



EUROPEAN UNION

EU MISSIONS



Concrete solutions for our greatest challenges

A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030

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DG Agriculture and Rural Development
5 October 2022

#EUmissions #HorizonEU



Missions: a new instrument under the R&I programme Horizon Europe (2021 – 2027) to address major societal challenges

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.

Adaptation to
Climate Change



Cancer



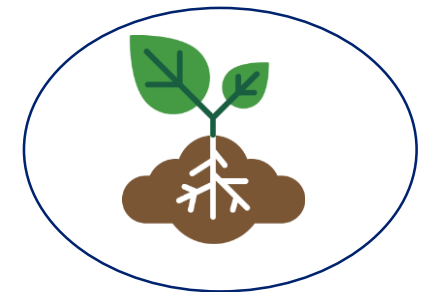
Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



Soil Deal
for Europe

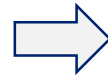


Officially launched on 29/9/2021



A supportive framework for soil protection in the EU

Policy framework:
“All soils are
healthy by 2050”



Soil monitoring
and data reservoir



Programme for research and innovation,
citizen engagement and outreach



The Soil Deal mission supports EU's Green Deal targets

By 2030

- 25% of land under organic farming
- Reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50%
- Reduce fertilizer use by at least 20%
- Reduce nutrient losses by at least 50%
- Reduce by 30% microplastics released into the environment
- Reduce net greenhouse gas (GHG) emissions by at least 55% compared to 1990 levels.

By 2035

- the EU should aim to reach climate neutrality in the land use, forestry & agriculture sectors

By 2050

- all EU soil ecosystems are in healthy condition
- **Europe is the first climate neutral continent**

Action on soils is key to meet these targets





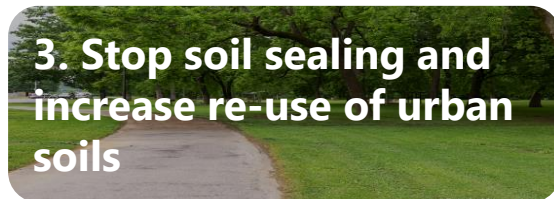
The soil mission's starting point

- Healthy soils are the **basis for nutritious and safe food and other vital, interconnected ecosystem services.**
- Yet, **soil degradation is prevalent in the EU territory: 60-70% of soils are considered to be unhealthy.**
 - **25-30% of EU soils** are either losing organic carbon, receiving more nutrients than they need, are eroding, compacted or suffer secondary salinization (or combination). These processes are all occurring **on agricultural land.**
 - An additional **30% of non-agricultural soils are eroding at an unsustainable level.**
- Soil related knowledge, monitoring and policies focus to a large extent on **agricultural soils.**
- Knowledge regarding sustainable soil management is not sufficiently applied: Need to focus on innovation pathways to address the **knowledge – practice divide.**



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

Specific objectives



- Objectives apply to **all types of land use** (e.g. agriculture, forestry, urban areas)
- Each objective is backed by a baseline, a target and measurable indicators



Mission specific objective 2: Conserve soil organic carbon stocks

- EU baseline: Area of land with low and declining carbon stocks = 23%.
Area of degraded peatland = 4.8%
- Target:
 - T 2.1: Current carbon concentration losses on cultivated land (0.5% per year) are reversed to an increase by 0.1-0.4% per year
 - T 2.2: the area of peatlands and wetlands losing carbon is reduced and the natural sink is significantly increased to help meet GHG reduction targets by 2030 and the Climate law goal by 2050.
- Indicators:
 - soil organic carbon stock
 - vegetation cover



Photo: EASDAC, JRC



Mission specific objective 5: Prevent erosion

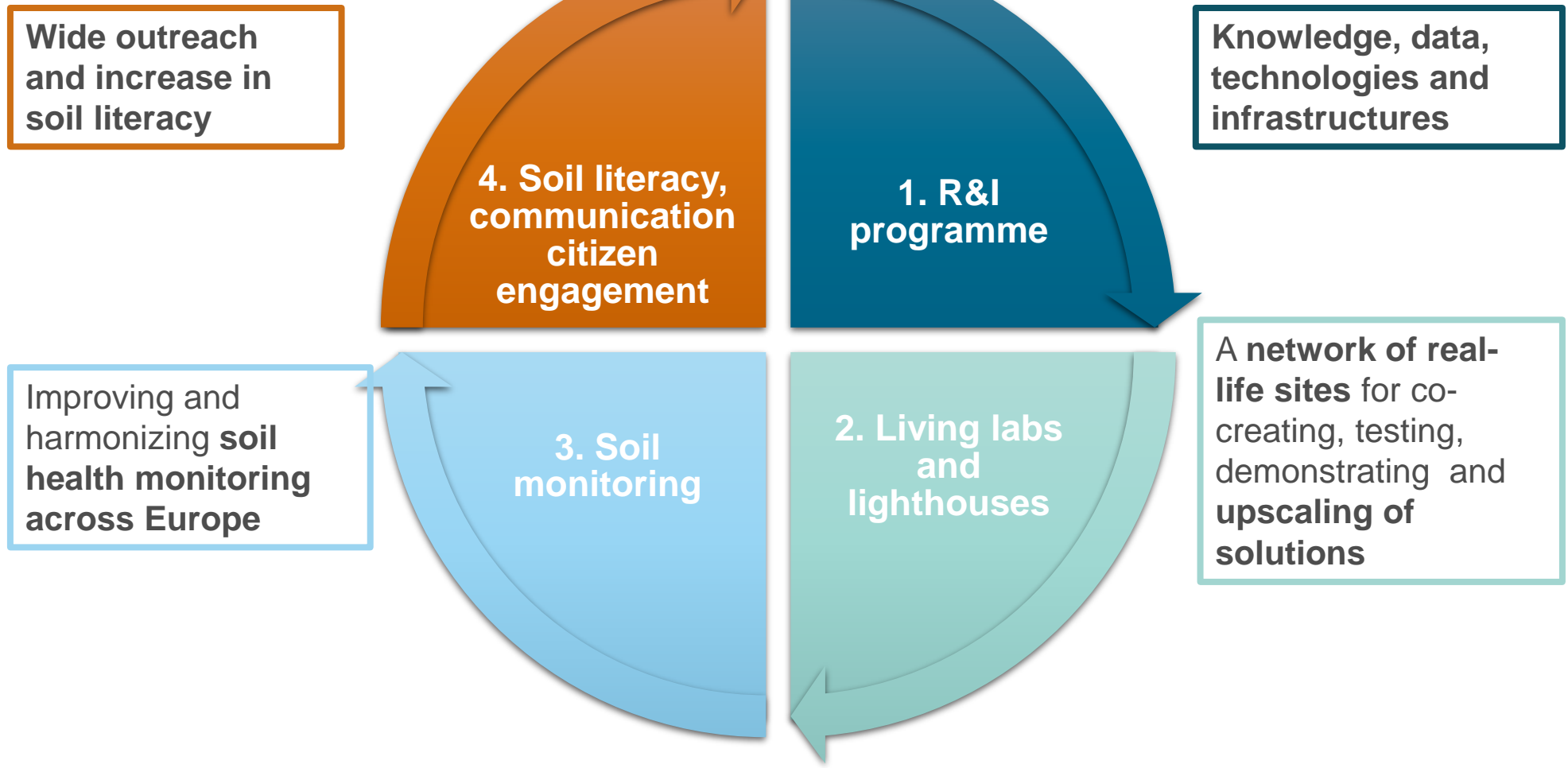
- EU baseline: area of land with unsustainable soil water erosion is 25%, with 70% of this being agricultural land (Panagos et al, 2015).
- Target: reduce the area of land currently affected by unsustainable erosion from 25% to sustainable levels (in line e.g. with the Roadmap to a resource efficient Europe)
- Indicators:
 - soil structure
 - absence of soil sealing
 - erosion and water infiltration
 - vegetation cover
 - landscape heterogeneity



Photo: E. Fulajtar/IAEA)



The mission's building blocks for implementation



Co-implementation of mission by: researchers, land managers, regions, businesses, policy makers, citizens and **international partners**

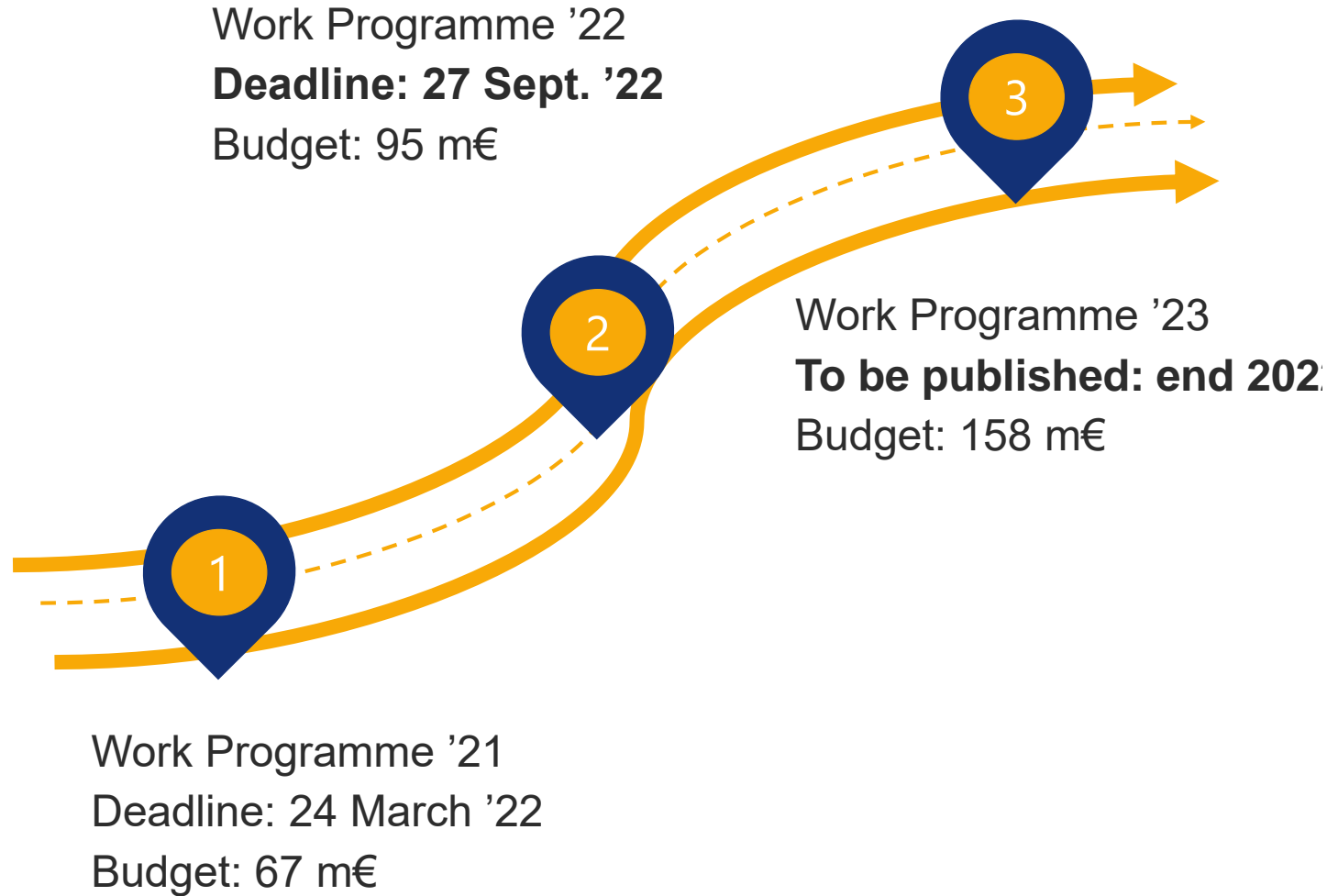




Mission roll-out



Sept. 2021



- + Outreach and engagement
- + Synergies with other policies and programmes



Work Programme 2022 – examples of R&I topics

Topic

Improving **food systems sustainability and soil health** with food processing residues

Soil **biodiversity** and its contribution to ecosystem services

Remediation strategies, methods and financial models for **decontamination and reuse of land** in urban and rural areas

Monitoring, reporting and verification of **soil carbon** and GHG balance

Network on **carbon farming** for agricultural and forest soils

Foster **soil education** across society

Citizen science for soil health

Innovations for **soil improvement** from bio-waste

Previous topics e.g. to:

- develop **business models for soil health**,
- identifying **soil health indicators**,
- establish the **links between healthy soils and healthy food**



The international dimension

- Soil health is a global concern.
- Participation to calls under Horizon Europe and the missions is open to international partners.
- First call for international collaboration on soils launched under the first Horizon Work Programme.

Topic: Building an **international consortium on soil carbon sequestration**;
resulting project under negotiation.

- Significant interest of international partners (e.g. Japan, US, New Zealand, Canada, Australia, African partners) to link up with the mission.





Useful links

- **Mission A Soil Deal for Europe** webpage - <http://ec.europa.eu/mission-soil>
- **Mission A Soil Deal for Europe Implementation Plan** https://ec.europa.eu/info/files/eu-mission-soil-deal-europe-implementation-plan_en
- **Mission A Soil Deal for Europe factsheet** <https://op.europa.eu/en/publication-detail/-/publication/90779d7a-227c-11ec-bd8e-01aa75ed71a1/language-en/format-PDF/source-232536601>
- **Press release –Missions launch:** https://ec.europa.eu/commission/presscorner/detail/en/IP_21_4747
- **EU Missions** https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe_en
- **Video EU Mission “A Soil Deal for Europe”** <https://youtu.be/3hPIZqwwhhM>
- **Behind the Scenes** podcast episode *A blossoming career as a soil keeper* <https://play.acast.com/s/behind-the-scenes-conversations-with-researchers-and-innovat/s02e05-a-blossoming-career-as-a-soil-keeper>
- **On a mission to save our soils - the EU's plan to rebuild the land (Futuris episode, euronews)** <https://www.euronews.com/2020/09/21/on-a-mission-to-save-our-soils-the-eu-s-plan-to-rebuild-the-land>
- **Funding and tenders portal:** https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-12-missions_horizon-2021-2022_en.pdf





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SOIL DEAL FOR EUROPE



The Mission – more than a funding programme. Join the soil health community.

Thank you!

For further information and questions please contact the mission secretariat:

AGRI-SOIL-MISSION-BOARD@ec.europa.eu

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