



EUROPEAN UNION



EU MISSIONS

SOIL DEAL FOR EUROPE

Transformation towards healthy soil

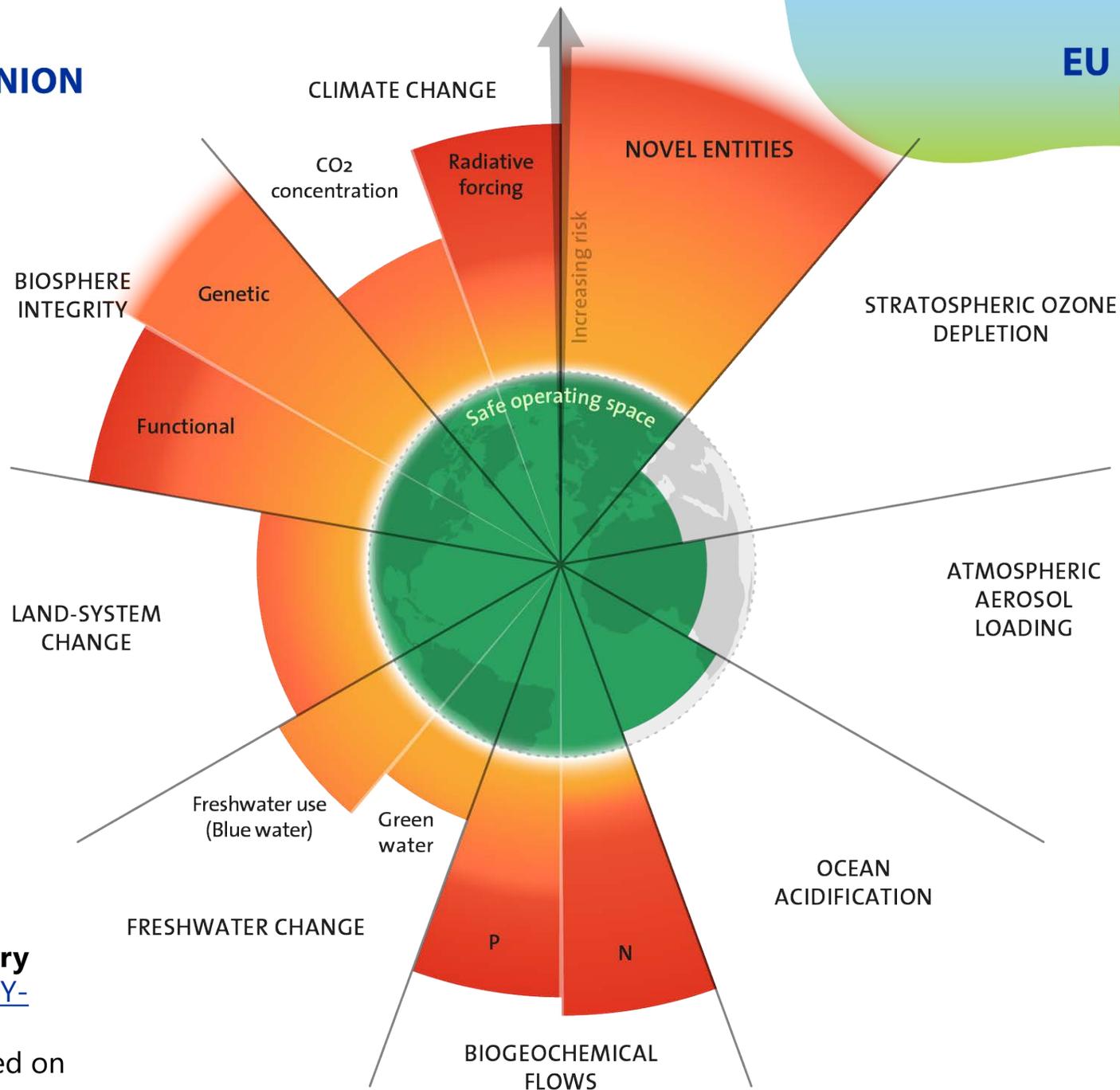


© European Union, 2021

Anna Krzywoszynska, University of Oulu

#EUmissions #HorizonEU #MissionSoil

This presentation is delivered by a member of a Horizon Europe Mission Board, which is an informal group of experts set up by the European Commission to support the implementation of Horizon Europe Missions. The contents of the presentation do not represent the official views of the European Commission nor do they constitute a commitment of any kind on its behalf



The 2023 update to the Planetary boundaries. [Licensed under CC BY-NC-ND 3.0.](#) Credit: "Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023"

An aerial photograph showing a multi-lane highway running diagonally from the bottom left towards the top right. To the left of the highway are large, vibrant green agricultural fields. To the right of the highway, there are brown, tilled fields and a residential development with a winding road and small houses. The overall scene depicts a mix of agriculture and suburban expansion.

“...to reveal consumer models that make us disobedient to our relationship with land and time. Through my artwork, I reveal the impact of the American dream on our society and the land”

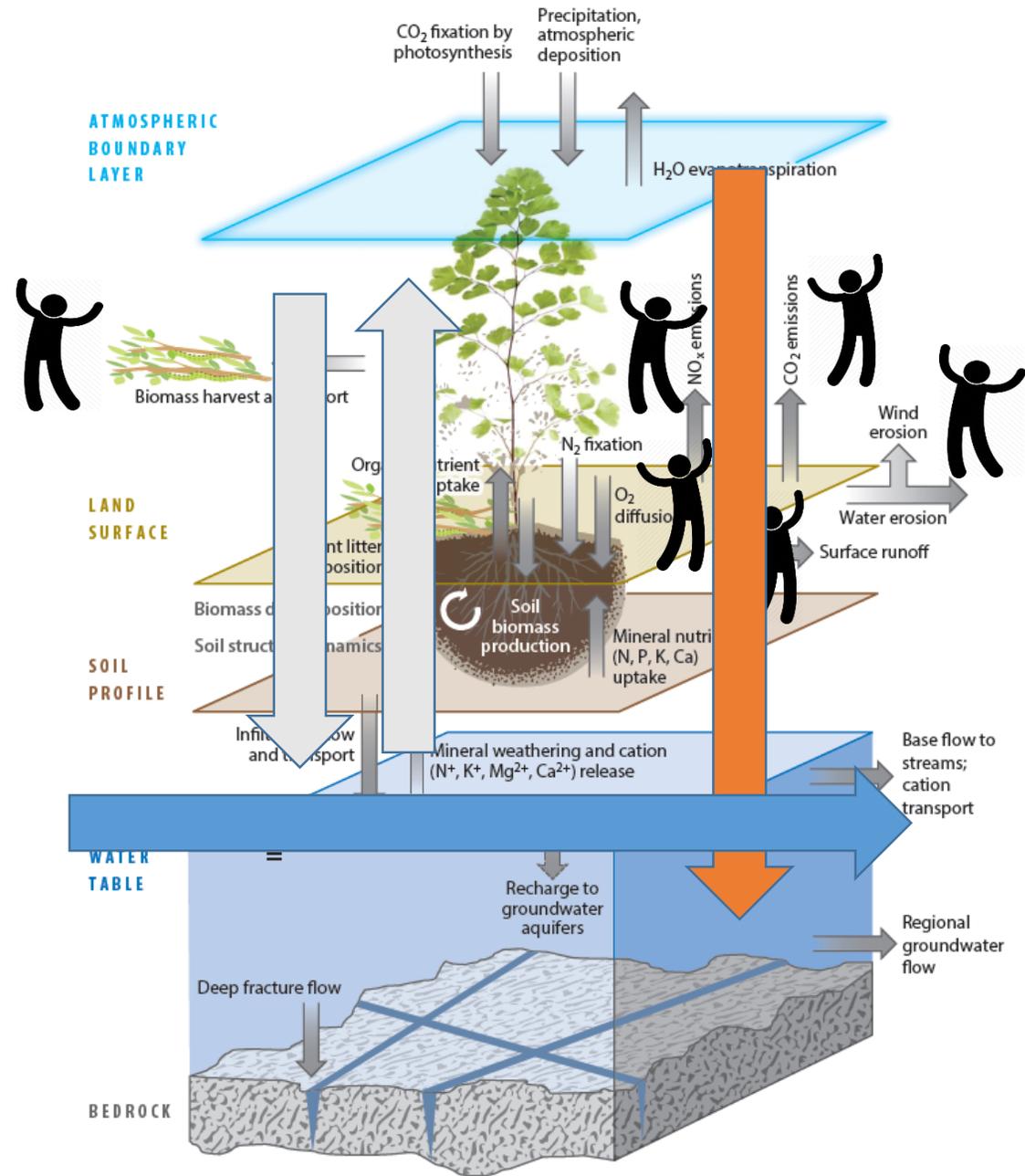


Matthew Moore: Rotations



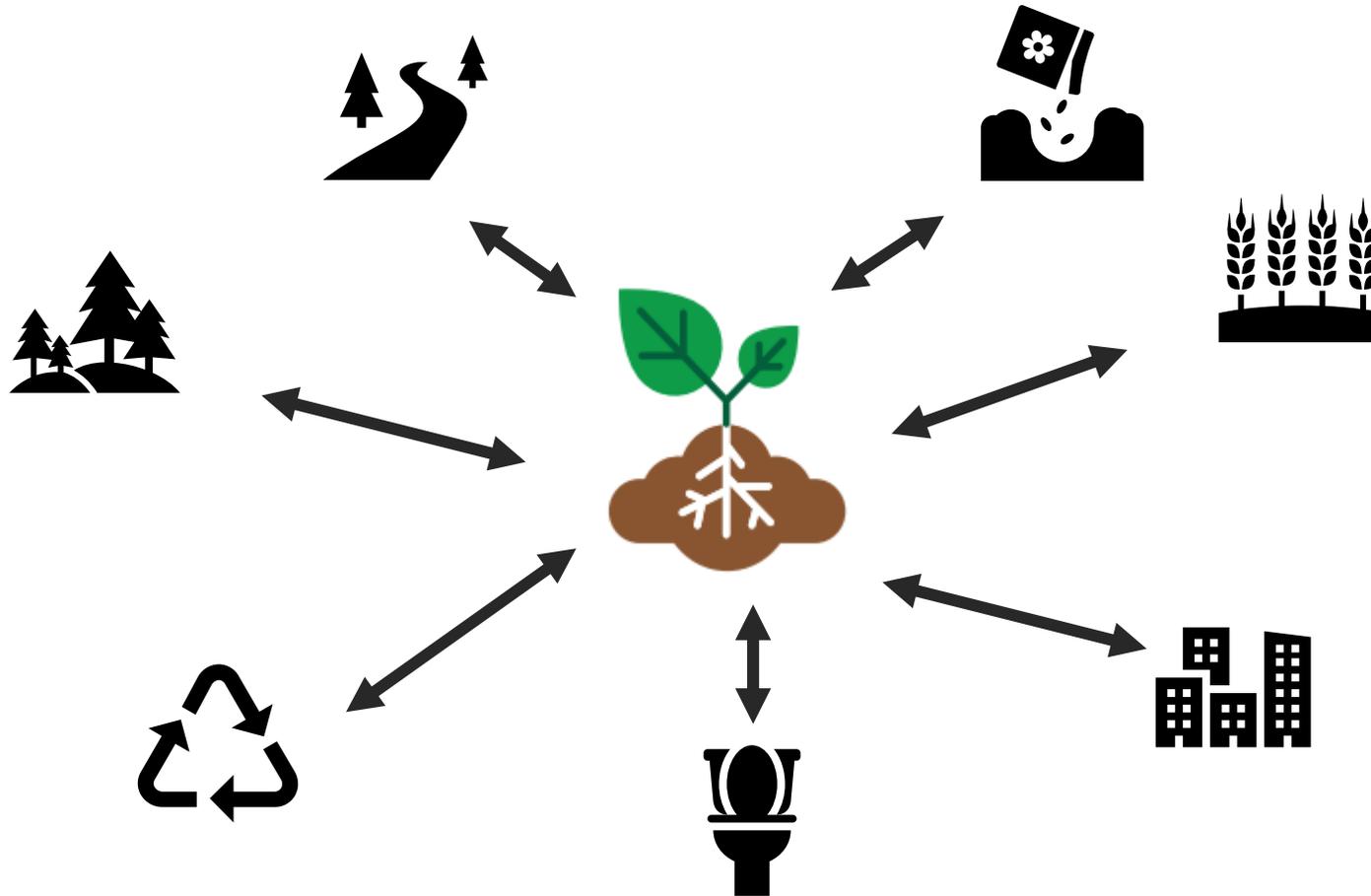
From a chemico-physical to an ecological focus in soils research







Achieving sustainability means transforming social relations with soil in all areas of social life





Transforming social relations means paying attention to values.

- Achieving soil sustainability and soil health requires not just changes to the variables that make up existing relations, but also ways of thinking, values, perceptions, meaning and ways of interacting.
- This includes associated institutional, cultural, economic, and political arrangements and power relations.



Food and Agriculture Organization of the United Nations



Soils and SDGs

Healthy soils perform/provide key functions and ecosystem services



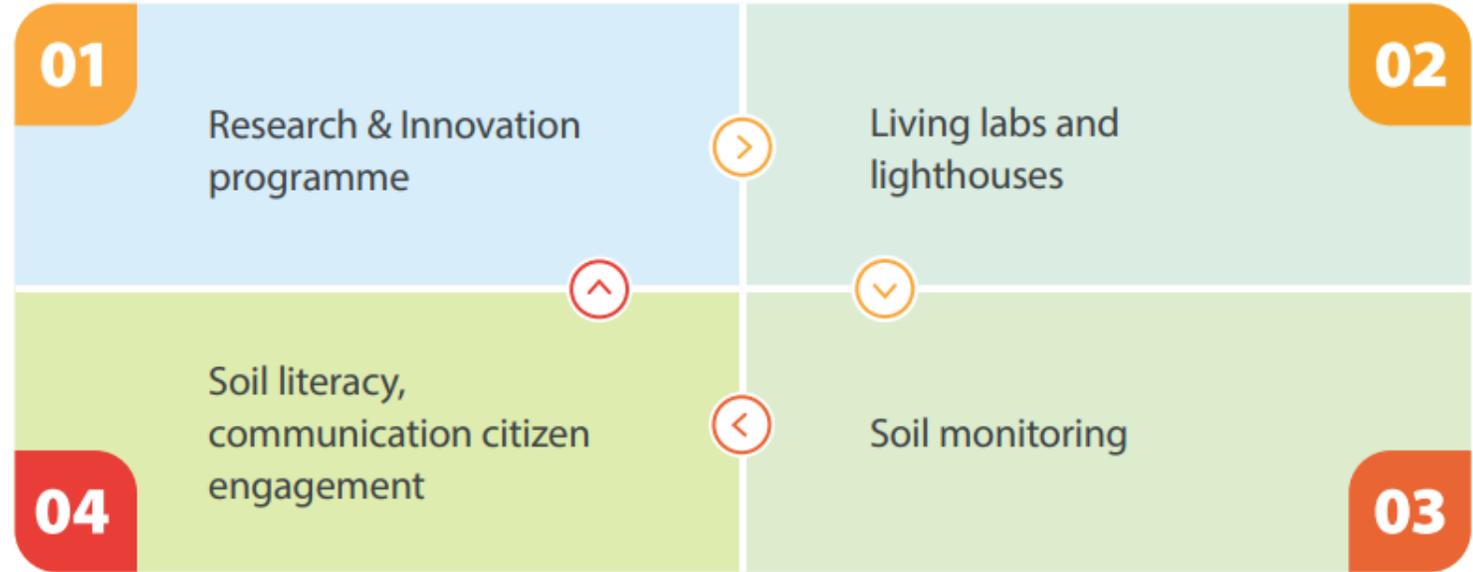


Transformation requires transdisciplinarity.

- Beyond “speaking truth to power”. Linear approach does not exist and does not work.
- Soil sustainability and soil health: need to understand the relationship with societal, cultural, political and economic dynamics.
- Need to explore how to transform those dynamics so that just sustainability is achieved.
- Transdisciplinarity: working from the onset with the agents of transformation (in social groups, not on social groups).



Transdisciplinary ambitions of the Mission Soil.



The mission will pioneer, showcase and accelerate the transition to healthy soils through ambitious actions in 100 living labs and lighthouses within territorial settings. This will be combined with an ambitious transdisciplinary R&I programme, a robust, harmonised soil monitoring framework and increased soil literacy and communication to engage with citizens.



Transdisciplinarity key to the Mission's success.

- SF1: **Building awareness and engagement of the society at various levels**, improving soil literacy and connecting people with soils.
- SF2: **Co-creating activities** and exchanging practices with as many land users and related actors as possible **to drive collective experimentation and co-ownership of solutions and results.**
- SF3: Working under adequate policy frameworks, **involving policy-makers and other governance authorities (including private businesses or influential associations) as co-design actors;** ensure a good science-policy-practice interaction.
- SF4: Taking in consideration **how land use is related with social, cultural, and economic needs and local contexts while paying specific attention to existing structures and values** to understand drivers and barriers regarding sustainable land use and soil management.
- SF5: Stimulate efforts to **develop economic models fit to circular and solidary economies** and the involvement of the actors from the wide value chain- in the co-creation process.
- SF6: **Combining and networking activities at local, regional, national and global scales** to ensure concerns regarding different land uses and up-scaling can be considered.



Transdisciplinary work already funded.



- **co-creation and roll out of tools and spaces for interaction, knowledge-sharing and co-learning**, as well as **stocktaking and dialogue** to understand how regional assessment of soil needs, supported by harmonised monitoring mechanisms, can then lead to action in living labs and light houses for soil health.



- **engage municipalities and regions by creating spaces for dialogue on soil health** with Quadruple Helix stakeholders, including marginalised and vulnerable parts of society. The project will also launch call for pilot projects promoting wider co-assessment and transitioning exercises on local soil challenges



Mission goal and 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

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

5. Prevent erosion

6. Improve soil structure to enhance soil biodiversity

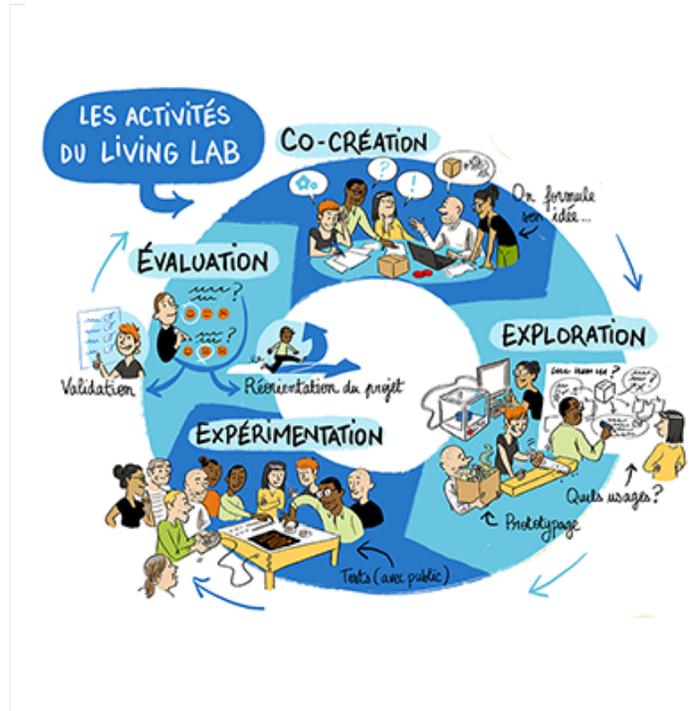
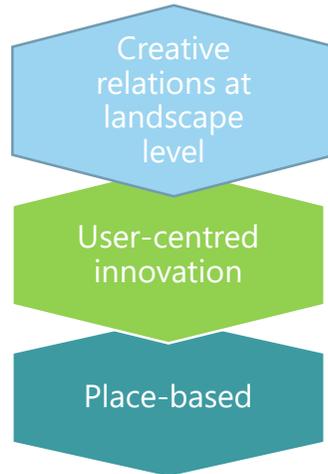
7. Reduce the EU global footprint on soils

8. Improve soil literacy in society



Living labs are open innovation arrangements

- Principles
 - Co-creation
 - With users
 - In reality
- Values
 - Knowledge
 - Business
 - Social



Multiple actors with complementary knowledge

Social and behavioural sciences



Living Labs and Lighthouses

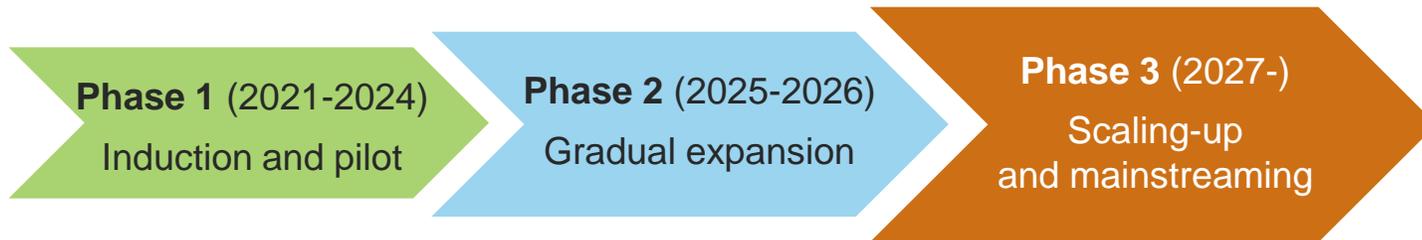
Living labs are a core element of the mission

- They are 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 are sites of exemplary performance with regards to a certain practice

- They are individual sites, such as a single farm, to showcase good practices.
- They are places for demonstrations, training and communication.

Network of 100 Living labs and lighthouses to be built up gradually.



Living labs and lighthouses are key to accelerate the adoption of sustainable practices by users and co-developed methods adapted to the local conditions.



Living Labs in the Soil Mission

- A living lab contains a group of sites working together at regional or sub-regional level.
- A project gathers partners from at least 3 member-states or associates countries.
- Involvement of different civil society actors from the start is key.
- Facilitating that e.g. through national Mirror Mission Boards.



NATI00NS supports regional stakeholders in applying for the soil health Living Labs topics

NATI00NS is hosting a series of capacity-building webinars, specifically dedicated to explaining the concept of Living Labs. These webinars cover a range of topics, including recommendations for the establishment of Living Labs, governance and business models, and the process of application for Living Labs under the **Mission's call for proposals**. The deadline for submitting proposals is 20 September 2023.



Join the Mission – Mission Soil Manifesto

- A Manifesto in **5 points** to:
 1. remind the importance of soils for people and the planet
 2. acknowledge the status of soils
 3. recognise the urgency to act
 4. support the Mission and its objectives
 5. take action as policy makers, organisations or individuals

Everyone can contribute to protect and restore our soils

[Sign it !](#)

<https://ec.europa.eu/eusurvey/runner/mission-soil-manifesto>



The Mission Soil Manifesto

Objective:

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

➔ **Protecting soils is a societal undertaking**

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



EUROPEAN UNION



EU
MISSIONS

SOIL DEAL FOR EUROPE



Mission Soil Manifesto

- 1.** Soil is essential for the life of humans and nature. 95% of our food comes from soil. Healthy soils provide us with clean water, good air, sequester carbon thus mitigating and increasing the ability to adapt to climate change, and support biodiversity. Soils also sustain our landscape and cultural heritage and are the basis of our economy and prosperity. We acknowledge that soil is the basis of our well-being. With this Manifesto, we are creating a community that takes care of soils.
- 2.** We need to protect and restore soils. Soils are a fragile resource that needs to be carefully managed and safeguarded for future generations. More than 60% of soils in the EU are considered to be in an unhealthy state due to unsustainable management practices, pollution or sealing. Climate change puts further pressure on soils and accelerates land degradation. All types of soil are concerned. No soil should be left behind.
- 3.** Soil protection and restoration need to be embedded in all human activities that have an impact on land. Protecting and improving soils is crucial to sustain the well-being and prosperity of everyone. We can all contribute to halting soil degradation and building a sustainable future based on healthy soils for food, people, nature, and climate. Actions are encouraged at all levels: global, national, regional and local.
- 4.** We support the Mission 'A Soil Deal for Europe' (Mission Soil) and its goal to create 100 living labs and lighthouses by 2030 to promote soil protection and restoration in Europe. We also welcome activities under the Mission to address its specific objectives: reduce desertification, conserve soil organic carbon stocks, stop soil sealing and increase the re-use of urban soils, reduce soil pollution and enhance soil restoration, prevent erosion, improve soil structure to enhance soil biodiversity, reduce the EU global soil footprint, and improve soil literacy in society.
- 5.** We are committed and motivated to contribute to the protection and restoration of soil health in our capacity, sector, and territory as this is a fundamental resource for the place where we live and for our well-being. We will contribute to raise awareness on the importance of soil and enlarge the community actively involved in caring for this precious resource.

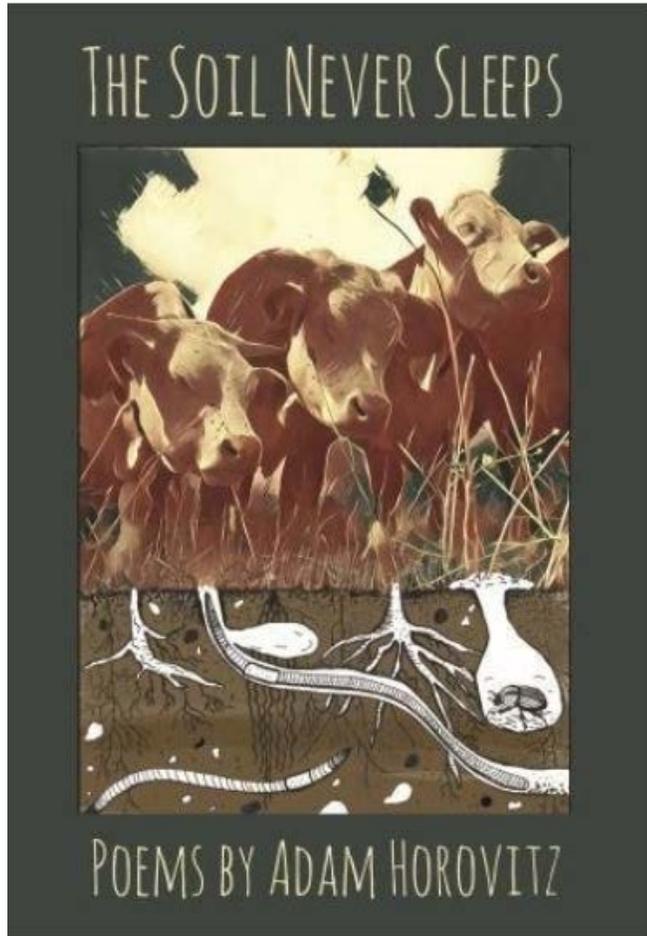


European
Commission



Mission soil: transdisciplinarity research for societal transformation of relations with soil.

- Achieving soil sustainability requires transformation.
- This is a societal transformation: a transformation of societal relations with soils at all levels, everywhere.
- This requires understanding current societal relations with soils (cultural, economic, political, and other aspects) - and understanding how to transform those.
- This needs transdisciplinary approach – research in society.
- Mission Soil promotes this approach – especially via LLs framework.



I would not dare,

now, to say I knew anything of land. It has no master;
only people who strive to learn and understand
the minutes of it, and the hours. The earth moves faster

than we can comprehend, so seek a segment, find a strand
of it that you can love. Listen to the movement in one hedge.
Attune to it. See what it will give. Make no demand.

If you've listened, you'll know we're balanced on the edge
between oblivion and life and that the only charm
for our salvation comes in the moments when we pledge

to do no lasting damage, cause as little harm
as we can manage in field or office, city street or farm.



EUROPEAN UNION

EU MISSIONS
SOIL DEAL FOR EUROPE



Thank you!

For further information and questions please contact the Mission Secretariat:

EU-HORIZON-MISSION-SOIL@ec.europa.eu

#MissionSoil #EUmissions #HorizonEU

© European Union, 2021

Reuse is authorised provided the source is acknowledged and the original meaning or message of the document are not distorted. The European Commission shall not be liable for any consequence stemming from the reuse. The reuse policy of the European Commission documents is implemented by Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39).

All images © European Union, unless otherwise stated. Icons © Flaticon – all rights reserved.
Photos: © Alfred Grand, all right reserved.