



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

Soil Mission Secretariat

European Commission - DG Agriculture and Rural Development

Unit F2 Research and Innovation

#EUmissions #HorizonEU



## 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 mission characteristics and elements of governance, and **5 missions areas**.



# Missions: a new instrument under Horizon Europe to address major societal challenges

Adaptation to  
Climate Change



Mission Manager  
DG CLIMA

Cancer



Mission Manager  
DG RTD

Climate-neutral  
and Smart Cities



Mission Manager  
DG MOVE

Restore our  
Ocean and Waters



Mission Manager  
DG MARE

Soil Deal  
for Europe



Mission Manager  
DG AGRI



# Why a mission on soil health?



- Healthy soils are the **basis for nutritious and safe food.**
- Soils deliver **vital, interconnected ecosystem functions**
  - water purification and regulation (protection from droughts and floods)
  - hosting biodiversity
  - nutrient cycling
  - climate mitigation and adaptation
  - range of cultural services
- Soil is a **scarce, non-renewable resource.**
- **Soils are threatened: 60-70% of soils in Europe are considered to be unhealthy** due to current management practices, pollution, urbanisation and the effects of climate change.

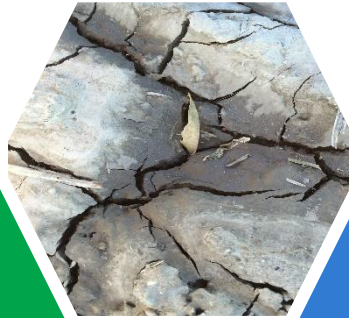


# We need to act now!

Soils need our attention!



Cropland soils **losing carbon** at a rate of 0.5% per year; 50% of peatlands drained and losing carbon – this is contributing to the climate crisis



24% of land with **unsustainable water erosion rates**

25% of land at High or Very High risk to **desertification** in Southern, Central and Eastern Europe in 2017



2.8 million potentially **contaminated sites** posing major health risks

65-75% of agricultural soils with nutrient inputs at levels risking **eutrophication of soils and water** and affecting biodiversity



The **costs** associated with **soil degradation** in the EU exceed **50 billion €** per year



The effects of climate change put further pressure on soils and accelerate land degradation!





# The Soil Deal Mission supports the Green Deal

## The Mission is part of

- Farm to Fork Strategy
- EU Biodiversity Strategy for 2030
- Climate Adaptation Strategy
- Forest Strategy
- Zero Pollution Action Plan for air, water and soil
- Organic Action Plan
- Long-term vision for EU's rural areas
- New EU Soil Strategy
- Communication on food security and resilience of food systems

## Examples of soil relevant 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.

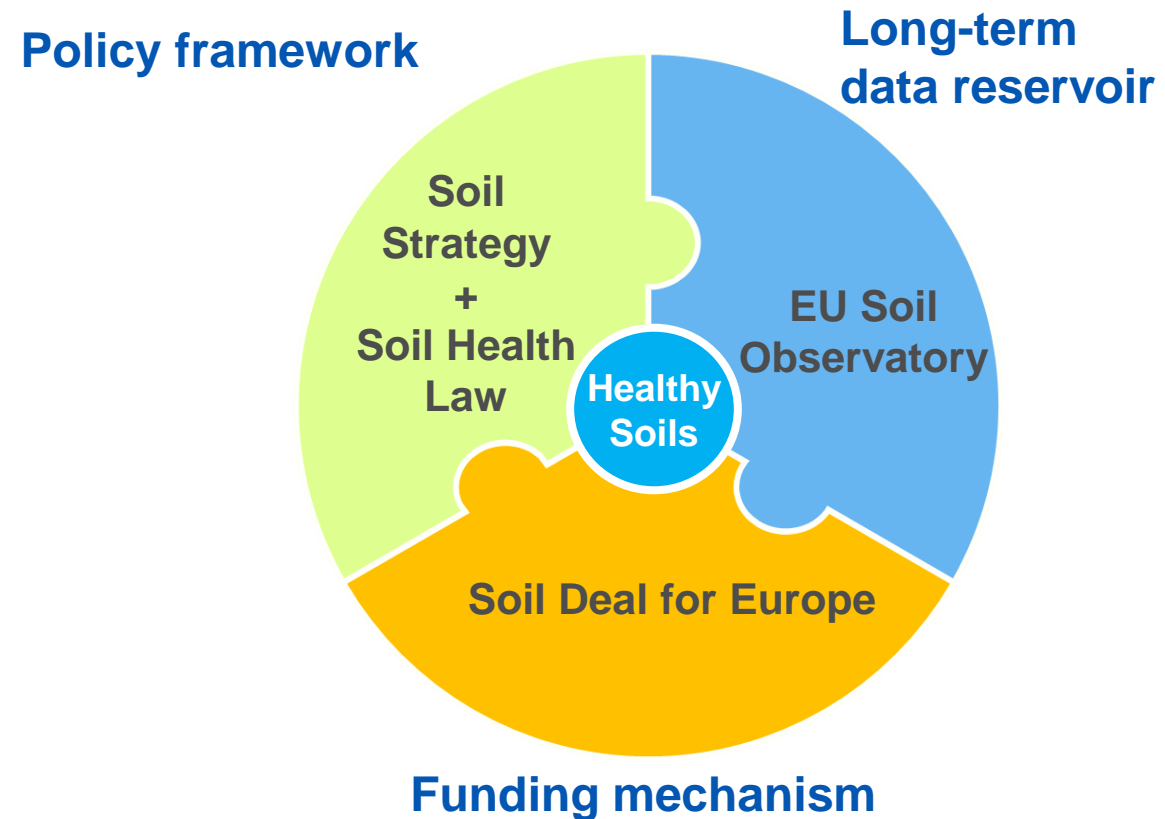
### By 2035

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



## Europe's pathway to healthy soils

Soil Strategy and upcoming Soil Health Law (2023), European Soil Observatory and Mission together build an **effective framework for soil protection and restoration**





# Goal of mission “A Soil Deal for Europe”: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030

## 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**

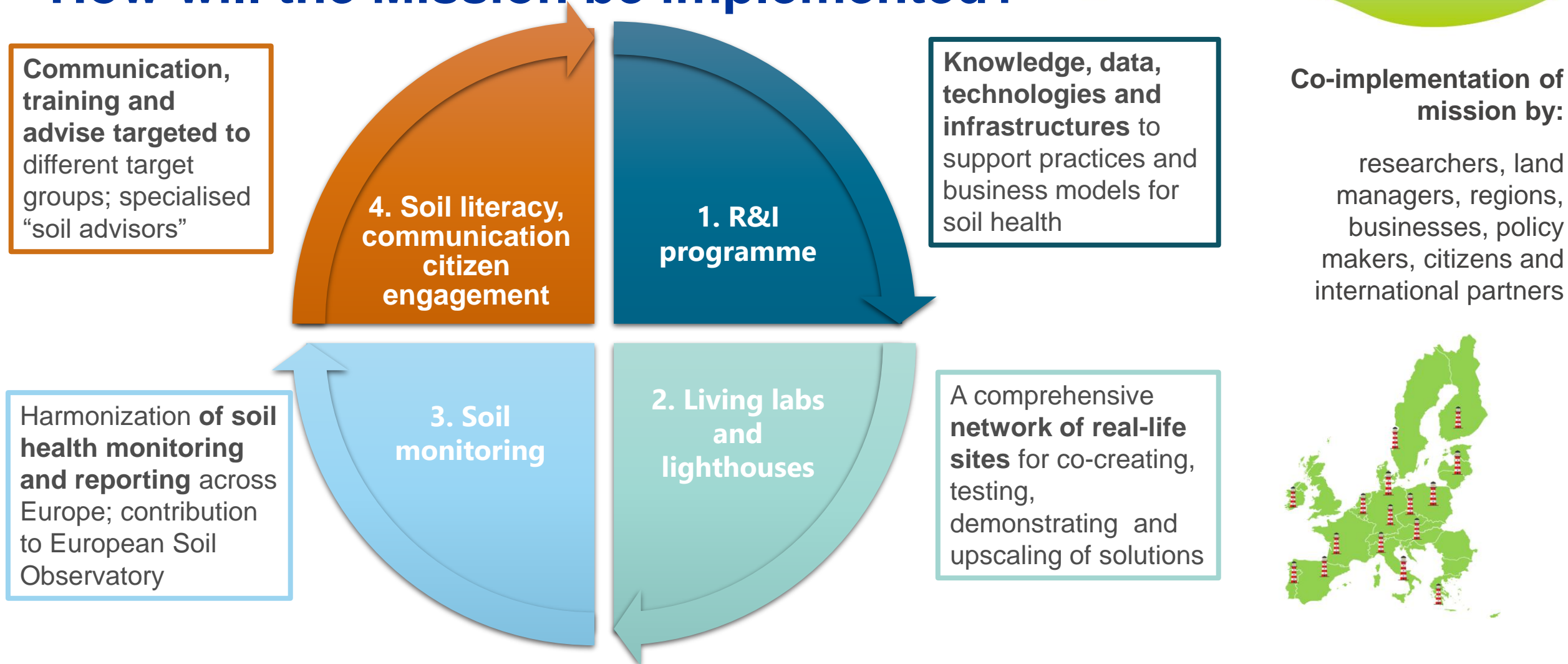
8. Improve **soil literacy** in society

Each specific objective is backed by **one or more quantified targets** and **measurable indicators**.  
Objectives apply to **all types of land use**.





# How will the Mission be implemented?



Activities under the **four building blocks** to address **soil health** and the **drivers of soil health**



# Soil Mission Work Programme under Horizon Europe

Topics contribute to all four of the building blocks and innovation hotspots

## Building Block 1 (R&I):

- 2021-SOIL-02-01 Roadmaps on soil mission objectives
- 2022-SOIL-01-01 Mission's knowledge repository

## Building Block 2 (Living Labs):

- 2021-SOIL-02-07 National engagement sessions on LLs and LHs

## Building Block 3 (Soil Monitoring):

- 2021-SOIL-02-02 Indicators for soil health and functions
- 2022-SOIL-01-05 Soil carbon and GHG balance monitoring

## Building Block 4 (Soil Literacy and Citizen Engagement):

- 2021-SOIL-02-06 Engage with municipalities and regions
- 2022-SOIL-01-07 Foster soil education across society

## Innovation Hotspots (i.e. soil biodiversity, carbon farming, soil pollution):

- 2022-SOIL-01-03 Soil biodiversity and ecosystem services
- 2022-SOIL-01-06 Network on Carbon Farming
- 2022-SOIL-01-04 Strategies, methods and financial models for decontamination and reuse of land

## Call for proposals under Horizon Europe

Horizon Europe Mission  
Work Programme 2022

- Deadline 27 September 2022
- 9 topics + 1 Framework Partnership Agreement for Living Labs support structure





# Living Labs and Lighthouses

- **Living labs are a core element of the mission**
  - They are real-life sites in rural, urban or natural areas where people from various sectors (multi-stakeholder) and backgrounds (transdisciplinarity) test solutions in a co-creative manner.
  - Living labs place the real soil managers at the center of the innovation processes.
  - Each living lab contains several sites (e.g. farms, forest exploitations, city parks) working together at regional or sub-regional level.
- **Lighthouses are sites of exemplary performance**
  - They are individual sites, such as a single farm, to showcase good practices and upscale solutions.
  - They are places for demonstrations, training, networking and communication towards future users, policy-makers or the broader society.

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





# A gradual development of 100 Living Labs across Europe

## Phase 1 (2021-2024)

### Preparatory actions:

- **Mapping of LL and soil needs**
- **Engagement sessions** and other activities for capacity building
- **LL Support Structure** to cater for the needs of the emerging living labs.

### Creation of Living Labs:

Launch of 1<sup>st</sup> call for establishing a transnational cluster of LL

## Phase 2 (2025-2026)

### Expansion of LL:

Launch of successive calls for expanding the network of LL

→ Look at wide coverage of:

- Geographies (EU and AC),
- Soil challenges (Mission's objectives)
- Land uses (agricultural, forest, urban, industrial).

## Phase 3 (2027 onwards)

### Scaling up of LL:

Launch of last calls for setting LL,

→ also measures to facilitate the mainstreaming, continuation and sustainability of the LL beyond the Mission timeframe.

**A network of living labs and lighthouses** will be gradually established through consecutive calls under Horizon Europe.



# Soil literacy, communication and engagement

- **Foster soil education** across society to bring soils closer to citizens' values.
- **Engage and activate regions and municipalities** to design their own strategies and actions for the protection of soil
- **Engage with the private sector and consumers** to embed soil health in business practices
- Strengthen soil health advice and **improve access to training for practitioners** in line with AKIS Agricultural Knowledge Innovation Systems
- Create **citizen-led soil stewardship** and **citizen science**

## Examples:



200+ co-creation and engagement events since Sept 2019 - Upcoming: R&I days 2022



Social media campaigns including 2 campaigns #EIPAgriSoil; new one planned in 2022



Several articles, press releases, newsletters, 4 videos, 2 factsheets



2 Podcast episodes



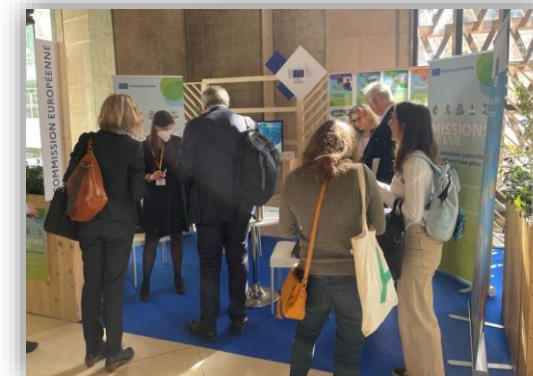
1 Soil health results pack



Interactive games for kids and adults, including composting training



Survey sent to **7000+** contacts across Europe and 2500+ contributions received







## Involvement of Countries, Regions and local level- Examples

- Form Mission '**mirror groups**' at national level.
- **Mobilize stakeholders** for involvement in living labs, e.g. through information, capacity building and engagement at national and regional levels.
- Promote Mission calls (Work Programme 2022 now open until 27<sup>th</sup> September 2022).
- Actively contribute to mission activities to improve and harmonize **soil monitoring**.
- Reinforce soil improving measures in **CAP strategic plans** and build links to the Mission.
- Make use of **EIP-AGRI** operational groups to promote the mission objectives and disseminate results.
- Establish a core network for missions at national level. See call in Mission Work Programme 2021: HORIZON-MISS-2021-COOR-01-01: Coordination of complementary actions for missions.

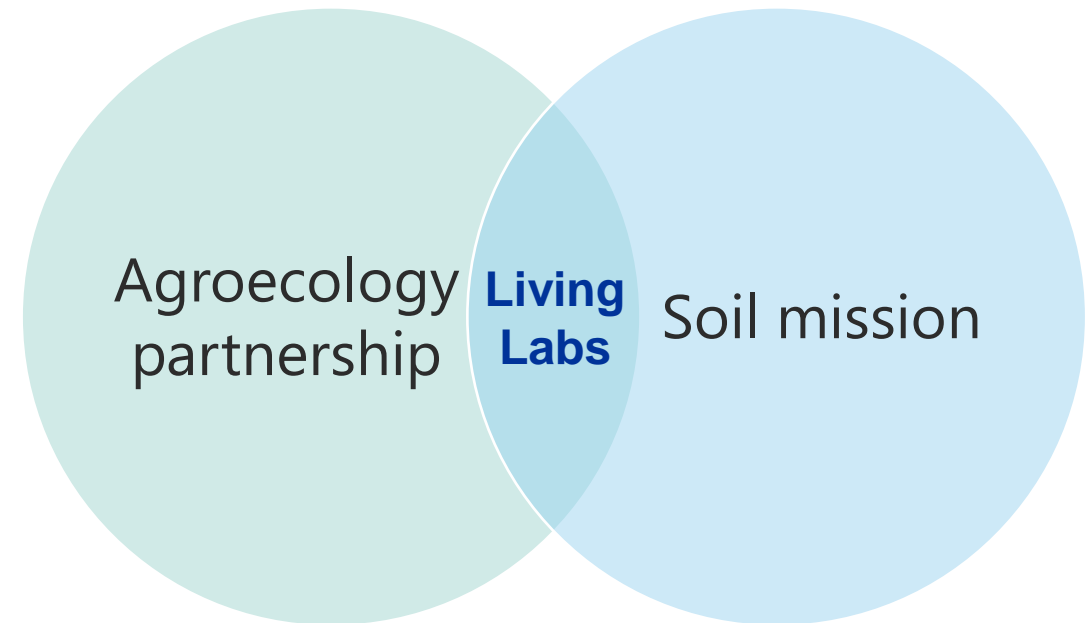




# Potential synergies between Soil Mission and Partnerships via Living Labs

Examples for possible cooperation areas between the Agroecology Partnership and the Soil Mission:\*

- Research calls (e.g. agroecological and organic practices beneficial to soil health)
- Common activities of the two networks of Living Labs (best practice exchange, capacity building)
- Potentially sharing living labs
- Monitoring activities



\* To be determined during the development of the strategic research and innovation agenda



# 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](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](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](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/3hPlZqwwhhM>
- *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>



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EU **MISSIONS**  
SOIL DEAL FOR EUROPE



# Thank you!

For further information and questions please contact the mission secretariat:

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