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National engagement event

15. Marts 2023

- The Mission explained
- Soil Health Living Labs and Lighthouses
- Thematic focus of the 2023 Living Lab calls
- Engagement session

Funded by
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Please be aware:

- We will share the **participant list** with names, institutions and e-mail addresses with participants only, for information and further networking.
- We will take **photos** during the event for communication and dissemination purposes of the NATI00NS project. If you find yourself in a picture you would like us to remove, please send an email to info@nati00ns.eu
- If you have given your **consent** during registration to receive updates from NATI00NS and/or to receive information from other initiatives related to the EU Soil Mission, you have the **right to withdraw your consent** - by email to info@nati00ns.eu
- This is a hybrid event with an online component. The **Zoom Meeting will be recorded**.

The Mission explained

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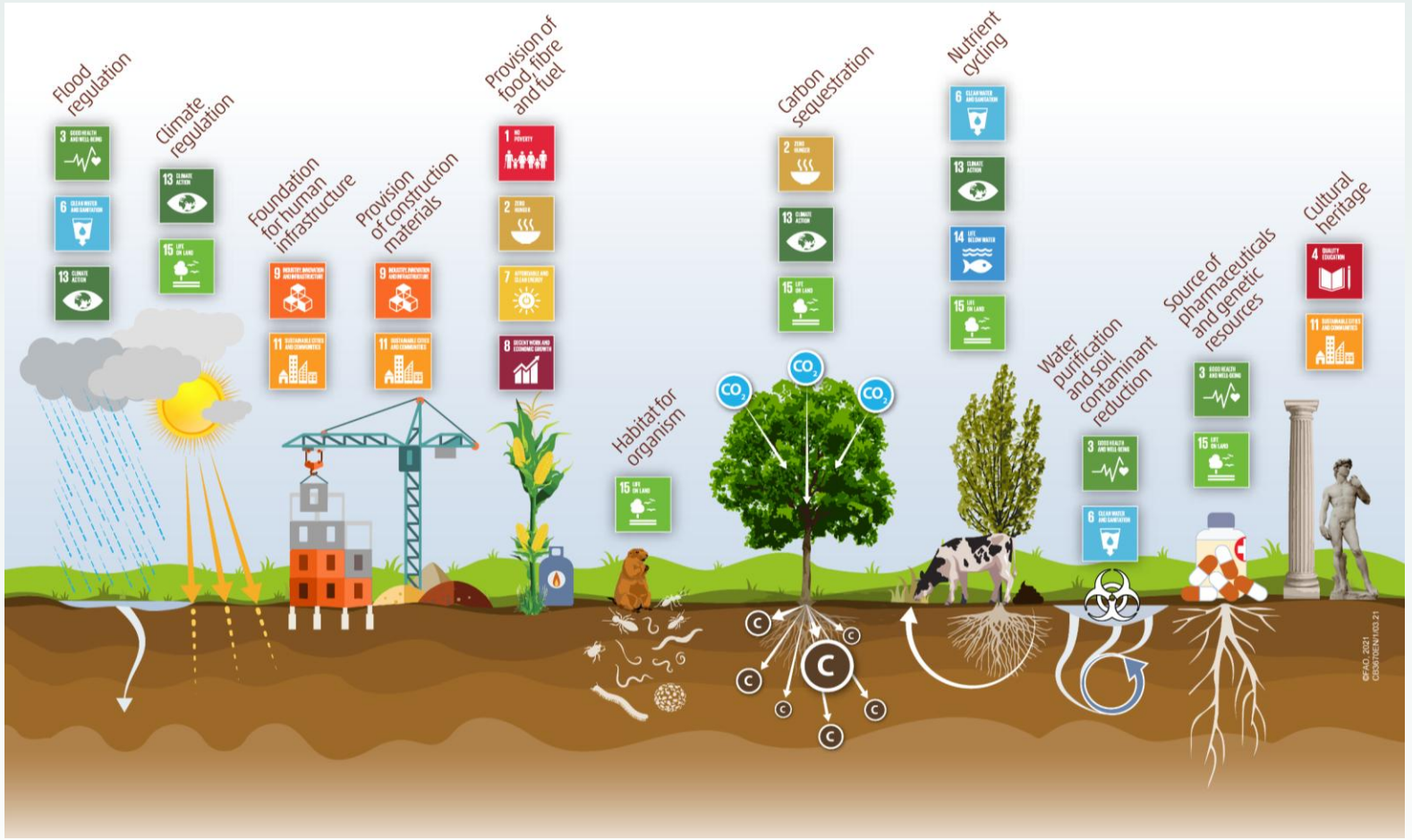
Healthy soils

- are essential for all life-sustaining processes on Earth
- have the continued capacity to support ecosystem services.



Healthy soils, a prerequisite to achieve the SDGs. Source: fao.org

Unhealthy soils

- Soils degraded by human activities, including anthropogenic climate change;
- Often enhanced by a lack of understanding or education;
- Concerns about 2/3rd of European soils: agricultural, natural and rural;
- Ecosystem services are limited, and costs of degraded soils are enormous (> 50 billion € yr^{-1}).

The Mission ‘A Soil Deal for Europe’

- 1 out of 5 EU Missions;
- The Mission to lead the transition towards healthy soils in 2030;
- A Mission at the heart of the EU Green Deal: the transition to overcome threats by climate change and environmental degradation.

The benefits of the European Green Deal

The Soil Mission 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

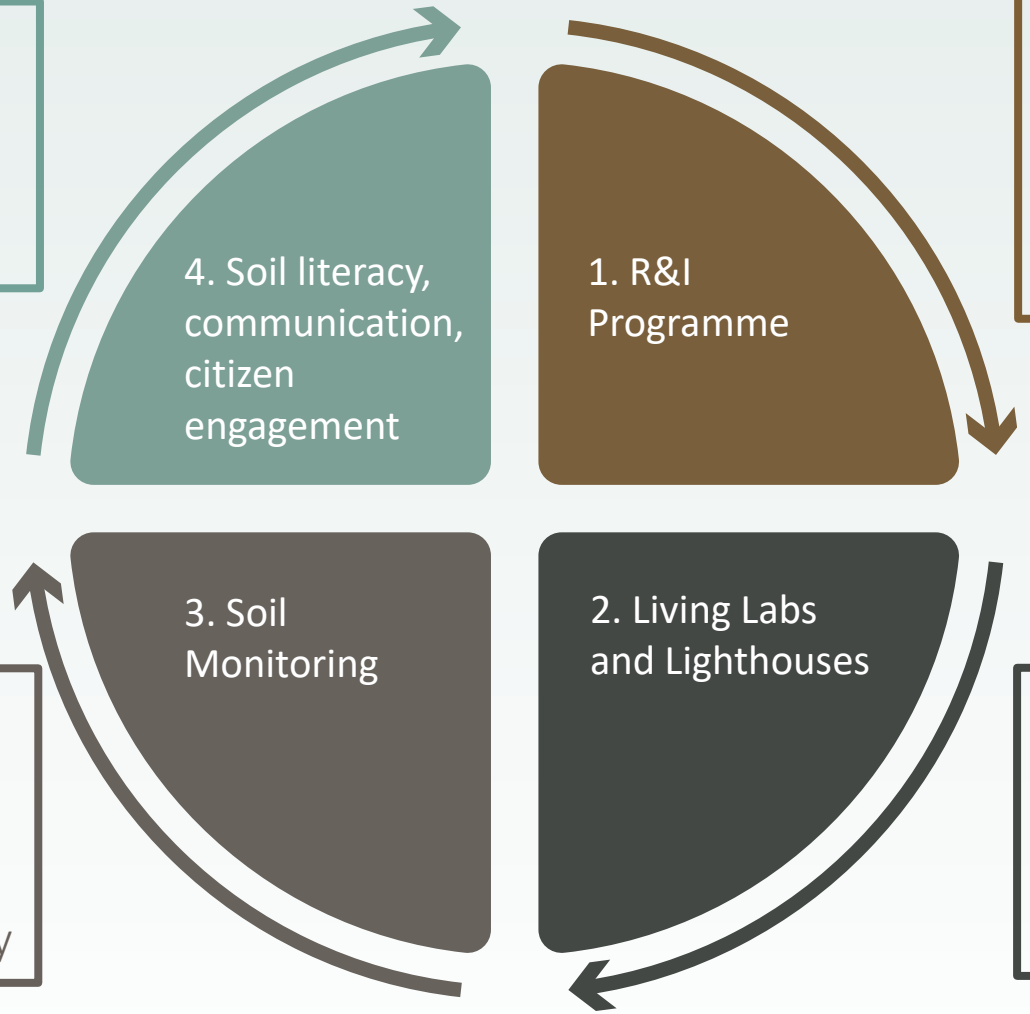
5. Prevent erosion
6. Improve soil structure to enhance soil biodiversity
7. Reduce the EU global footprint on soils
8. Improve soil literacy in society

The Soil Mission goals and implementation

- 100 Living Labs and Lighthouses across all land uses: agricultural, forestry, natural, industrial and urban sites;
- To give visibility to soils as a crucial, yet widely “unrecognised” societal asset and public good;
- To pioneer, showcase and accelerate the transition to healthy soils.
- Bottom-up approach: based on open science and interactive, participatory innovation with strong stakeholder and citizen engagement;
- Co-implementation of mission by researchers, land managers, regions, businesses, policy makers, citizens and international partners;
- To accelerate the co-creation and uptake of solutions.

The Mission's four building blocks

Communication, training and advice targeted to different target groups; specialised "soil advisors"

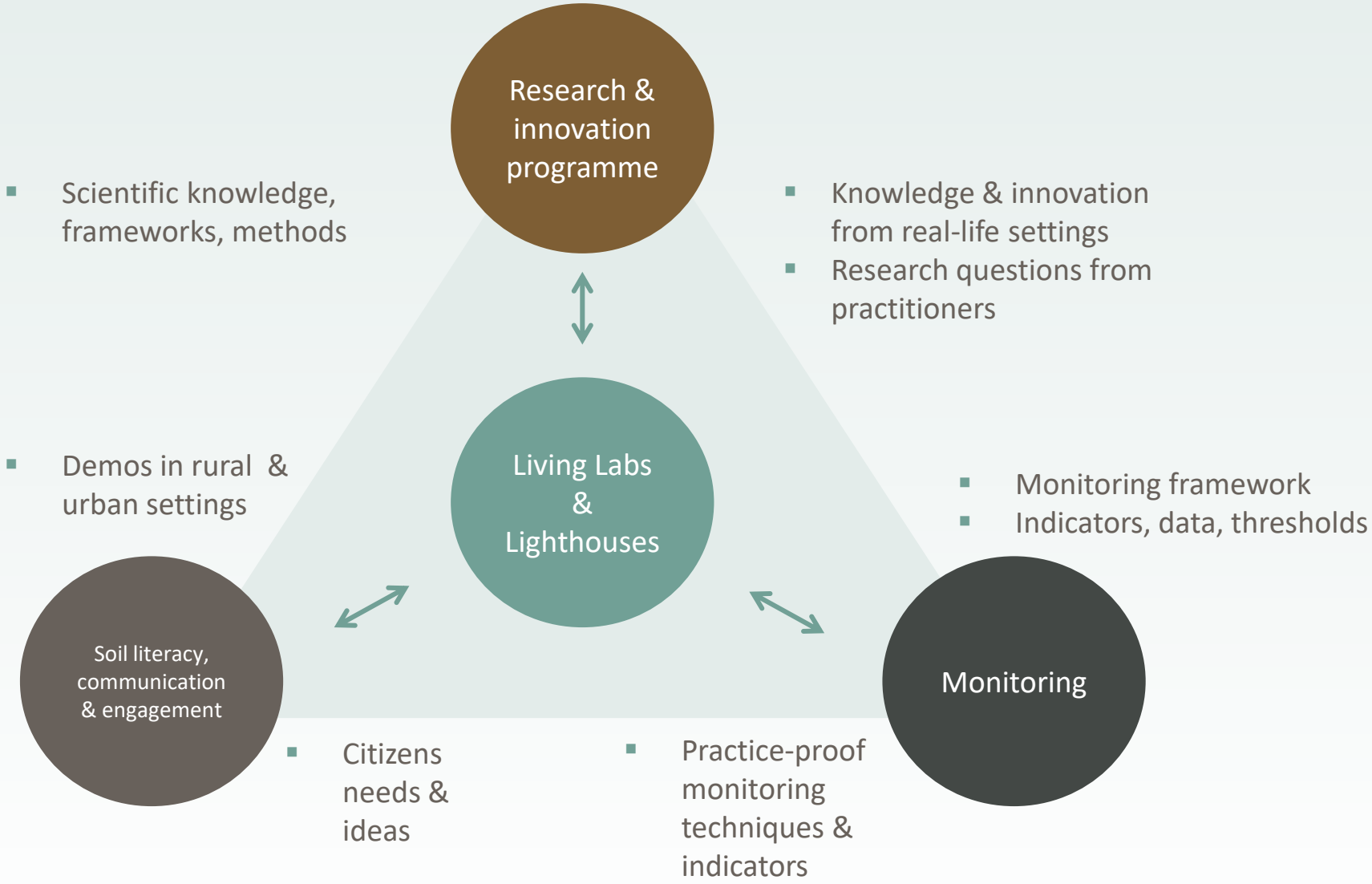


Knowledge, data, technologies and infrastructures to support practices and business models for soil health

Harmonization of soil health monitoring and reporting across Europe; contribution to European Soil Observatory

A comprehensive network of real-life sites for co-creating, testing, demonstrating and upscaling of solutions

The core element of the Mission: Living Labs and Lighthouses



Soil Health Living Labs and Lighthouses

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Soil Health Living Labs & Lighthouses: Definition

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."

- **User-centred,** place-based and transdisciplinary
- **Multi-stakeholder**: Involve all relevant partners in co-design, testing, monitoring and evaluation of solutions,
- Use of **real-life** settings to accelerate adoption.
- Contain **several sites** (e.g. farms, forest exploitations, city parks) at **regional** or **sub-regional** level.

Soil Health Lighthouses

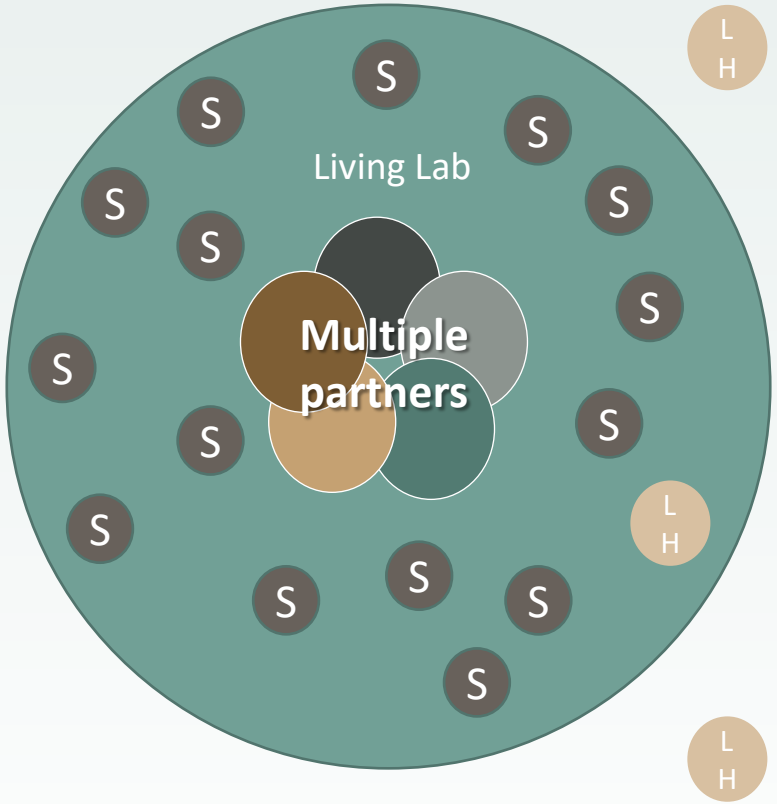
Individual sites of exemplary performance

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

- They **showcase** good practices and upscale solutions.
- They are places for demonstrations, training, networking and communication towards future users, policy-makers or the broader society.

* 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 living labs.

Soil Health Living Labs & Lighthouses: Scale & Activities

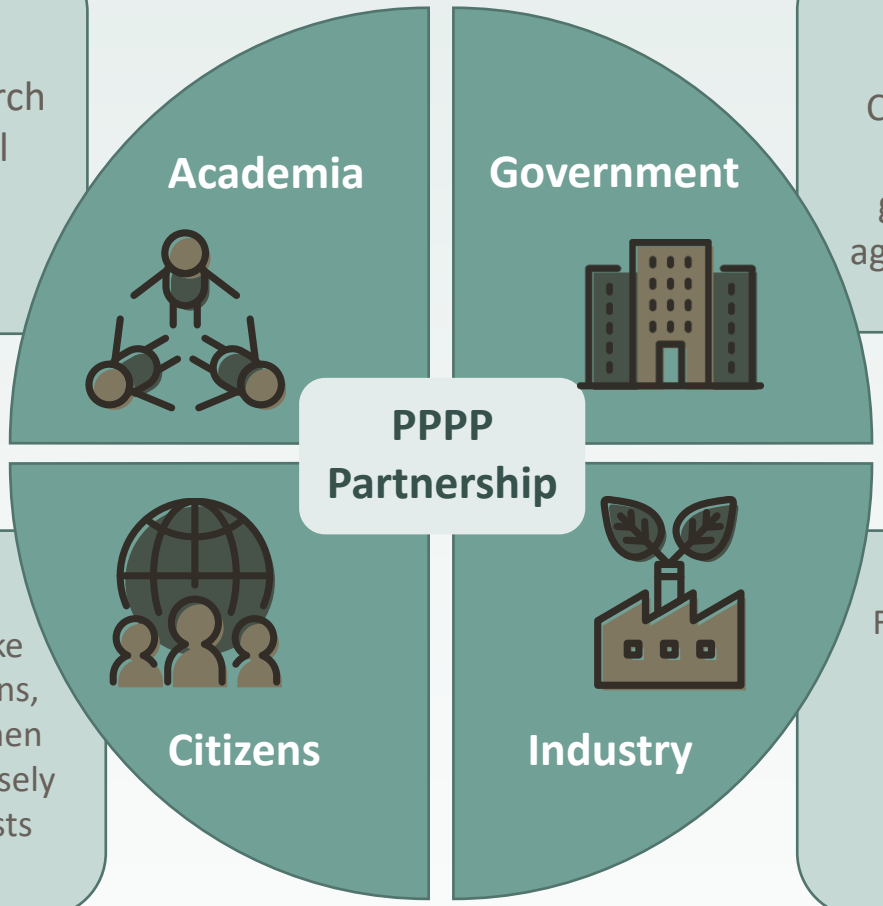


	Scale	Activities	Performance in soil health improvement
Living Lab	**Regional/ subregional landscape**	Coordinate experimentations & partners	In progress at landscape scale
Living Lab experimentation site	**Local** (one farm/forest, one urban site, etc)	Co-create knowledge and innovations	In progress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

Participants in the Living Labs: Quadruple Helix

Academia
Schools, colleges, universities, research institutes and innovation labs of all types, whether in the public, private or civil sectors

Government & Public sector
Central, regional & local governments, intergovernmental organizations, government entities like ministries & agencies, public administrations & other publicly-owned entities



Citizens, civil society & users
Both non-profit formal organizations like NGOs, charities, foundations, associations, trades unions & social entrepreneurs when not profit-seeking & more informal & loosely organized communities, citizens, interests groups & movements

Industry
Firms, companies, entrepreneurs, SMEs, corporates, other profit seeking organizations operating in the market, including commercial ICT & technology sectors, representatives of these stakeholders like employers' and trade organizations

Carayannis, Elias & Campbell, David. (2009). 'Mode 3' and 'Quadruple Helix': Toward a 21st century fractal innovation ecosystem. International Journal of Technology Management - INT J TECHNOL MANAGE. 46. https://doi.org/10.1504/IJTM.2009.023374 .

*Carayannis, E.G., Barth, T.D. & Campbell, D.F. The **Quintuple Helix innovation model**: global warming as a challenge and driver for innovation. J Innov Entrep 1, 2 (2012). https://doi.org/10.1186/2192-5372-1-2*

Soil Health Living Labs & Lighthouses: Implementation Plan - Criteria

Living Labs*

AIMS	• **Innovation**, **co-creation**, formal learning • Contribution to **societal challenges** • **Improving soil health and related ecosystem services** (=> mission objectives)
ACTIVITIES	• **Co-creation, co-development & experimentation** of innovations improving soil health and related ESS • **Research on impact of these innovative practices** on **ecosystems** • **Networking** and **knowledge exchange** • **Demonstration** (in particular lighthouses)
PARTICIPANTS	• **Public-private people partnership** • **Real users (soil managers connected with broad array of stakeholders & decision-makers)** • **Demonstration:** wider public, policy arena, EIP and relevant networks
CONTEXT	• Multiple **disciplines** (-> transdisciplinary, inc. social sciences), **methods, dimensions** (technical, economic, social) • **Place-based** approach and **real-life context** = real farms/forest/urban sites • **Robust scientific setup** for **ecosystem assessment** • **Openness,** communication, dissemination

Lighthouses

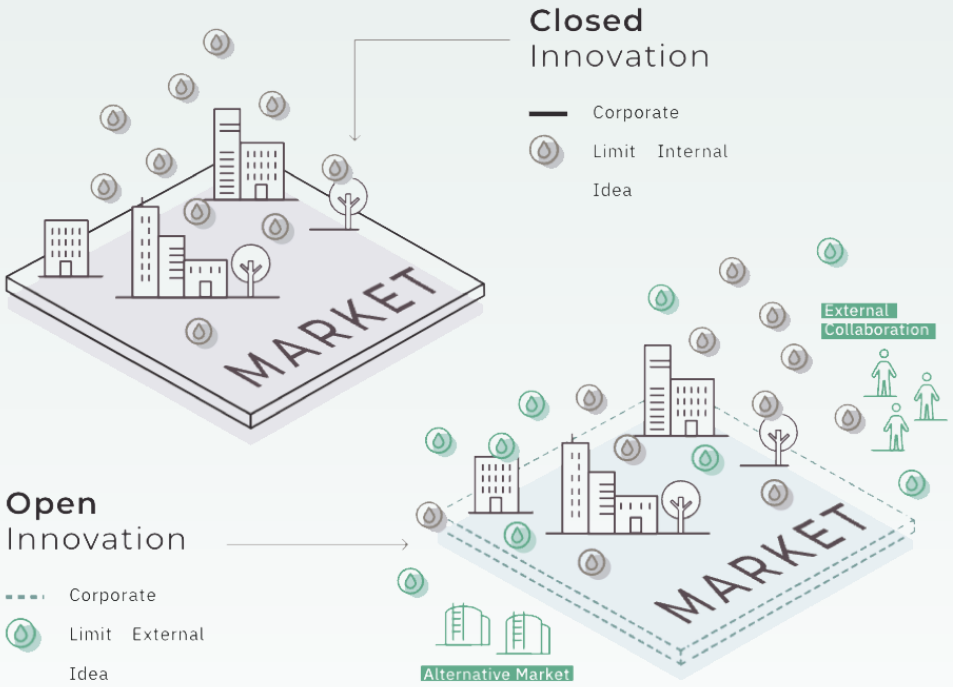
Criteria based on **exemplary performances** in terms of soil health and related ecosystems services

*adapted from McPhee et al. (2021)

Why implementing the Living Labs?

- Complex challenges cannot be solved by single stakeholders
- Lack of trust between stakeholders
- Different language
- Different approach (solution driven to problem driven)
- Different goals (solution for practice vs publishable results)
- Practical solutions from one farm are not widespread
- Practical solutions are not evaluated
- Lots of motivated farmers, still difficult for them to get heard
- …

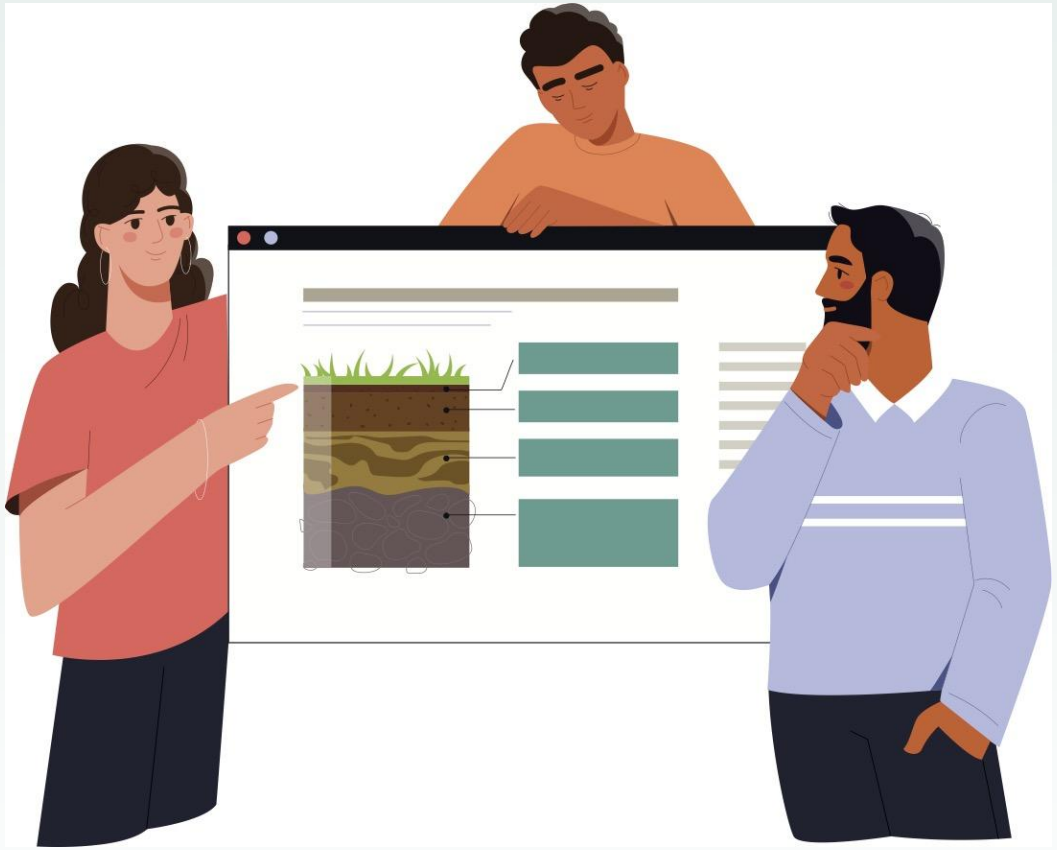
What to expect from the Living Labs?



Cooperating in a multi-stakeholder team makes you

- … become inspired
- … learn to think out of the box
- … better understand each other
- … accept different perspectives from different stakeholders
- … aim for the same goals
- … work together instead of side by side
- … find faster, more evaluated (from different perspectives) and therefore easier scalable solutions
- …

What to consider when setting up a Living Lab?



Operation
Experience
Commitment
Openness
Communication

Users
User engagement
User-driven
Co-created
Values
Reality

Organisation
Partnerships
Management
Governance
Infrastructure

Business Model
Innovation ecosystems
Lifecycle approach
Value chain coverage
Business models

Essential factors when setting up a Living Lab. Source: ENoLL (2019)

Types & Map of Living Labs

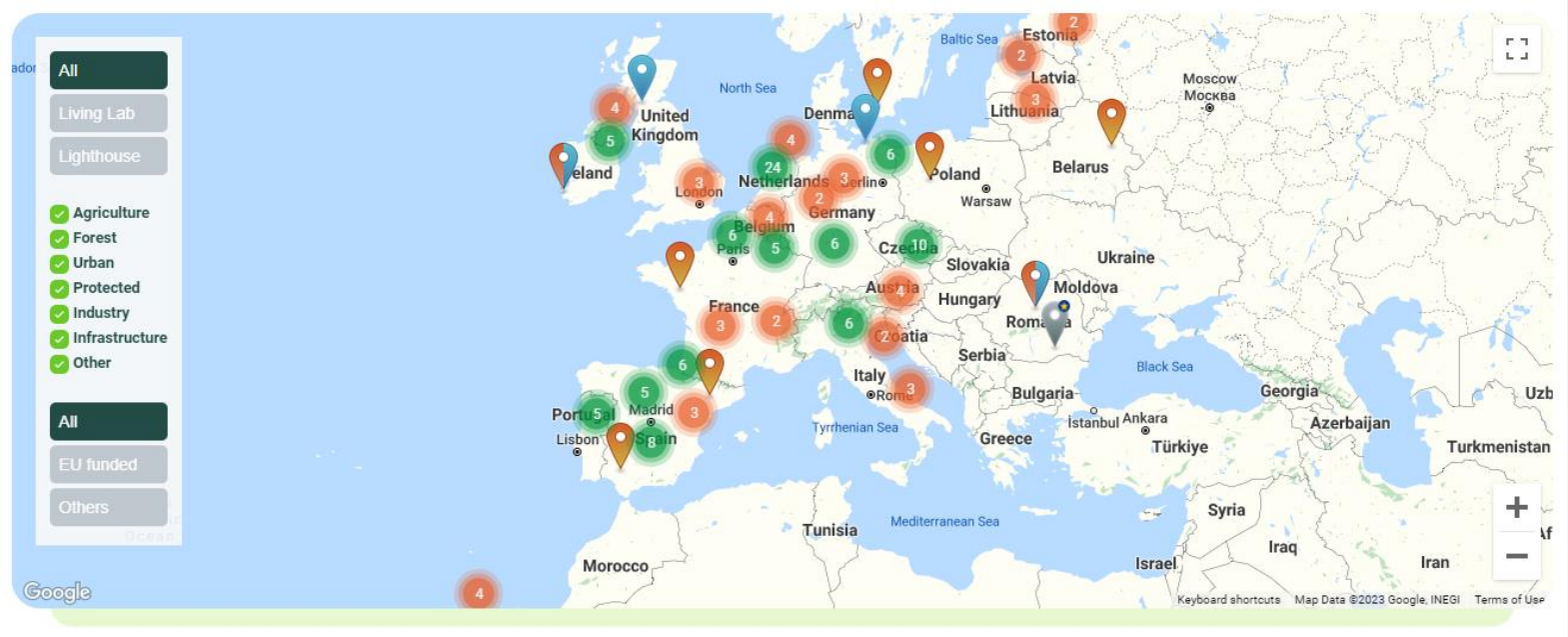
Agricultural LLs

Urban LLs

Forestry LLs

Industrial LLs

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



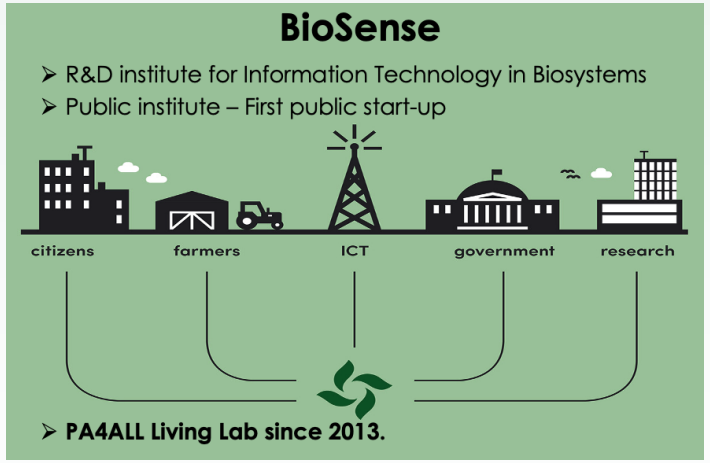
The Living Labs shown on the map do not necessarily fulfil the criteria for the selection and set-up of living labs in the context of the Soil Health Mission presented in the Mission Implementation Plan. A re-assessment of the listed living labs according to Mission criteria will be carried out by ENoLL as of mid-2023.

Agricultural Living Labs: Precision Agriculture for All

PA4ALL has been established as a meeting place for all the relevant stakeholders. This is the first LL in Serbia and one of the first in Europe to focus on precision agriculture. PA4ALL based its activities on educating its community on precision agriculture, motivating end-users to test and validate the IT innovations and ensuring their adoption among various stakeholders.

PA4ALL - Precision Agriculture for All
BioSense Institute

Country: Serbia
Area: Agriculture & (Agri-)Food, Circular Economy, Education/Vocational Training; Environment/Climate change
Website: https://biosens.rs/



Digital village
Digital transformation of agriculture & community
YouTube video

LALA robotic platform – on farm laboratory
On-farm soil sample & analysis
YouTube video

The ÖMKi On-Farm Living Lab is an agroecology-focused nationwide participatory experimentation network which includes a variety of field trials and technology tests co-designed and co-implemented with farmers in Hungary, with the aim to promote agro-ecological transition. Through the national network, ÖMKi tests how newly released sustainable and organic technologies, products and practices perform in diverse, everyday farming.

ÖMKi On-farm Living Lab
Hungarian Research Institute of Organic Agriculture

Country: Hungary
Area: Agriculture & (Agri-)Food
Website: https://biokutatas.hu/en
Email: info@biokutatas.hu

https://biokutatas.hu/en/page/show/onfarm

https://www.youtube.com/watch?v=zn75i1luf3o&t=9s

KRAKOW TECHNOLOGY PARK

The Kraków Technology Park (KPT) is the most complete one-stop-shop for business operating in Poland. They have a full toolbox at their disposal to let clients develop better and faster. The ecosystem they have built consists of about 350 enterprises, which they help day after day to build the best conditions for the development of their companies and increase in sales. KPT's portfolio of initiatives includes several Green Projects.

The Kraków Technology Park

Country: Poland
Areas: Green and digital transformation, Artificial Intelligence, Data Analytics and Simulation, etc.

Website: https://www.kpt.krakow.pl
Email: biuro@kpt.krakow.pl

Microparks

Participatory Design of Green Spaces

Urban Living Labs: Torino City Lab

Torino City Lab (TCL) is an initiative aimed at creating more accessible conditions for companies and other interested parties to respond to specific open challenges in response to concrete needs of the territory, the public administration and its citizens. TCL enables the testing of innovative solutions or business ideas in real-world conditions in the territory.

Recently Torino City Lab (TCL) relaunched itself with the smart life paradigm and with the aim of contributing to the ecological and digital transition of the territory and services to citizens. This reflects the City commitment for keeping climate neutrality by 2030. TCL involves a large number of local and international partners of the public and private sector, and all stakeholders interested in supporting and making the local innovation ecosystem network grow.

Torino City Lab

Country: Italy

Area: New regenerated soil, community-based urban farms and gardens, accessible green corridors, etc (EUSO OBJ 3,6,& 8)

Website: https://www.torinocitylab.it/en/

Email: torinocitylab@comune.torino.it

Orti Generali urban gardens

New soil along the banks of Sangone stream

Forlì, area in front the museum complex of San Domenico

Save Our Soil for LIFE is a demonstration project funded under the LIFE programme «Environment and Resource Efficiency» which aims to contribute to the implementation on a municipal scale of European guidelines on soil protection and urban regeneration. The activity consists in de-sealing and de-paving a green area of approx. 6,500 m2 waterproofed and currently intended for public parking, through:

- the removal of flooring and existing structures up to the underlying permeable layer;
- the restoration of the area by backfilling of soil and topsoil;
- creation of itineraries cycle-pedestrian and underground utilities.

S.O.S. 4 LIFE - Save Our Soil for LIFE

Country: Italy
Type: De-sealing & de-paving soils
Area: urban regeneration, green urban areas (EUSO OBJ 3,6, &8)
Website: https://www.sos4life.it/
Email: stefano.bazzocchi@comune.forli.fc.it

Thematic focus of the 2023 Living Lab calls

Disclaimer

Information provided herewith are of the NATI00NS consortium.

The sole official source of reference shall remain the 2023-2024 Mission Work Programme, officially published by the European Commission January 2023.

Funded by the European Union

Thematic focuses of the two 2023 Living Lab calls

Soil health (0108)

HORIZON-MISS-2023-SOIL-01-08: Co-creating solutions for soil health in Living Labs

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-miss-2023-soil-01-08

Carbon farming (0109)

HORIZON-MISS-2023-SOIL-01-09: Carbon farming in living labs

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-miss-2023-soil-01-09

- Deadline for applications: 20 September 2023 17:00:00 Brussels time
- Single-stage submission via the Funding & Tenders Portal;
- Research and Innovation Actions: 100% funding for any actor
- **4-5 Living Labs** for each application **in at least three** different Member States and/or Associated Countries.

Thematic focuses of the two 2023 Living Lab calls

Soil health (0108)

HORIZON-MISS-2023-SOIL-01-08: Co-creating solutions for soil health in Living Labs

- 36 M€ funding
- Expect 3 applications funded

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

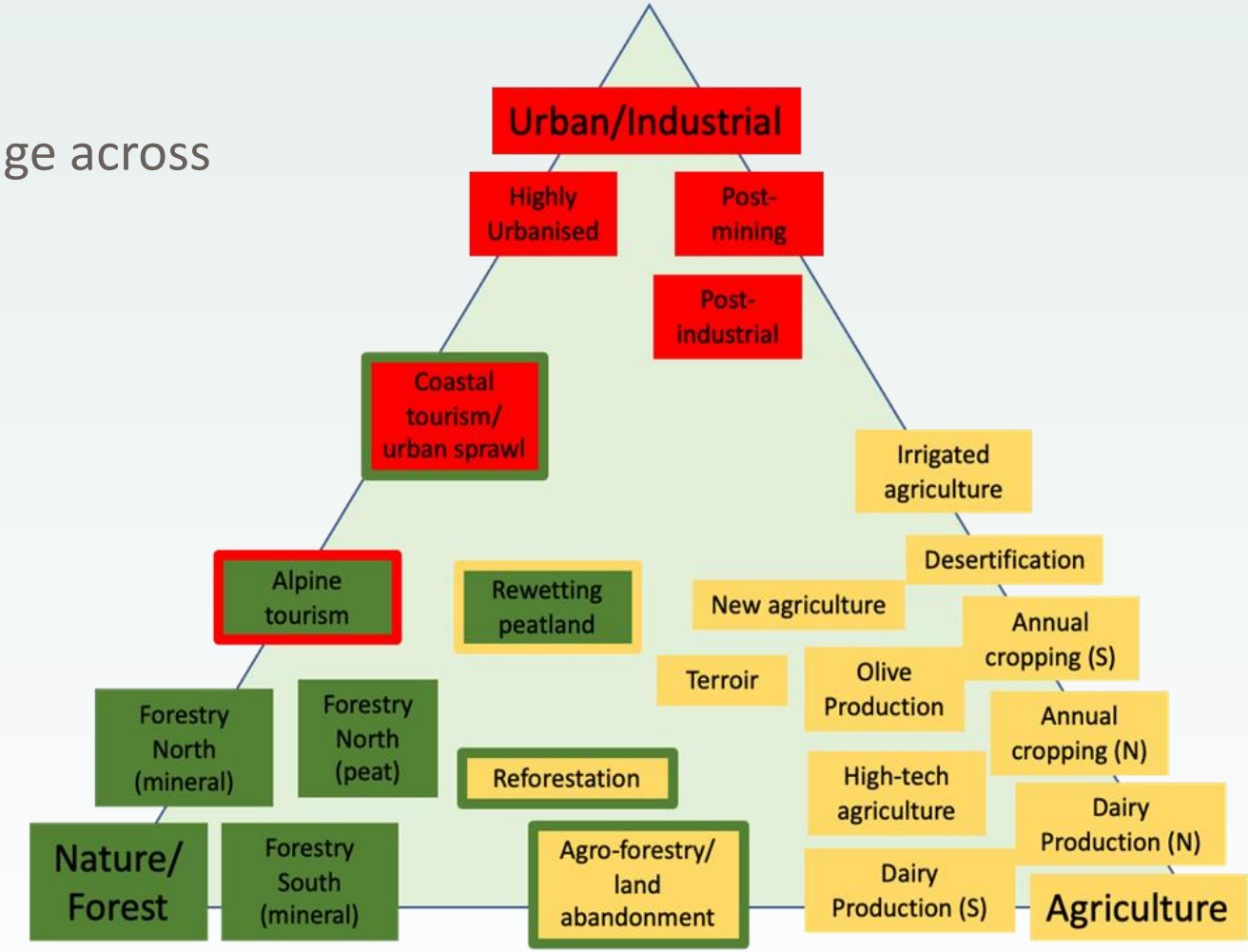
Carbon farming (0109)

HORIZON-MISS-2023-SOIL-01-09: Carbon farming in living labs

- 12 M€ funding
- Expect 1 application funded

Aim of PREPSOIL Project

Synthesize soil needs and drivers of change across 21 EU-representative regions

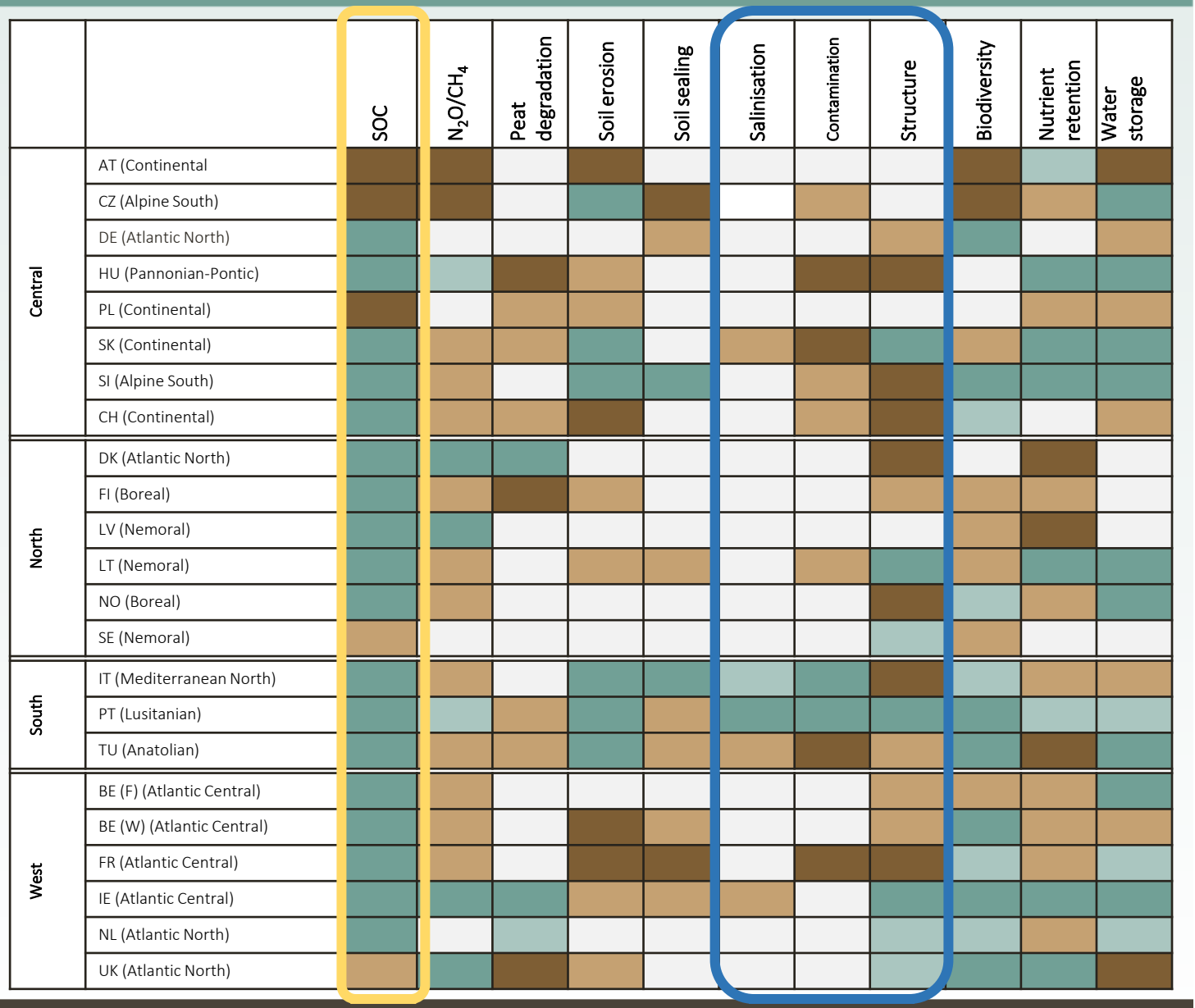


Source: PREPSOIL WP2 workgroup

Regional soil needs

- Different regions have different soil challenges and different research needs.
  For example, salinisation; contamination; structure (in blue)
- Some soil challenges are relevant across regions, such as soil organic carbon (in yellow)

Soil challenge	Research need
Very important	Very important
Important	Very important
Very important	Important
Important	Important
Other	Other



Source: Thorsøe et al.

NATIOONS

Time for engagement

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EXAMPLE SLIDE FOR SLI.DO

Update with correct links and screen
Select your questions and insert in Slido.
Essential tool for hybrid meetings

https://app.sli.do/event/rXp3XP3K6hYrv3AhPYLsYt

TO BE REVISED BY ORGANISERS
Questions can be selected/adapted/renewed according to national relevance

National soil challenges

Focus: to relate soil challenges to mission objectives and the land use types

- Open discussion 1
  - What is the overall condition of our national and regional soil health?
  - Which of the challenges mentioned in the soil mission objectives can you recognize in your own region or in this country?
  - Can you give examples of soil challenges that you have seen or experienced in your own region?
- Break-out session
  - Identify specific examples of each land use type.
  - Where are they relevant (region(s)) and describe why they were pointed out.

TO BE REVISED BY ORGANISERS
Questions can be selected/adapted/renewed according to national relevance

Living Labs concept

Focus: Living Labs as defined by the European Commission

- Open discussion 2
  - Identify examples of existing Living Labs (if any)
  - Present positive aspects of the Living Lab concept.
- Break-out session (continued)
  - Discuss and point out who needs to be engaged to enable influence.
  - Discuss and point out who needs to be engaged to enable action.
  - Identify obstacles that prevents the establishment of a Living Lab.
  - Discuss solutions to overcome the obstacles.

TO BE REVISED BY ORGANISERS
Questions can be selected/adapted/renewed according to national relevance

Living Labs – continued

- Open discussion
  - Can we, based on today's session, establish a Living Lab?
  - If no – What are possible solutions to the individual obstacles?
- Conclusion
  - Identify possibilities within and across the individual groups.
  - Make arrangements for further discussions after the event.

If you will try to establish a Living Lab, NATIOONS can help you!

E.g. with further information, coaching, and to find and engage with similar Living Labs in other countries

NATIOONS: Engagement & Support to applicant LLs

Engagement events	**Inform, engage & promote.** 43 countries (EU MS + AC), national language
Matchmaking – national	**Facilitate creation of local LL.** Online and along engagement events
Factsheets & E-learning	**Inform & train.** LL, open call, types of LL peculiarity
Helpdesk & FAQ	**Support.** Online, addressing all questions on LL creation
Webinars LL methodology	**Train.** How to set up, develop and enlarge a LL.
Coaching	**Support.** Available in local language, appointed mentors.
Thematic events & webinars	**Inform, train & engage.** Different themes for specific land uses.
Matchmaking – International & thematic	**Facilitate creation of partnerships of LLs.** Online and along thematic events

Upcoming Events

Individual Coaching Sessions

- For confidential, individual coaching sessions, please contact: Nataša Hurtová (natasa.hurtova@cvtisr.sk), Beata Houskova, Dana Peskovicova

Matchmaking Sessions

- Matchmaking tool for applicants in the creation of transnational consortia: https://nati00ns.eu/matchmaking-opportunities

Capacity-Building Webinars:

- How to set-up a Living Lab, 23 February 2023 Register: https://www.nati00ns.eu/events, choose Webinars

Thematic Events

- Industrial soil focus in creation of LL, planned for February 2024 https://www.nati00ns.eu/events, choose Thematic events

Join the Community

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Contact Details

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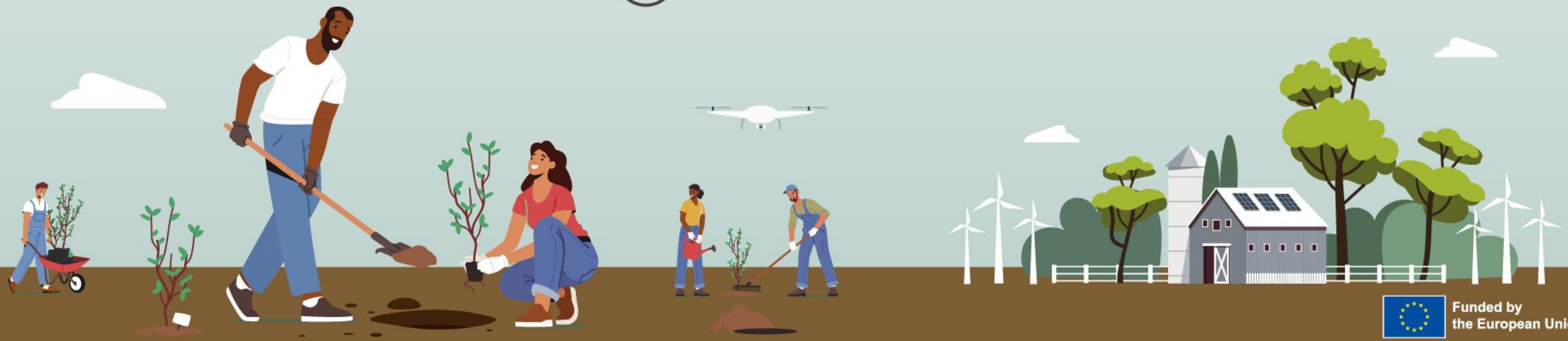

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