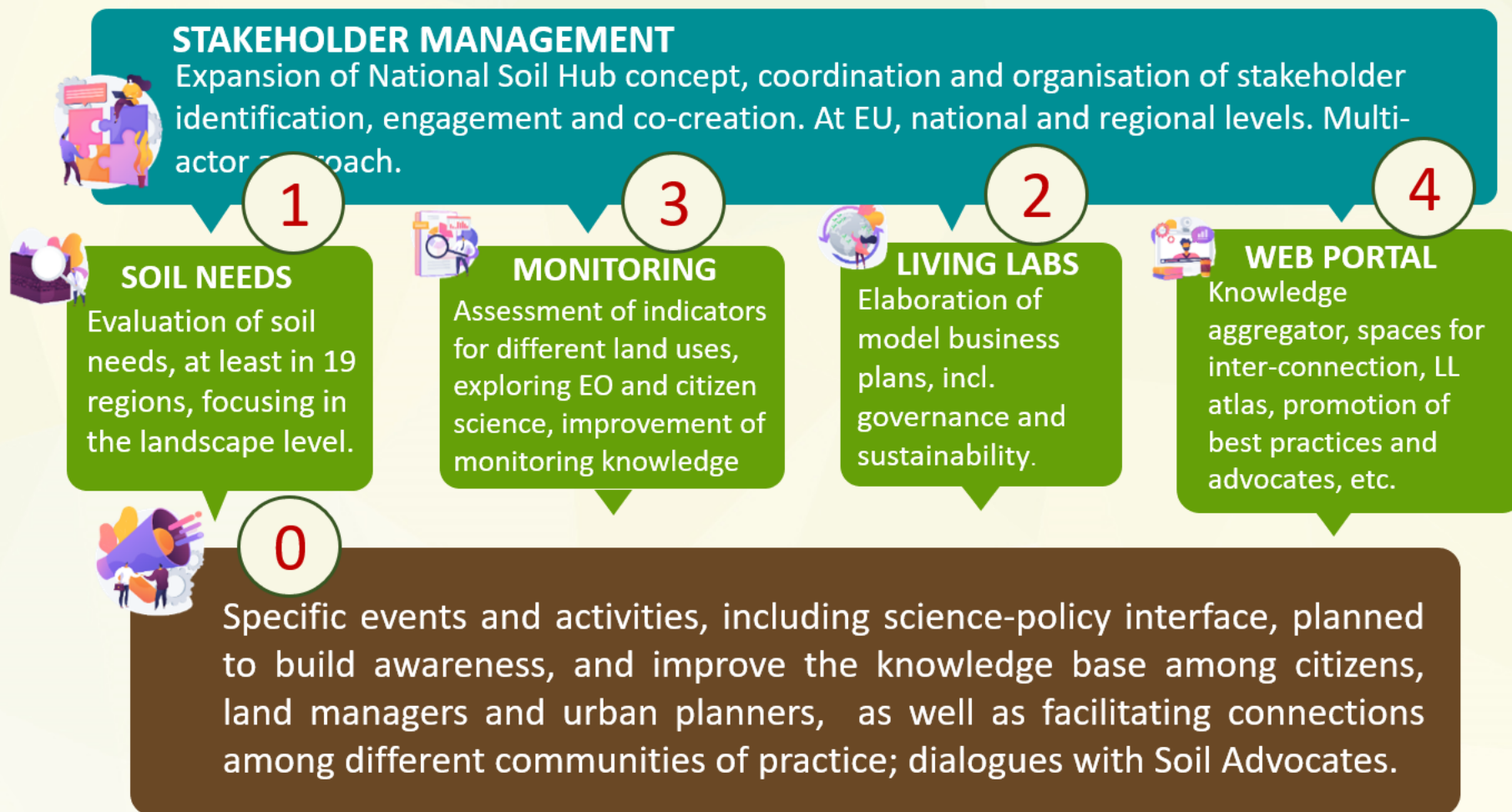
By default, multiplying the impact.

### FLEXIBLE

Smooth communication and adaptation to the Mission's needs.

### CAPABLE

Consortium composed of the top EU researchers, agencies and stakeholder associations.



Building on the EJP SOIL program, SMS project, SOILS4EU, ALL-Ready,...  
Expanding to different soil use types and broader scope of Soil Mission



# NBSOIL Academy & PREPSOIL: Potential Synergies

It's a MATCH?



NBSOIL Academy

Soil and NBS



Facilitating Soil Health  
Living Labs



Digital tools for soil  
health monitoring and  
mapping



Improving soil-related  
decision making in  
business and policy



PREPSOIL

Soil Needs Assessment

LLs (Mapping, Knowledge, Business M)

Monitoring & Indicators

Knowledge Hub

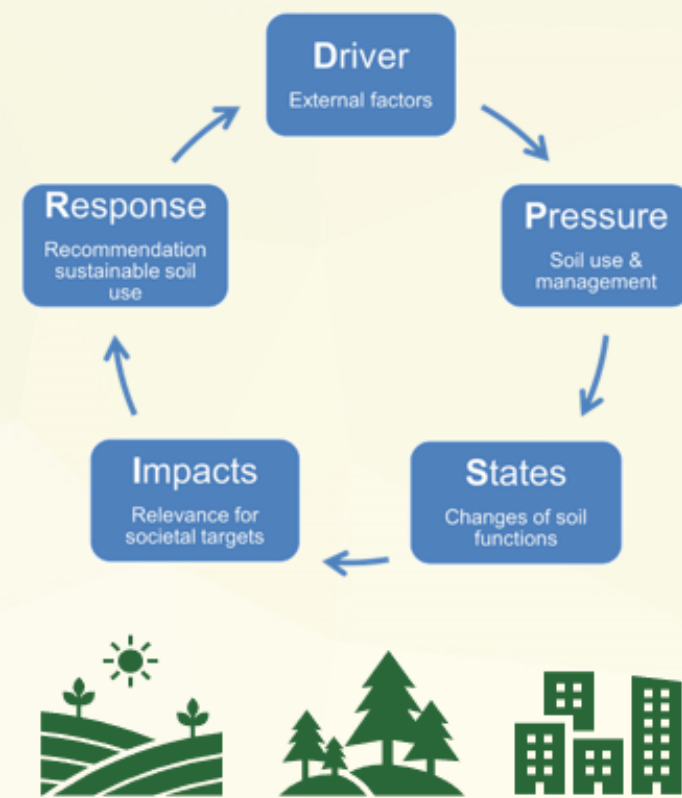
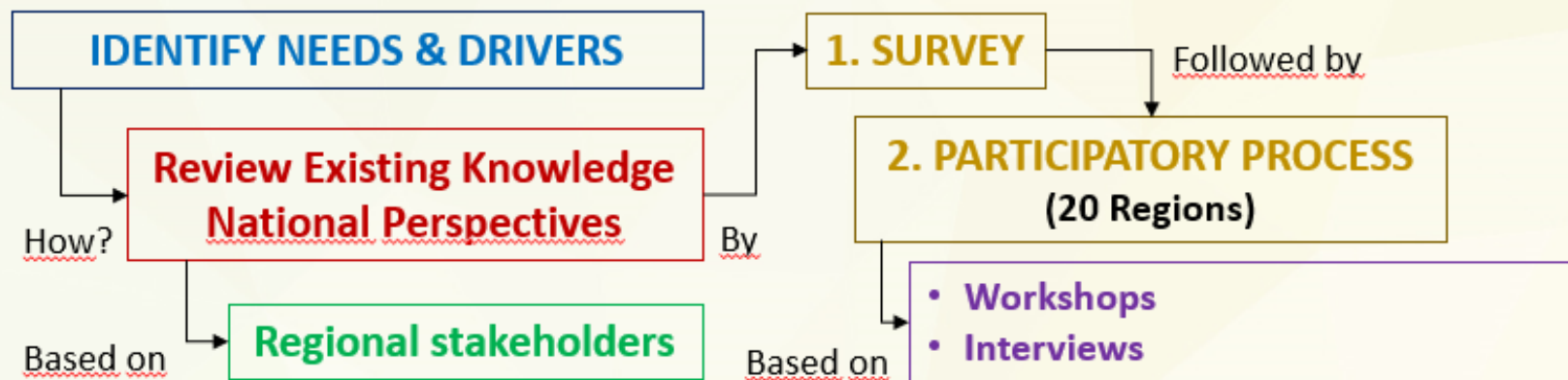
Interaction, Mobile App

Soil Literacy, Engage CoPs, Forum

Recommendation and SRA

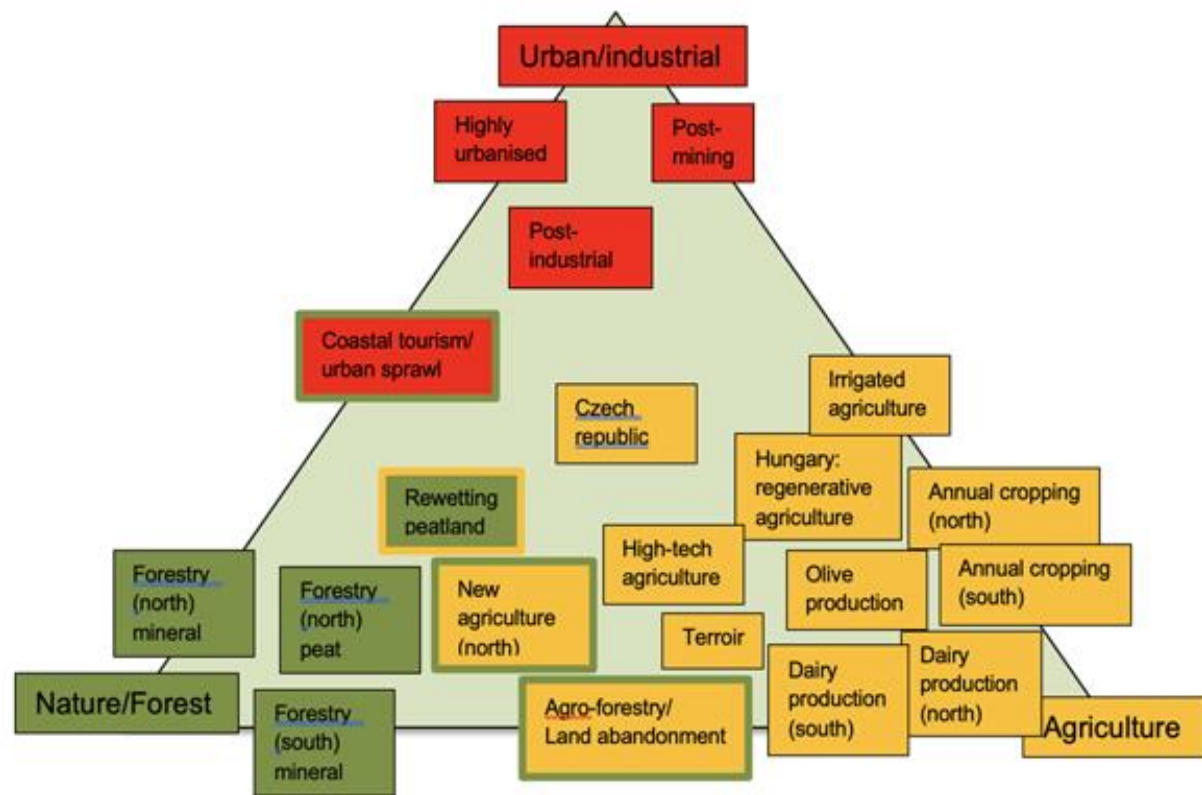
Improving the knowledge base and access to critical information to take action on soil health

- To identify the existing 'soil needs' in contrasting regions in European MS and AC that represent main European pedo-climate zones and land uses
- To kick off a wider appraisal effort across EU regions
- 20 representative regions of various land use types



# SNA. 20 Representative Regions

LAND USE: ● Nature/Forestry ● Urban/Industry ● Agriculture ● ● Mixed





# SNA. Regional Soil Needs Workshops

1  
Soil Needs

**Goal:** Assess the various soil needs across Europe according to different land use types: Agricultural, Urban, Industry, Forestry and Natural.

The outcomes of these workshops will feed into the preliminary PREPSOIL Report “Synthesis of soil needs and drivers of change for different land use types”, presented in November 2023 at the European Mission Soil Week (Madrid).

## Paving the way towards:

- 1) Shaping the Regional Strategic Research and Innovation Agenda on Soil (mid-2025) and
- 2) 2) Creating innovative activities to improve soil health, leading to recommendations for new Living Labs and Lighthouses

**VISIT THE DEDICATED WEBPAGES FOR EACH WORKSHOP**  
Read the blogposts and check the their agenda & pictures



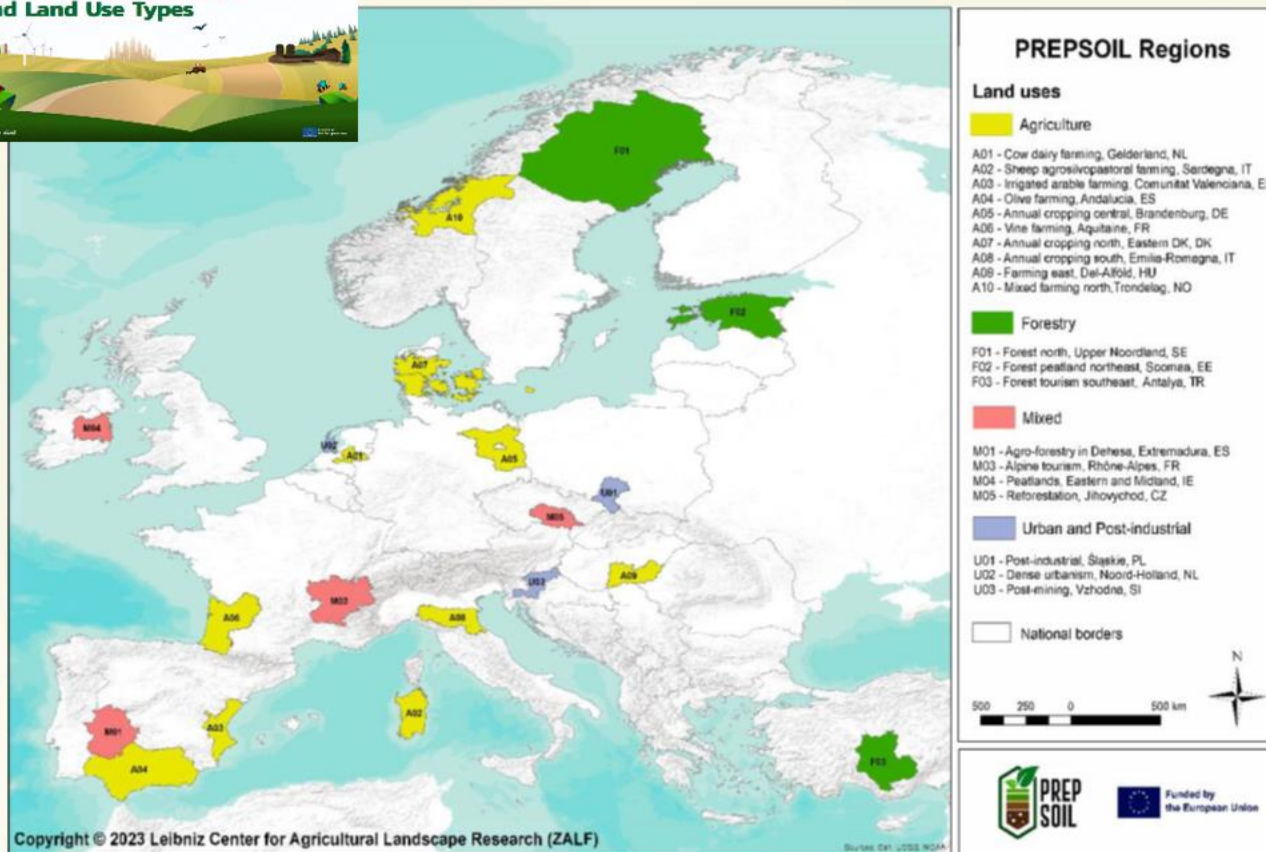
<https://prepsoil.eu/regional-soil-needs-workshops>





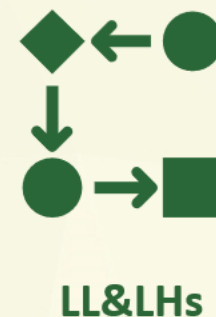
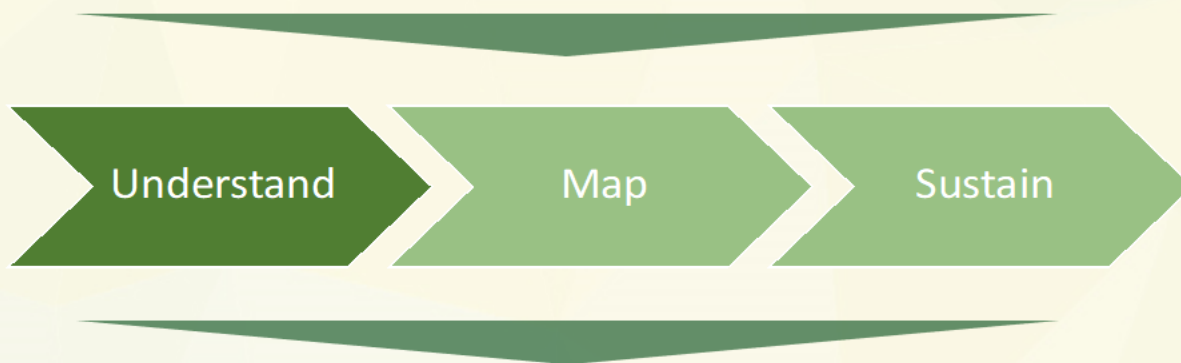
Funded by  
the European Union

+ Dedicated Breakout Session at the EMSW (Madrid, Nov. 2023)



# LL. Knowledge Transfer & Co-creation LLs/LHs

To facilitate the deployment of the Mission across European regions



- ✔ **LL1.** To improve the **understanding of the LLs/LHs concept** and how they can lead to a **improvement of soil health**
- ✔ **LL2.** To **map current and emerging LLs and LHs** using a new taxonomy and to engage LLs in development
- ✔ **LL3.** To co-design a spectrum of **model business plans** considering the high variability among LL and the taxonomy
- ✔ **LL4.** To create a service package for **knowledge transfer** and co-creation for LLs/LHs, prioritizing specific soil needs



## Soil Health Living Labs \*

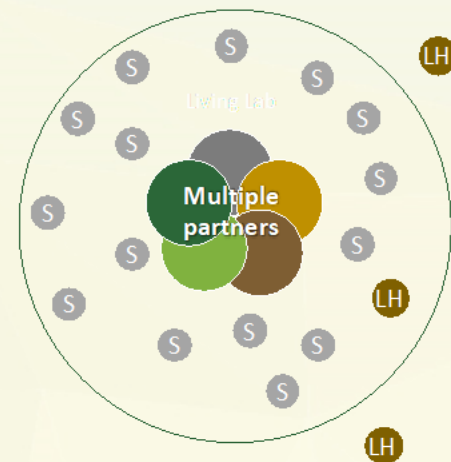
**Collaborative initiatives to co-create knowledge and innovations**

*“User-centred, place-based and transdisciplinary research and innovation ecosystems, which involve land managers, scientists and other relevant partners in systemic research and co-design, testing, monitoring and evaluation of solutions, in real-life settings, to improve their effectiveness for soil health and accelerate adoption.”*

## Soil Health Lighthouses

**Individual sites of exemplary performance**

*“Places for demonstration of solutions, training and communication that are exemplary in their performance in terms of soil health improvement”*

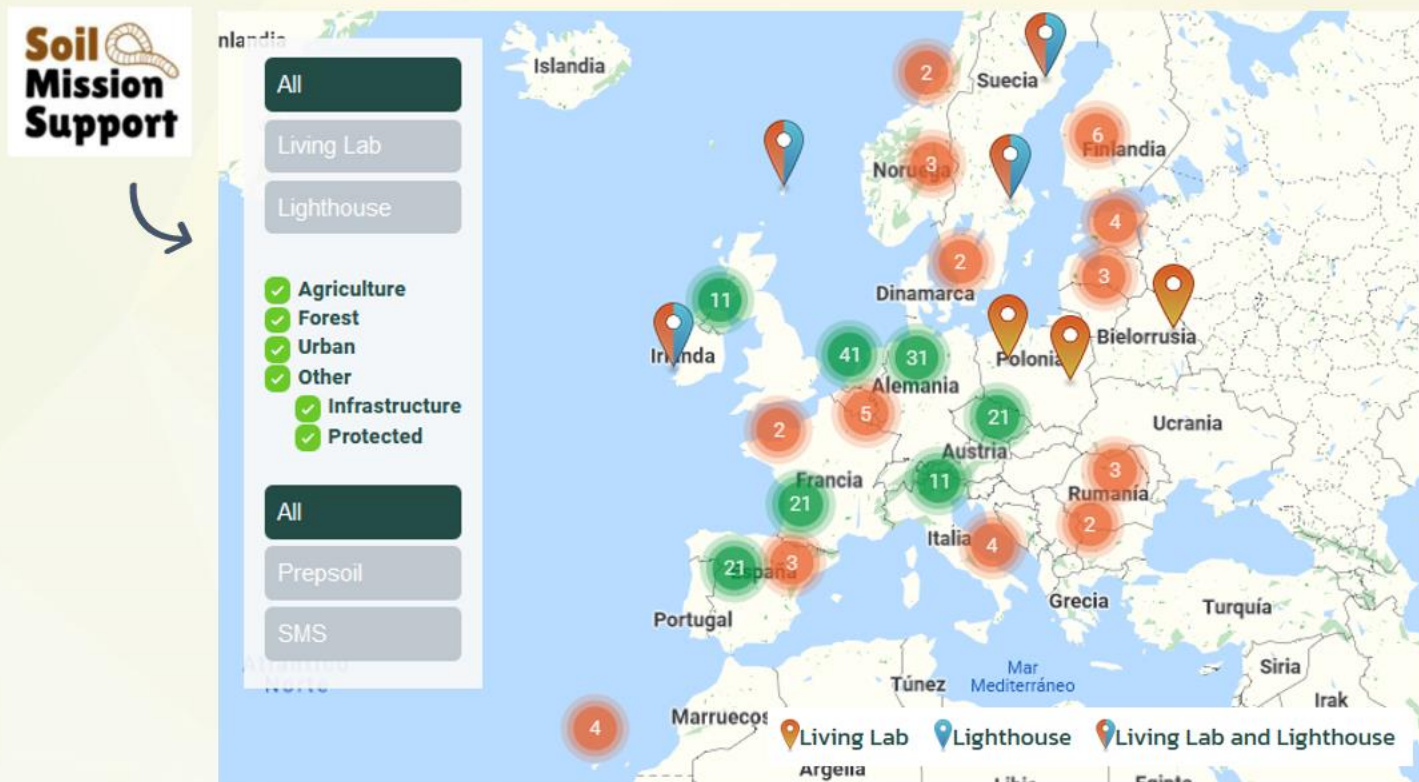


	Scale	Activities	Performance in soil health improvement
Living Lab	Regional/ subregional landscape	Coordinate experimentation & partners	In progress at landscape scale
Living Lab experimentation site	Local (1 farm/ forest, 1 urban site...)	Co-create knowledge and innovations	In progress on the site
Lighthouse	Local (1 farm/ forest, 1 urban site...)	Experiment and/or demonstrate	Demonstrated high performance

\* This LL definition is customised for soil health LL and is provided within the [“A Soil Deal for Europe – Implementation Plan”](#). It aggregates elements of **ENoLL definition** with those of a WG of the G20 agricultural chief scientists on agroecological LLs

# LL. Interactive Map of initiatives of LLs/LHs

Stock-take current experiences around LLs/LHs, inspiration for networking



Overview of Soil Health initiatives across Europe that are active or starting their activities as LL/LH, in order to facilitate knowledge exchange, networking and consortia creation

REVIEW  
REFINE  
EXTEND INFO

Self-registration form for new LLs/LHs

AVAILABLE

Self-assessment form to define maturity level of the initiative to LL and/or LH

COMING

<https://prepsoil.eu/living-labs-and-lighthouses/map>

BROWSE THE MAP

[Fill the self-registration form!](#)

**WORK IN PROGRESS:** Report on LL/LH taxonomy, identification and mapping feeding the online interactive LL atlas (D4.1) - Summer 2024

The Living Labs shown on the map do not necessarily fulfil the criteria for the selection and set-up of living labs in the context of the Soil Health Mission presented in the Mission Implementation Plan



## Investigate current modes of financing LLs/LHs

- ✓ Workshops on model business plans reflecting different contexts of each LL/LH, including the state of maturity, cooperation forms, innovation approaches, growth/exploitation
- ✓ Convene discussions on potential financing models, incl. private and public actors

## Catalogue of model business plans to ensure the long-term success of LLs/LHs in different soil use types

- ✓ Different types of LLs/LHs
- ✓ Different land use
- ✓ Different socio-economic context: Smart financing for LLs/LHs

## Upcoming events 2024

- ✓ Online workshop on smart financing for LLs/LHs
- ✓ Participatory workshop with LLs/LHs

**WORK IN PROGRESS:** Report on LL/LH model business plans (D4.2) - Summer 2024

## Focus on

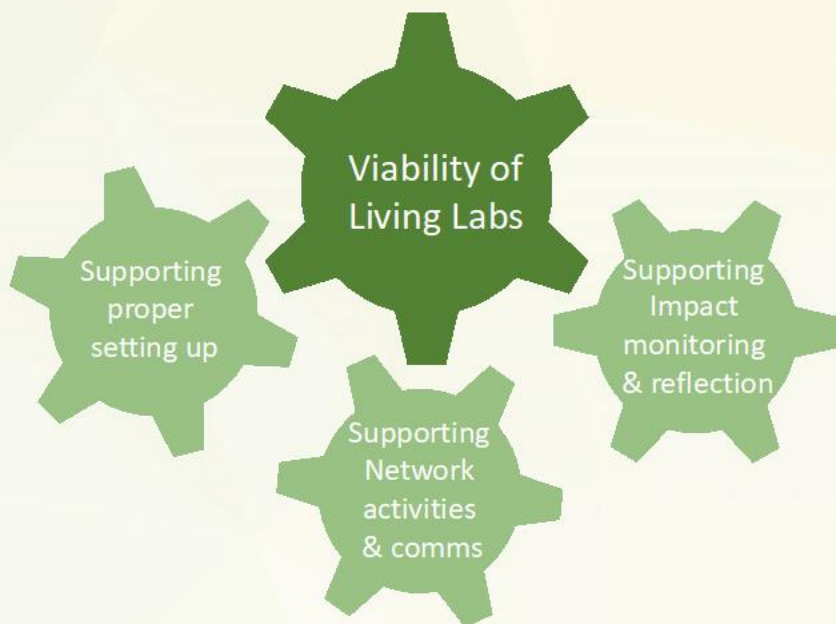
- ✓ Driving forces & stakeholder types
- ✓ Cooperation forms
- ✓ Maturity stage
- ✓ Value creation





# LL. Service package for increased performance and accelerated maturity of LLs/LHs

Co-design, validate and refine a “service package” to accelerate the adoption, maturity and optimise the running of the Mission LLs/LHs under different land use contexts



## WORK IN PROGRESS



### Co-creation activities

Workshops with selected LLs&LHs



### Focus on maturity domains

Themes  
Innovation processes  
Communications  
Financial sustainability



### Identification of

Development potential  
Needs to mature



### Recommendations for future Soil LLs&LHs



## Providing direction and capacities for the future harmonized soil health monitoring mechanisms

- ✓ To consolidate the Mission's soil monitoring framework: How to extend current and new results obtained on agricultural soils to natural, forest, urban and industrial soils?
- ✓ To assess the possibility of using satellite-based EO at different scales and citizen contribution to soil observations
- ✓ To define training needs on soil health monitoring and indicator use and give first input to capacity building
- ✓ To assess the feasibility of citizen science engagement for soil monitoring according to soil needs and LLs

**Identify and fulfil the capacity building needs of decision makers and public officers (incl. LL members) to assess monitoring outputs**

**Proposal for capacity building effort by the Mission + Training Curriculum**

**DEVELOP CURRICULUM**



**4 EU TRAINING WORKSHOP (Pilot)**  
**MS + EC Public Officers**

### CONTENTS:

- Up-to-date info on EU harmonized reporting protocols
- Common definitions
- Interpretation of soil health indicator values (with regard to a reference system and threshold values)
- Practices likely to improve soil health indicator values

### WEB (one-stop-shop)

- ✓ **Training MATERIALS**
- ✓ **VIRTUAL DISCUSSION FORUM**





# W. PREPSOIL WEB Portal

ONE-STOP SHOP Platform

<https://prepsoil.eu>



## Main Objectives:

- ✔ To equip stakeholders with tailored digital networking tools to connect and exchange, including LL atlas and virtual CoP forums
- ✔ To connect and improve access to existing quality resources including to science-based info through a multi-lingual knowledge hub
- ✔ To offer 'best-of' online materials to inspire citizens, educators, etc.
- ✔ To promote and support virtual interaction on best practices on social innovation and soil education, including Soil Ambassadors

## Online community Engagement and Training

**PREPSOIL  
FORUM**

CONNECT TO COMMUNITIES OF  
PRACTICE AND SPREAD IDEAS  
ON HOW TO IMPROVE SOILS!

Stay in the loop!

**SIGN UP TO THE NEWSLETTER**





# O. Building awareness, improving the knowledge base and facilitating connections

## Engaging Communities of Practice (CoPs)



Andreas Capjon / Økern Portal Rooftop garden in Oslo, Norway

124 Aufrufe • vor 7 Monaten



Maina Joner at Skøyenåsen hagelag in Oslo, Norway

112 Aufrufe • vor 7 Monaten



Best Teaching Practices | The vital soil - The Nature School in Lund

74 Aufrufe • vor 7 Monaten



Farming in Balance (Odling i balans) - Hidinge gård (Sweden)

112 Aufrufe • vor 7 Monaten



Urban gardens at "Suerte Saavedra (Spain)"

368 Aufrufe • vor 8 Monaten



Best Teaching Practices | Raising Soil Awareness among Austrian Pupils and...

89 Aufrufe • vor 9 Monaten

## Informing society through education



Raising Soil Awareness among Austrian Pupils and Students

In order to raise awareness and understanding of the importance of soil, ASSS, the Austrian Soil Science Society

**School:** Environment Agency Austria and more (see text).  
**Teacher:** Barbara Birli



Foligno (Perugia), Italy

Carbon Cycle, Soil and Biodiversity within Italian students

The aim of the project was to explore soil-related topics, a subject that is scarcely or not at all present in the Liceo

**School:** Liceo Scientifico e Artistico G. Marconi, **Teacher:** Stefania Minelli



The vital soil

At Naturskolan (The Nature School) in Lund, we have taught about soil using outdoor pedagogy. At the Nature school, we

**School:** Naturskolan, **Teacher:** Carolina Lindeblad



Soil degradation – soil surface erosion by water

It is a small-scale irrigation experiment that simulates an intense rainfall event and demonstrates the differences.

**School:** Centre for Agricultural Research, Institute for Soil Sciences (CAR ISS).  
**Teacher:** Zsófia Bakacsi



Soil zoology – unrealistic soil living macro organisms

This is an image-selection exercise in which students are presented with large photos or photo-realistic representations.

**School:** Centre for Agricultural Research, Institute for Soil Sciences (CAR ISS).  
**Teacher:** Norbert FLORIÁN



Urban Vegetable Gardens

The Urban Vegetable Gardens are a collective project of an entire neighborhood in the city of Badajoz, pioneers in

**School:** JOINT INITIATIVE Platform Urban Vegetable Gardens & Manuel Pacheco Public School, **Teacher:** Fernando González (Huertos Urbanos) and Rocio Macero (Manuel Pacheco PS)



Open Schools for Open Societies

The aim of the project is to raise awareness of environmental issues, organic farming and the consumption of seasonal

**School:** IC "Comuni della Scudascia", Scuola secondaria di MERLARA, **Teacher:** Mariapia Borghesan

Check out the videos at [Prepsoil TV](#) | [Prepsoil](#)

Check out all applications at [Best Teaching Practices](#) | [Prepsoil](#)



## O. Multilingual Knowledge Hub



### Spread knowledge about soils across Europe

The Knowledge Hub is an online multi-lingual library featuring best practices, policy briefs, video materials, experiments and publications focused on soil health

With relevant categories and a searchable index by the Mission Soil objectives, resources can also be filtered by land use, language and country. At the moment, the Knowledge Hub includes resources from 25 countries in 13 different languages

The Knowledge Hub is now open to contributions by the public with all material reviewed by a dedicated Editorial Board before going online.

Interested in learning more or suggesting a resource? [Visit the Knowledge Hub on the PREPSOIL website.](#)



## O. Mobile App

Ensuring user engagement and integration of citizen science and crowd sourced data into multimedia data coming from real life

The Mobile App will include multiple features that will help citizens to learn about soil and contribute with their real-time observations on soils in their region.

Thanks to the PREPSOIL Mobile App, universities, research centers and organizations working on soil topics will have the opportunity to create **soil quests**.

In a soil quest, organizations can ask users (citizens) for a picture of soil or any other kind of information that will help them to understand the soil state in a specific region and obtain information from citizens that will support your work and research activities.

Currently being tested in 4 LLs.

To be launched in Summer 2024, but stay tuned

[Coming soon: the PREPSOIL Mobile App for all soil enthusiasts! | Prepsoil](#)







## PREP SOIL PROJECT

SUPPORTING THE MISSION SOIL

EST. 2022

→ LINE FRILS - LINDNER  
→ SASKIA KEESSSTRA  
→ KATHARINA HEMLING

IDENTIFYING SOIL NEEDS  
THE PREP SOIL REGIONAL APPROACH

22 CONSORTIUM PARTNERS

CO-CREATION OF INTERACTIVE SPACES

LOCAL INITIATIVES

NGOs

LAND OWNERS

SOIL ADVOCATES

FARMERS

SCIENTISTS

WE KNOW

WHAT TO

DO

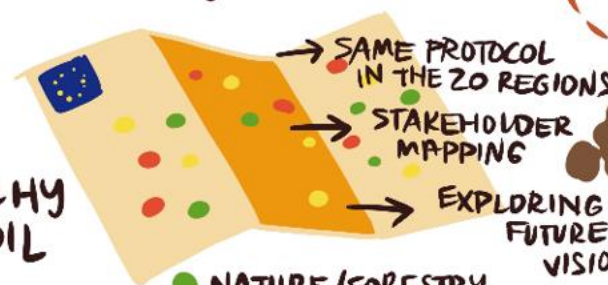
SOIL LITERACY / SOCIETAL APPRECIATION  
IMPROVING KNOWLEDGE BASE  
INTERACTION SPACES

SOIL NEEDS ASSESSMENTS

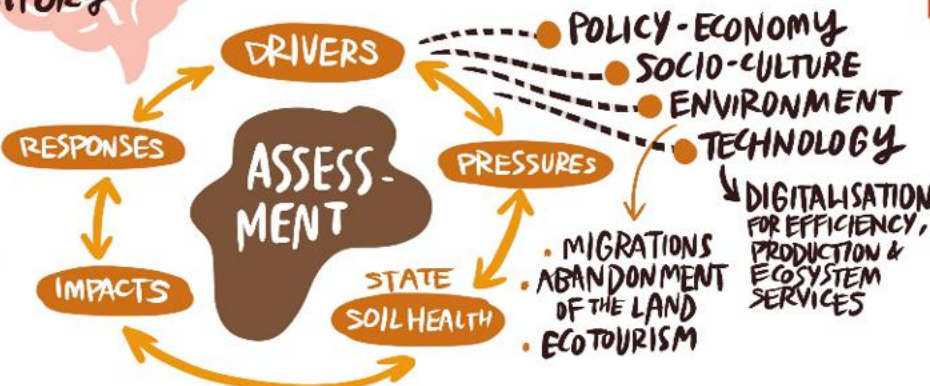
IN 20 EUROPEAN REGIONS:  
methods & key results

soil NEEDS  
REQUIREMENTS OF SOIL TO BE HEALTHY & OURS FROM SOIL

KNOWLEDGE HUB  
- REPOSITORY -



- NATURE / FORESTRY
- URBAN / INDUSTRY
- AGRICULTURAL
- MIXED



EUROPEAN MISSION SOIL WEEK

21 - 23  
NOVEMBER 2023

#MissionSoilWeek

MONITORING

CONNECTING SCIENCE TO POLICY

ACTIVITIES

STAKEHOLDER INTERACTIONS,  
LIVING LABS, MONITORING,  
SCIENCE - POLICY

100 LIVING LABS

CREATING COMMUNITIES



LIGHTHOUSES

CO-CREATION WORKSHOPS

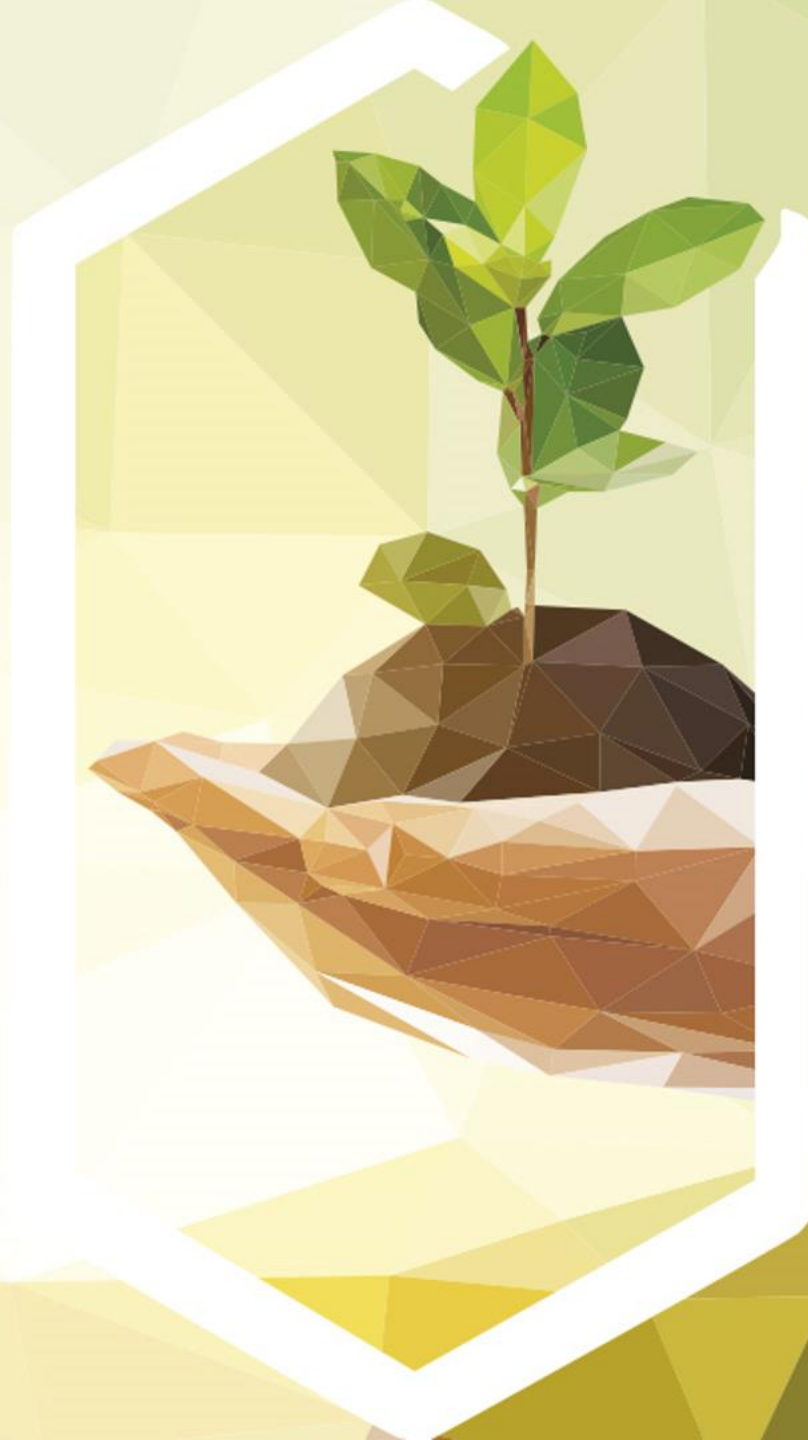
UNDERSTANDING SOCIAL INTERACTIONS  
= UNDERSTANDING SOIL





*Thanks for your  
attention!*

[pablo.gomez@inia.csic.es](mailto:pablo.gomez@inia.csic.es)





## FOLLOW US



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<https://prepsoil.eu/newsletter>



# Mentimeter Activity:

Go to **menti.com** and  
use the code **1868 8538**

# Introduction of the NBSOIL Academy

**Carolyn Coxe , Soil Association**





# Introduction to the NBSoil Academy

01

## Purpose

- A 2-year blended learning programme
- Upskill the next generation of soil advisors.

02

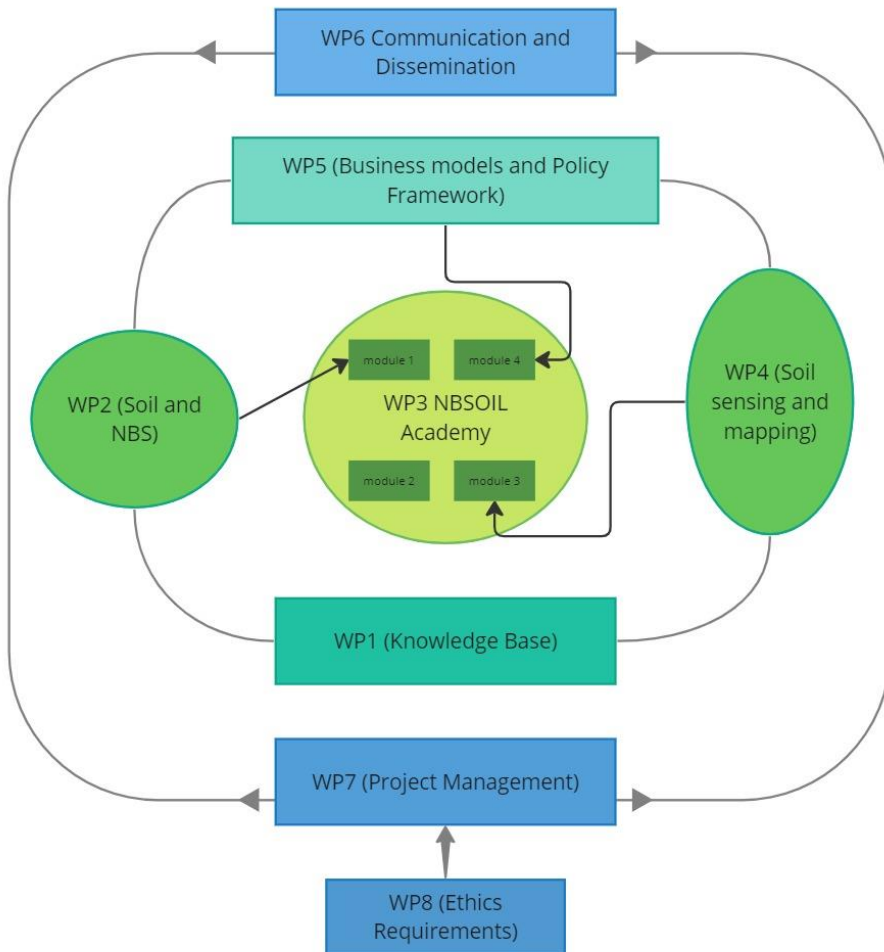
## Aim

- Create an immersive interactive, learning experience

03

## Scope

- Tested by 300+ soil advisors
- In 8 or more countries
- 7 Languages (English, Polish, German, Dutch, French, Italian, Spanish)



## NBSOIL Academy and Positioning within the Wider Project

1

Central to the NBSOIL Project

2

Cross over with multiple work packages

# How Will The Academy be Delivered?

## Final Project

The final project will address a real soil advisory situation, designed in teams and mentored by the NBSOIL experts. This will span the last nine months of the Academy, from October 2025 until June 2026.

## Academy Contents



### Online Modules

Containing self-learning materials, tests and assignments facilitated through an e-learning platform



### Live Sessions

A series of introductory and complementary webinars for each module.



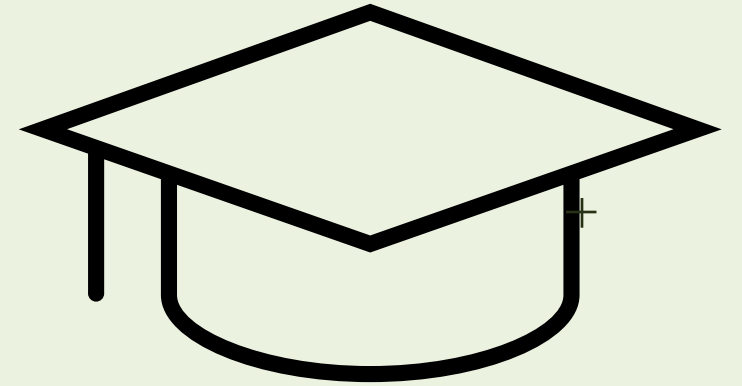
### Practical Workshops and Demonstration events

On-site practical workshops and demonstrations hosted by NBSOIL demo sites and other Soil Mission projects across Europe.



## Certification

- NBSOIL Academy **IS NOT** a formal training platform BUT a prototype offered within a Research and Innovation project.
- Provides potential for translation into continual professional development e.g ECTS, BASIS
- Participants are co-researchers and will be credited within NBSOIL certification if they:
  - Partake in advanced Levels
  - Complete module assessments
  - Contribute to NBSOIL co-design and research activity
  - Address EU Soil Mission research questions

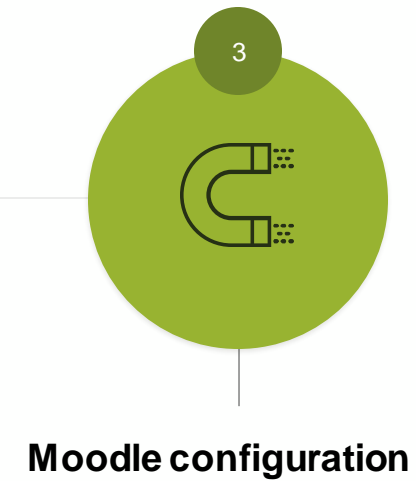
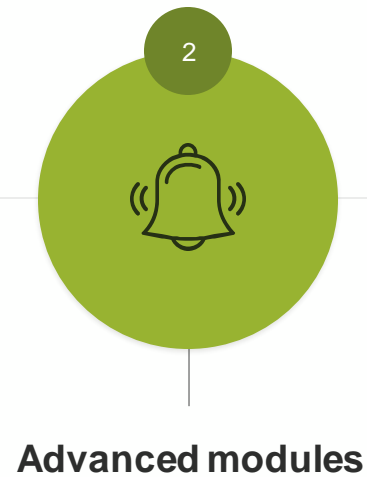
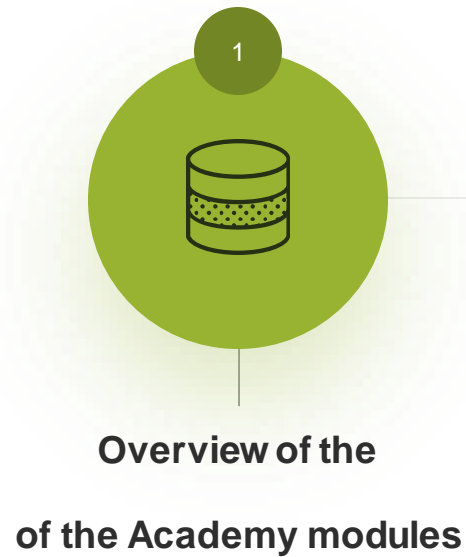


# Introduction to the NBSOIL Academy advanced modules

**Almudena Olivas (ITAP)**  
[aodr.itap@dipualba.es](mailto:aodr.itap@dipualba.es)

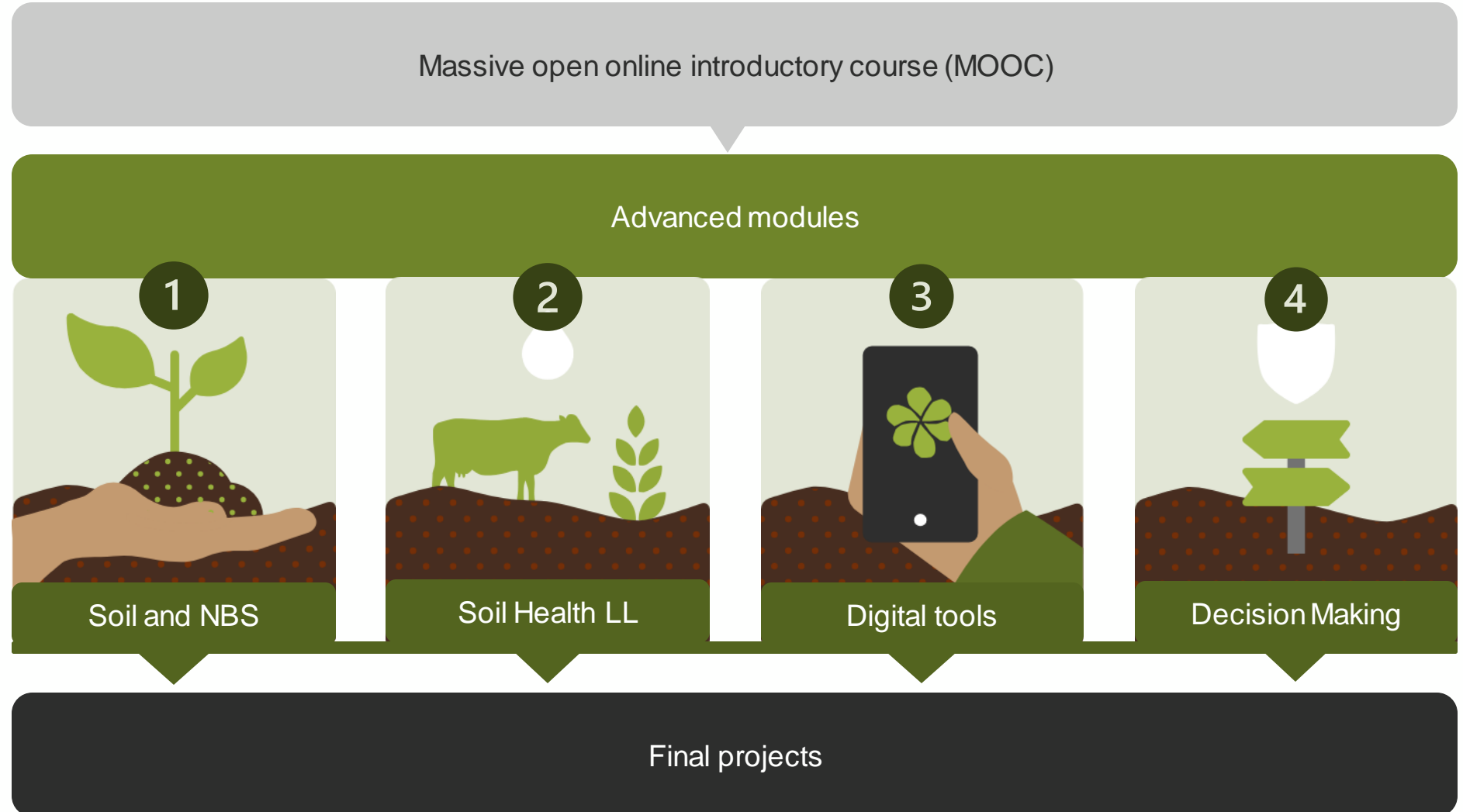


# Introduction to the Advanced Modules





# Overview of the Advanced Modules



# Advanced modules

1



## Soil and NBS

Centre National  
d'Agroécologie (CNA)

To train participants in the  
design of NBS-based soil  
health strategies.

Customised training will be  
developed and delivered at 3  
levels.

Regional adaptations using  
existing knowledge, digital  
tools and databases.

2



## Soil Health LL

Soil Association (SA)

Participants will be able to  
generate an LL.

Soil health with LL developed  
in the framework of Mission  
Soil.

Innovative methodology and  
experience of farmers will be  
shared.

Adapt the IF experience to  
local cultural conditions.

3



## Digital tools

Instituto Técnico Agronómico  
Provincial (ITAP)

Knowledge development for  
soil monitoring.

Include multiple data sources:  
nutrient management  
algorithms, meteorological  
data, soil sensors, sensors,  
drones, etc..

Examples of data processing  
will be presented.

4



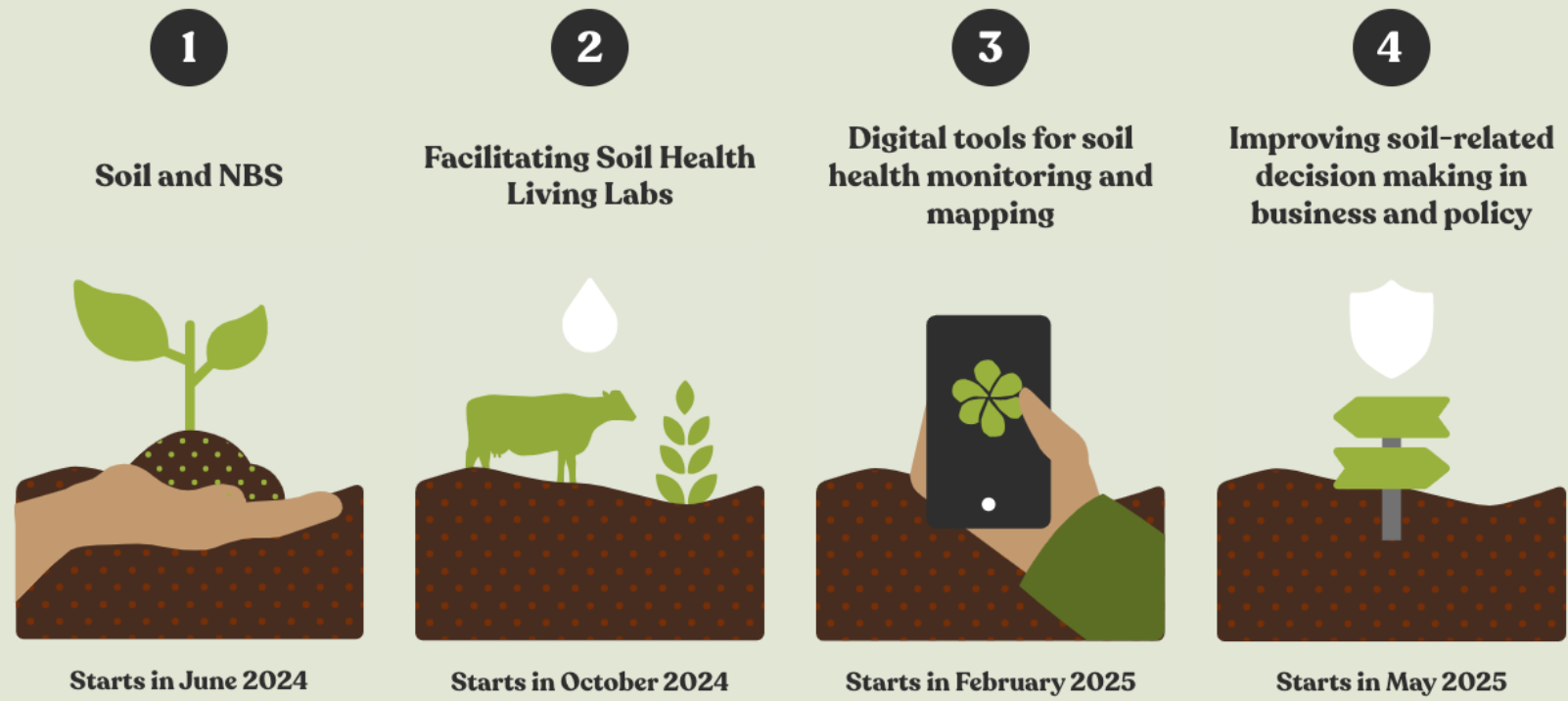
## Decision Making

Instytut Uprawy Nawożenia i  
Gleboznawstwa – Państwowy  
Instytut Badawczy (IUNG-PIB)

Training of participants in  
business models aligned  
with soil health, Policy, Soil  
Mission Objectives,  
Implementation of the NBS.

IUCN will develop this work in  
collaboration with its networks  
within and outside the EU.

Advanced Modules






## Learning Levels

### Level 1

FOUNDATION-TIER



Foundation learning.  
All participants understand essential concepts.  
Content available in 7 languages:  
English, Polish, German, Dutch, French, Italian and Spanish.


 60h  
15h x module

### Level 2

MID-TIER



Intermediate learning.  
Participants deepen their knowledge with specific exercises (like tests or assignments), being able to choose topics that interest them more.


 120h  
30h x module

### Level 3

ADVANCE-TIER




Advanced learning.  
Available for participants who want to go beyond self-learning and test their knowledge with an in-depth, practical exercise.


 240h  
60h x module


The common structure proposed for each module is based on the following activities:

- **Two webinars per module:** one launch webinar and one dedicated to solving the questions and answers of the forum.
- **A series of texts and quizzes** on the essential concepts all participants should understand, which will be translated into different languages.
- **A series of specific exercises** that participants will be able to choose according to their sector/ region/ area of interest.
- **A module challenge** for the most advanced and dedicated participants in each module.
- **A programme of in-person activities at demonstration sites** to provide on-the-ground experience of nature-based solutions.

Each module will collaborate with other Soil Mission and related projects through webinars and content.



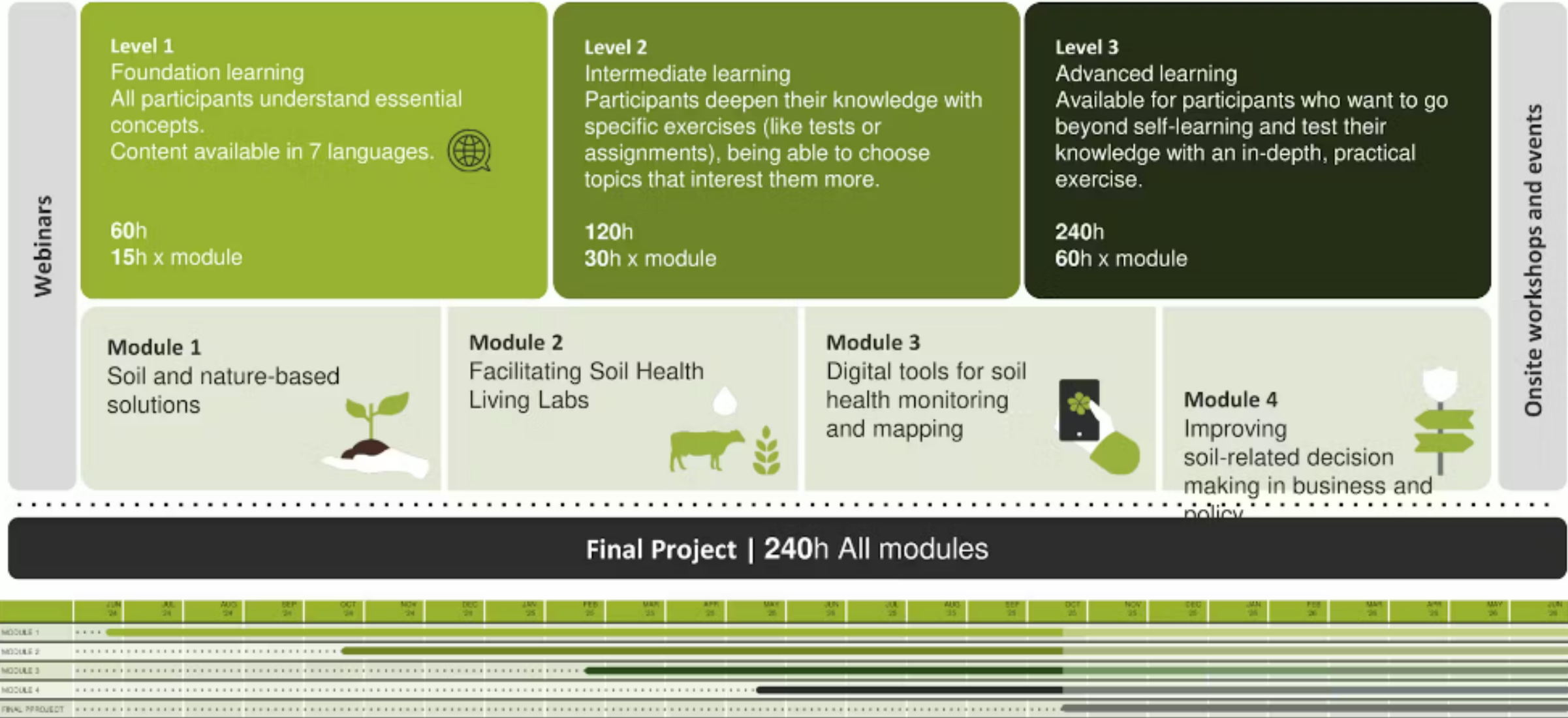
 **NBSOIL**  
Nature Based Solutions  
for Soil Management

 Co-funded by  
the European Union

**Join the NBSOIL Academy Launch webinar**

Wednesday 5 June  
10:00 – 12:00 CEST  
Online

[JOIN THE WEBINAR](#)





## Development of Moodle

Moodle e-learning  
solution for the Soil  
Academy



**Open-source platform.**



**Fully customisable (desktop and application).**



**Full ownership of your platform.**



**Available in +120 languages.**

# What does it look like?

## Inside Moodle



**NBSOIL**  
Nature-Based Solutions  
for Soil Management

### Acceder



almudenaolivas



.....

[¿Olvidó su nombre de usuario o contraseña?](#)

Acceder

Algunos cursos permiten el acceso de invitados

Entrar como persona invitada

Las 'Cookies' deben estar habilitadas en su navegador. [Aviso de Cookies.](#)



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- [Administración del sitio](#)

# Mis cursos

[Inicio](#) > [Páginas del sitio](#) > [Mis cursos](#)


## Vista general de curso

Todos

Buscar

Ordenar por nombre del curso


Tarjeta



⋮

Soil health and NBS

En Ginebra 1



⋮

Test

En Ginebra 1



## ▼ Tema 2

### ▼ Soil Health as a Concept

#### *Evolving definitions*

‘Soil health’ is a heavily-debated term with many different definitions. According to the EU Soil Mission, soil health is defined as “the continued capacity of soils to support both agricultural production and the provision of key ecosystem services”.

As was mentioned earlier in the module, soils deliver more than just the food we eat; they also deliver a range of vital ecosystem functions related to water regulation, biodiversity, nutrient cycling, climate mitigation and adaptation.

In recent years, the concept of “soil health” was increasingly adopted by policymakers, practitioners, and governments as it recognises the connections and interdependencies between the health of humans, plants, animals, and the environment (Lehmann et al., 2020).

#### **Soil health, soil quality, soil fertility: what are we talking about?**

The term ‘soil health’ is often understood as a complementary term to ‘soil quality’ (Laishram et al., 2012). In some cases, both terms are used as synonyms, while others argue that there is a

Comenzado el	jueves, 30 de mayo de 2024, 12:53
Estado	Finalizado
Finalizado en	jueves, 30 de mayo de 2024, 13:15
Tiempo empleado	22 minutos 33 segundos
Puntos	0,00/1,00
Calificación	0,00 de 10,00 (0%)

Pregunta 1

Incorrecta

Se puntúa 0,00 sobre 1,00

🚩 Marcar pregunta

⚙ Editar pregunta

v2 (última)

The photo below shows the soil cover remaining after corn planting was completed on a farm. It should last until the new crop is fully canopied. Which of the five principles of soil health does this practice apply to?

Check all those that apply.





# Coffee Break



What is Module 1 all about?

**Vincent Levavasseur,**  
Centre National d'Agroécologie





# Course outline

01

Level 1

## Learning outcomes

- Explain what soil is and its importance
- Define what soil health is and explain the importance of soil health
- Give soil advice in any context and conduct soil diagnoses
- List the NBS available among the NBSoil portfolio
- Provide advice on which NBS should be implemented and when
- Help advisors make assured soil management decisions

02

Level 2

03

Level 3

## Plan

1. Why soil health matters
  - What are healthy soils?
  - Soil health as a concept
  - Soil functions
  - Soil indicators
2. Assessing soil health
  - Tools to assess soil health
  - The Soil health index tool
3. NBS: a solution to improve soil health?
  - What are NBS?
  - The NBS portfolio
  - Designing your nature-based solution project
  - The IUCN Global Standard for NBS
4. Framework to give advice on soil regeneration

# Course outline

01

Level 1

## Learning outcomes

- Gain practical knowledge of NBS implemented in each sector
- Describe advantages of each NBS for soil health
- Design the different NBS in specific climates, geographic regions for the selected sector.
- Describe current European policy context for each of these NBS and EU-related projects

02

Level 2

03

Level 3

## Plan

### 1. Agriculture

- Practical knowledge on cover crops
- Practical knowledge on organic fertilizers
- Specific knowledge per country

### 2. Forests

- Generic knowledge
- Forest management to improve SH

### 3. Paludiculture

- Generic knowledge
- Managing wetlands

### 4. Bioremediation

### 5. BGI

## Course outline

01

Level 1

### Learning outcomes

- Fictional immersion in the work of soil advisors

02

Level 2

- Implement a soil diagnostic on any type of soil
- Decide to select the relevant NbS to implement in a specific context

03

Level 3

- Assess the impacts of the implemented NBS on any type of soil

### Plan

1. All levels
    - Make a full soil diagnostic (4h)
    - Common webinar (2h)
  2. For each sector
    - Fictional case study
    - Demo site / Field study (2 x 10h)
      - Realise a portfolio of 2 farms
      - Do a humic balance
      - Crop performance
- Evaluate NBS (4h)

## Content Formats



Knowledge  
Transmission

- Course texts
- Static graphics and infographics
- Videos sourced online



Active  
learning

- Reflection questions.
- Quiz questions after each video or text.
- Fictional case studies with the learner put in the role of a soil advisor and quiz questions



# Who is working on this?

## CNA / VDT



Vincent is leading the project and coordinating partners and Elodie is the instructional designer for Level 1 and coordinator for L2 and L3.

## IUNG



The IUNG team provides help if needed.

## AERES



They are in charge of designing and writing all agricultural content for Level 2 and 3 of the module.

## CDR



They are in charge of designing and writing the content of Paludiculture for L2 and L3 of the module.

## CALF



They are in charge of designing and writing the content of forest diversification for L2 and L3 of the module.

## The Soil Association



They helped in carefully proofreading the content for the Level 1 course

## IUCN



They are in charge of designing and writing the content of BGI for L2 and L3 of the module.

## Alchemia-Nova



They are in charge of designing and writing the content of Bioremediation for L2 and L3 of the module.

## FiBL



Tim Schmid helped in producing content for L1 and other levels of the course.

# Mentimeter Activity:

Go to **menti.com** and  
use the code **1868 8538**

Academy registration,  
platform and practical information

**Javier Montellano,**  
**REVOLVE**



# How to join?

<https://nbsoil.eu/soil-academy/>

Do you want to join the NBSOIL Academy? Enrol now here!

1

Step One

2

Step Two

3

Step Three

First name\*

Last name\*

Email\*

Country\*

Austria

Language\*

English

Age\*

Gender\*

Male

What is your status or interest level regarding soil advising?\*

Currently working as a soil advisor

Next





1

2

3

Step One

Step Two

Step Three

What is your background in soil management and advice? (check more than one as it applies)\*

University level education in soil science and or agronomy

Professional education in soil science soil science and or agronomy

Non formal training in soil management and apprenticeships

Practical experience in soil management

Other

Which land sector(s) interests you most?\* (select as many as you see fit)

Agriculture

Forestry

Urban

(Post)industrial

All

Which biogeographical region are you focused on?\*

Atlantic

Mediterranean

Continental

Alpine

Boreal

Pannonian

Other - please specify

Are you available to attend on-site events?\*

No

Do you have an idea for your final project?

Previous

Next

Please specify which crops, tree species, aspect of urban planning, or other areas are you interested

1

2

3

Step One

Step Two

Step Three

Do you have any of the following skills or resources?

Access to land/soil

Drone

Map drawing skills

Lab/soil testing

Do you have access to any of these stakeholders and their networks?

Farmers

Foresters

Urban planners

Industrial site managers.

Urban gardens.

Consumer coops.

Builders

Other soil advisors

Are you interested in participating in the Soil Mission and the Soil Health Living Labs beyond NBSOIL?

Yes

Would you like to receive updates on the project's progress?

I agree to be enrolled by the NBSOIL Project team on the Academy Moodle platform to follow the course once available.\*

I agree to [terms and conditions](#)

Submit

Previous

## What happens when you click submit?



**Thank you for enrolling on the NBSOIL Academy.  
Please check your email for more information.**

NBSOIL Thank you for your enrollment in the NBSOIL Academy > Inbox x



NBSOIL <info@nbsoil.eu>  
to me ▾

13:30 (0 minutes ago) ☆ 😊 ↩ ⋮

**Dear Marta Castillo,**

Thank you for your interest in participating in the NBSOIL Academy. Stay tuned for an email from the Moodle e-learning platform, which will provide you with your login access to the NBSOIL Academy. The Academy is scheduled to commence on June 5th. We invite you to join the Academy launch webinar online [here](#). In the meantime, you can begin your learning journey with our Introductory Massive Open Online Course (MOOC). More information can be found [here](#).

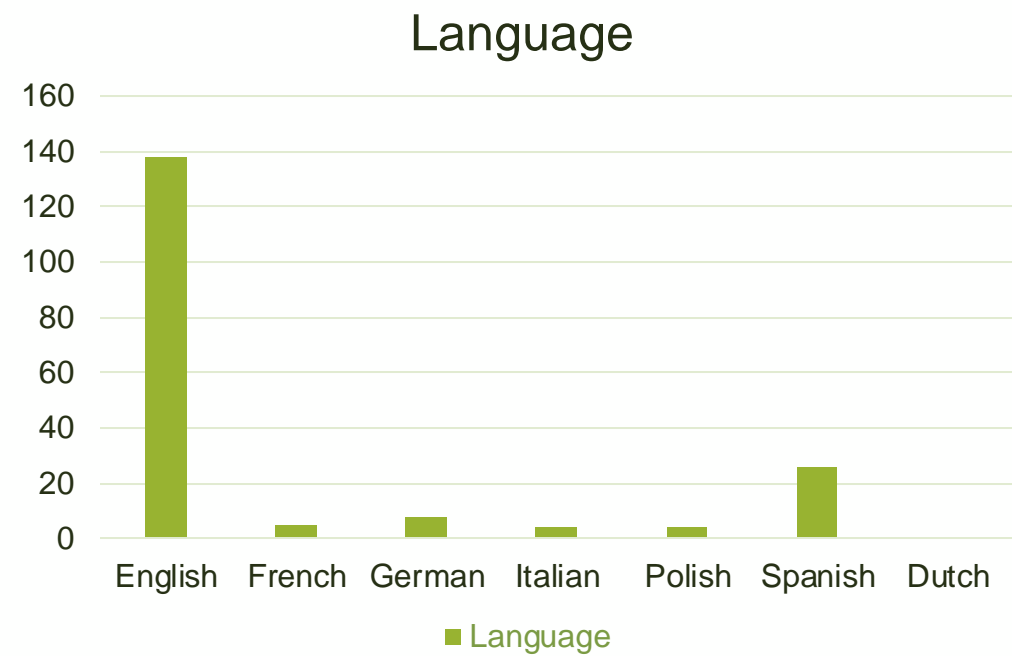
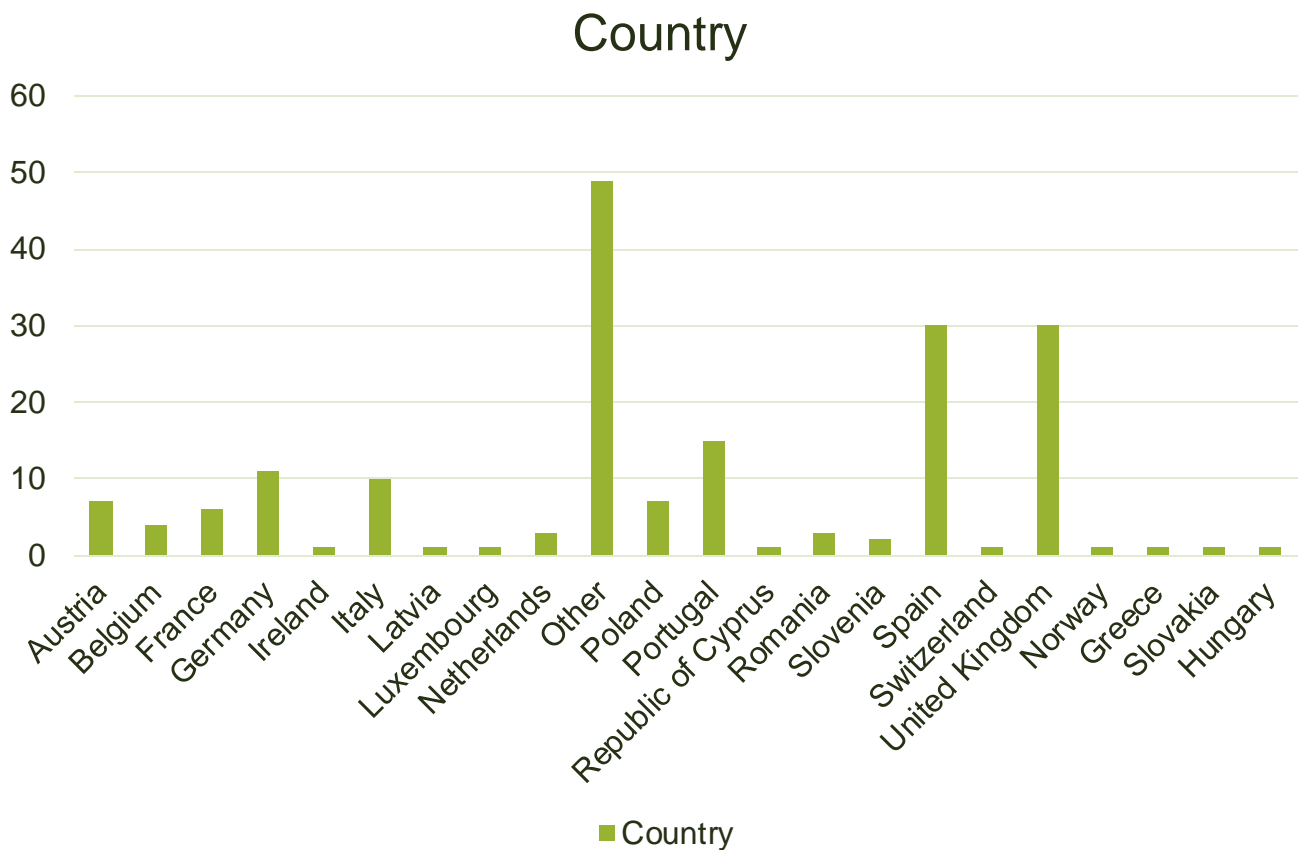
Thank you,

The NBSOIL team.



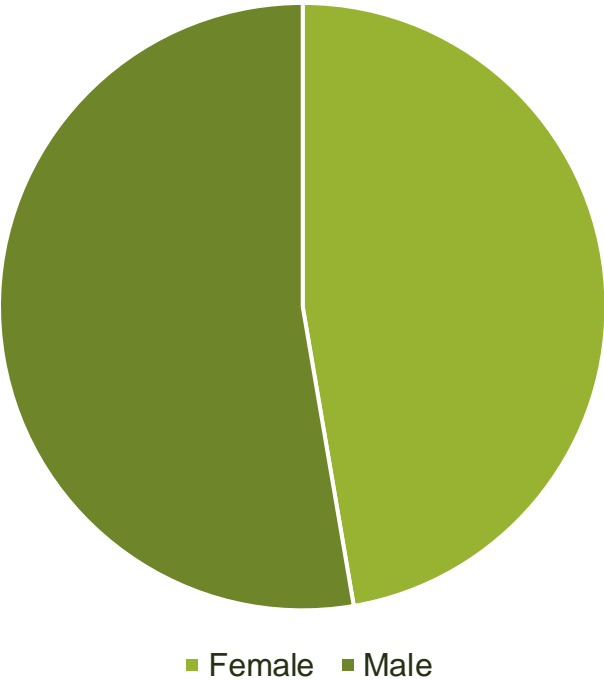
**NBSOIL**  
Nature-based Solutions  
for Soil Management

# Academy demographics

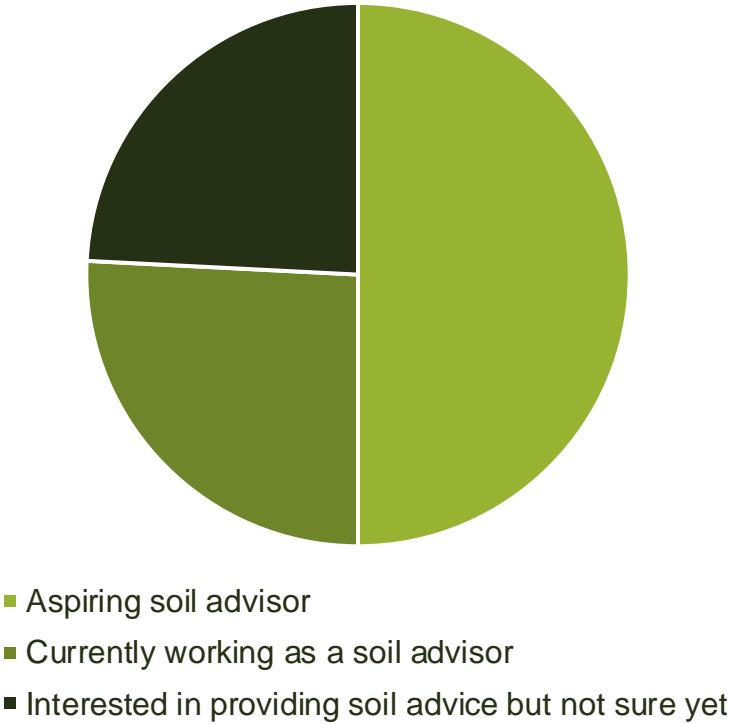


# Academy demographics

Gender



Current status







**Q&A**





## Closing remarks

- Next Steps
- Opening of the Academy
- Follow-up from this event

