



A supportive framework for soil protection in the EU

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Life on Earth depends on healthy soils



- Healthy soils are the **basis for nutritious and safe food**
- Soils deliver **vital, interconnected ecosystem functions**:
 - water regulation,
 - hosting biodiversity,
 - nutrient cycling,
 - climate mitigation and adaptation,
 - cultural services
- Soil is a **scarce, non-renewable resource**: it takes hundreds of years to generate 1 cm of top soil but only a couple of years or less to destroy it
- **Soils are threatened: 60-70% of all soils in Europe are unhealthy** as due to current management practices, pollution, urbanisation and the effects of climate change
- Main threats: Erosion, compaction, organic matter decline, pollution, loss of soil biodiversity, salinization, desertification, land take, sealing

Soils need our attention - EU Examples

- **2.8 million potential contaminated sites** (only 24% inventoried) posing major health risks
- 65-75% of agricultural soils with **nutrient inputs** at levels risking eutrophication of soils and water and affecting biodiversity
- **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
- The costs associated with **soil degradation** in the EU exceed 50 billion € per year



Effects of **climate change** are putting further pressure on soils and accelerate land degradation.

Healthy soils are key to support Green Deal targets

Examples of Green Deal Targets related to soil health

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.

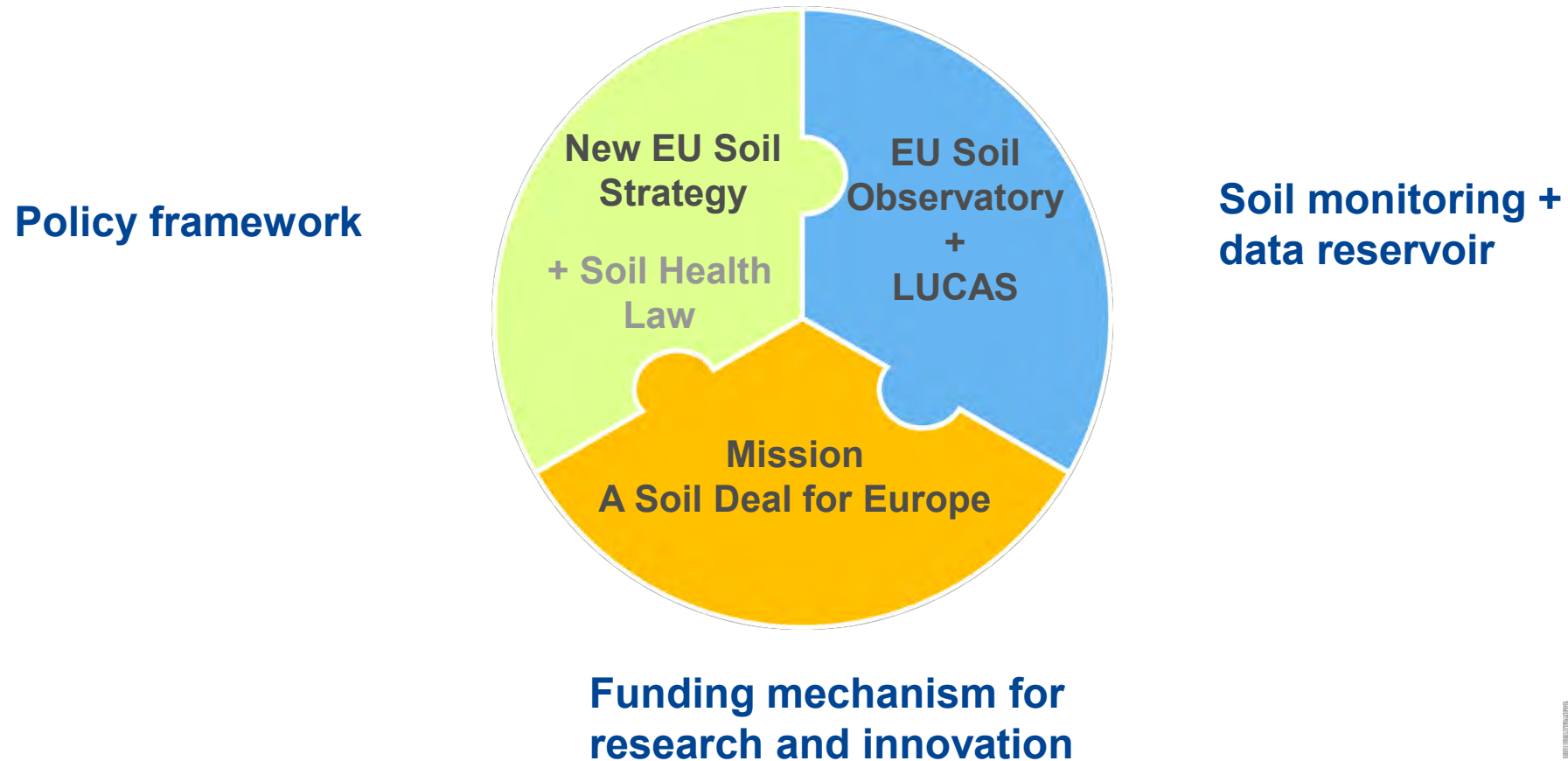
By 2035

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



Soil protection in the EU

New Soil Strategy, European Soil Observatory and Mission A Soil Deal for Europe together build an **effective framework for soil protection and restoration**



Soils in the new Common Agricultural Policy

- Soil management is recognised in the new CAP as an important element to improve farm sustainability in economic and environmental terms:
 - Specific objective five: “Foster sustainable development and efficient management of natural resources such as water, soil and air”.
- Higher environmental ambition of the new CAP is channelled e.g. via
 - stronger requirements for conditionality
 - new GAEC 2: preservation of carbon rich soils such as peatlands and wetlands
 - eco-schemes
 - agri-environment-climate measures
 - farm investments
 - Farm Sustainability Tool for Nutrient Management (FaST)



The new EU Soil Strategy

The Vision:

- By **2050**, all EU soil ecosystems are in **healthy** condition and are thus more **resilient**, which will require very **decisive changes** in this decade.
- By then, **protection, sustainable use and restoration of soil** has become the norm.
- Healthy soils contribute as key **solution to our big challenges** to achieve climate neutrality, a clean and circular economy, revert biodiversity loss, safeguard human health, halt desertification and revert land degradation.

How to get there:

- Strategy identifies a set of **guiding (voluntary) actions** driven by the Commission (e.g. in areas of carbon farming, soil biodiversity assessment, soil pollution, soil sealing, soil education, monitoring, research)
- Propose **legal protection of soils** similar through Soil Health Law (including legally binding targets for soil restoration)





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

Adaptation to
Climate Change



Cancer



Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



Soil Deal
for Europe



Mission Manager
DG AGRI



The research and innovation mission: A Soil Deal for Europe

Goal: 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





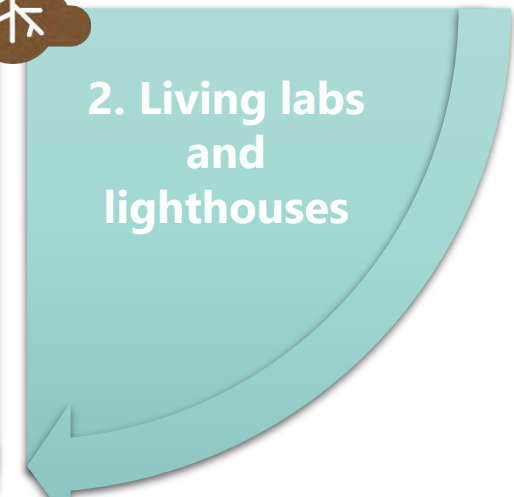
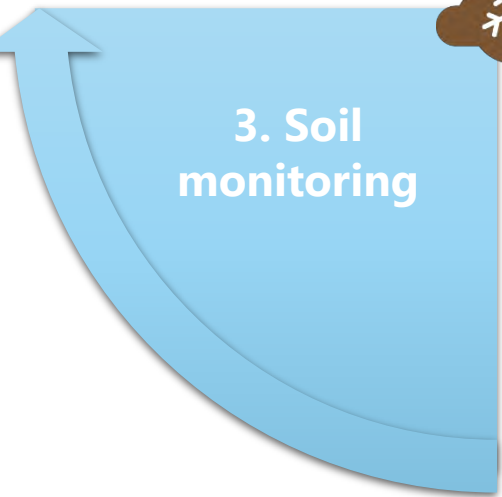
How will the mission be implemented?

Communication material, training curricula for different target groups and specialised “soil advisors”



Data infrastructures and platforms; knowledge to support management practices, business models, technologies

Harmonisation of indicators, measuring and reporting for soil health across Europe; contribution to European Soil Observatory



A network of real-life sites for testing, demonstrating and upscaling of solutions; due attention to balanced representation across regions

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



320m€ funding for 2021 - 2023



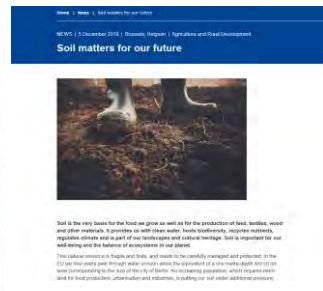
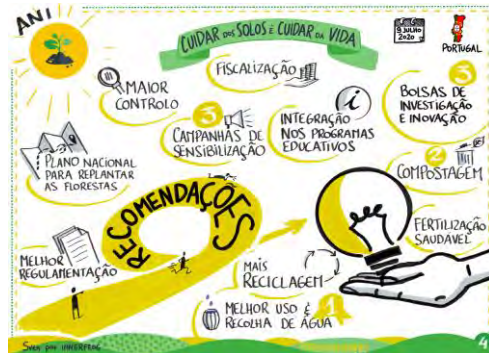
International cooperation under the mission

- 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 in linking up with the mission.





Communication and citizen engagement...



- **200+ co-creation and engagement events** from Sept. '19 – Jan' 22
 - including 3 **International fairs** and **global events** (e.g. FAO World Soil Day 3 Dec. 2021, GFFA 2022 session)
- **#EIPAgriSoil campaigns**; new one planned in 2022
- **Articles, press releases, newsletters, social media, videos** (Mission video more than 110,000 views in August 2020) + **new video for World Soil Day 2021**
- **Podcast episode**
- **Soil health results pack**
- **Interactive games for kids**
- **Survey**
 - sent to more than **7000** contacts (EN, FR, DE, PL, CS, PT) and **more than 2500** contributions received



Useful links

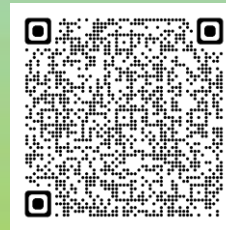
- **Mission Soil Deal for Europe webpage** - <http://ec.europa.eu/mission-soil>
- **EU mission Soil Deal for Europe – Implementation Plan** https://ec.europa.eu/info/files/eu-mission-soil-deal-europe-implementation-plan_en
- **Press release – missions launch:** https://ec.europa.eu/commission/presscorner/detail/en/IP_21_4747
- **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** https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb_logo
- **Mission report handover to the European Commission (EU R&I Days 2020)** <https://youtu.be/oAG5-CQIOoc>
- **Soil mission session (EU R&I Days 2020)** <https://research-innovation-days-conference.online/hubs/mission>
- **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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Thank you!



#MissionSoil #EUmissions #HorizonEU

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