

# Caring for soil is caring for life

*#HorizonEU #MissionSoil*

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The proposed mission:  
**Caring for soil is caring for life**

**ensure 75% of soils are  
healthy by 2030  
for food, people, nature and  
climate**



# The need for mission “Caring for Soil is caring for Life” (I)



- 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, carrying landscapes and 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

## The need for mission “Caring for Soil is caring for Life” (II)



- **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
- **Soils health is key in the implementation of the Green Deal** and its strategies (Farm to Fork, Biodiversity, Forestry, Zero Pollution and Climate): to address these major challenges

# Why do we have to act now?



## 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**

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

# What do we want to achieve with this mission?



by 2030, at least 75% of all soils in each EU Member State are either **healthy** or show a **significant measurable improvement for all indicators** where levels are below accepted thresholds, to support the provisioning of essential ecosystem services

for food, people, nature and climate

# What do we want to achieve with this mission? (I)



1. **Reduce land degradation**, including desertification and salinization
  - **Restore 50% of degraded land** moving beyond land degradation neutrality
2. **Conserve soil organic carbon stocks** (e.g. in forests, permanent pastures, wetlands)
  - Increase carbon concentration on cultivated land by 0.1-0.4% per year;
  - the area of peatlands losing carbon is reduced by 30-50%.
3. **Stop soil sealing** and increase re-use of urban soils (the current rate of soil re-use is increased from current 13% to 50%)

# What do we want to achieve with this mission? (II)



4. **Reduce soil pollution and enhance restoration** - at least 25% area of EU farmland under organic agriculture; an additional 5-25% of land with reduced risk from eutrophication, pesticides, anti-microbials and other contaminants; a doubling of the rate of restoration of polluted sites
5. **Prevent erosion and stop erosion** on 30-50% of land with unsustainable erosion rates
6. **Improve soil structure** to enhance habitat quality for soil biota and crops; reduction of high-density subsoils by 30-50%
7. **Reduce by 20-40% the global footprint of EU's food and timber imports** on land degradation
8. Significantly improve **soil literacy** in all Members States



# How do we want to meet the mission objectives?



- strategic research and innovation priorities: system approach, interdisciplinarity, co-construction, regional differentiation, societal support, cross-scale
- co-creation, testing and demonstration of solutions in living labs and lighthouses
- a set of 8 indicators and a consistent system for monitoring the status of soils
- strengthening independent advisory services for farmers and foresters
- engaging citizens and society at large
- encouraging changes to policies and day-to-day practices of land managers, industries and consumers

**→ soil health depends on the actions of all of us!**

# Cooperation across sectors and citizen engagement at the core of the mission



**Co-implementation** at the core of the mission:

researchers, land managers, businesses, policy makers and citizens working together in:

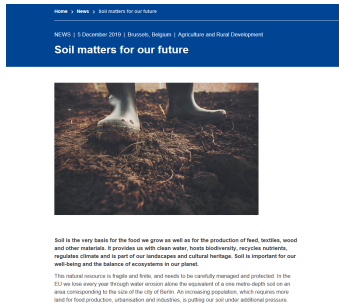
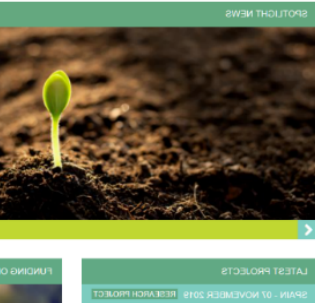
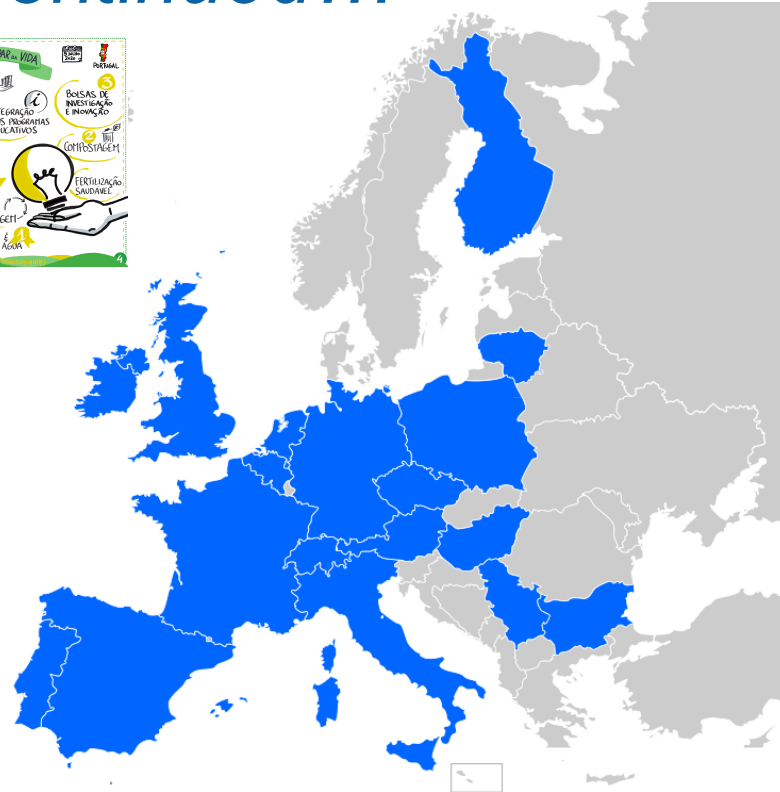
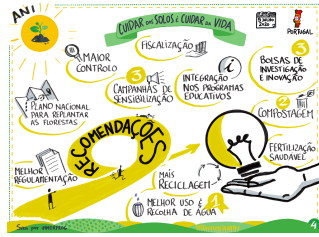
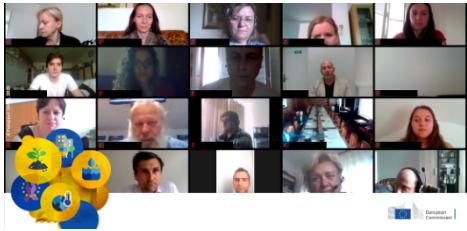
**Living laboratories**  $\Longrightarrow$  create knowledge and design, test and disseminate innovative solutions

**Lighthouses**  $\Longrightarrow$  test and demonstrate good practices

## R&I priorities

1. Improve uptake/use of existing knowledge
2. Develop needed innovation in technologies and practices
3. Adapt global food chains and move towards a resilient society
4. Set up an efficient monitoring system

# Communication and citizen engagement in the EU and beyond, *to be continued...*



- **World Soil Day – video - tweet:** more than **30,000 views** in less than 24h
- **2 major #EIPAgriSoil campaigns**
- **Articles, press releases, newsletters, social media, videos (Mission video more than 110,000 views in August)**
- **55 co-creation and citizen engagement events** (up to 29/10)
  - in AT, BE, BG, CH, CZ, DE, ES, FI, FR, HU, IE, IT, LT, NL, PL, PT, RS, UK + online reaching worldwide, and a co-organised session with Japan
  - including **2 International fairs:** International Green Week, Salon de l’Agriculture
- **Survey**
  - sent to more than **7000** contacts (EN, FR, DE, PL, CS, PT)
  - **more than 2500** contributions received



# Expected Impacts



- **Soil health is the starting point for systemic transformations across value chains and territories**
  - **Practices in agriculture, forestry and in urban areas will support healthy soils and their ecosystems services**
  - **Healthy soils are the basis for nutritious and safe food**
  - **Food and bio-based value chains reward soil friendly practices and minimise their impact on soils**



# Expected Impacts

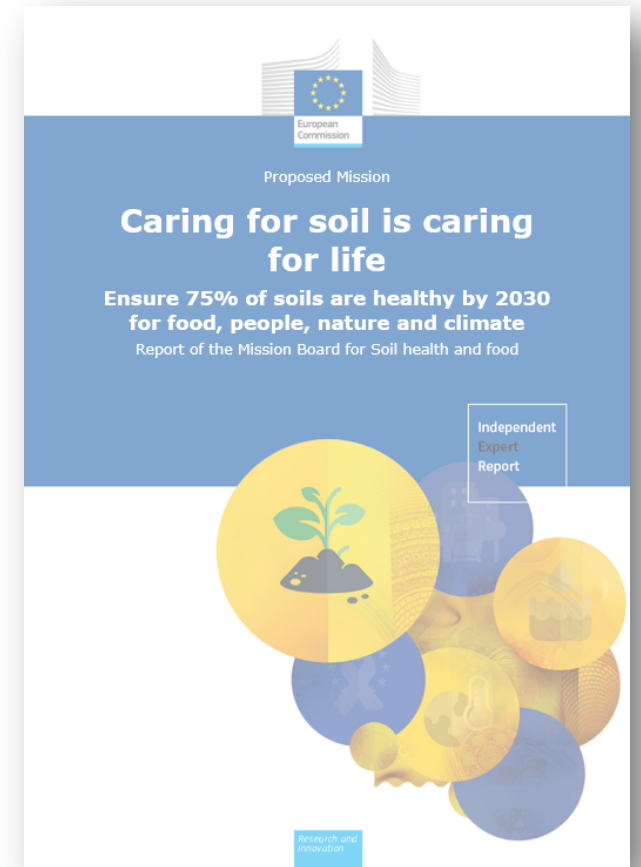


- Soils help us **mitigating and adapting to climate change**
- **Consumers and society** are aware of the importance of healthy soils and **on the role of citizen's in preserving this resource**
- The impact of production and consumption patterns in Europe on soils at global level is reduced – **a lower global footprint**

# Thank you!

#Mission Soil  
#EUmissions # HorizonEU

<http://ec.europa.eu/mission-soil>



# Useful links

- **EU mission Caring for soil is caring for life (mission report)**

<https://op.europa.eu/en/publication-detail/-/publication/4ebd2586-fc85-11ea-b44f-01aa75ed71a1/language-en/format-PDF/source-159637857>

- **Video on the Mission on Soil health and food** [https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb\\_logo](https://www.youtube.com/watch?v=53bbzE2lpKc&feature=emb_logo)

- **Mission report handover to the European Commission (EU R&I Days)**

<https://youtu.be/oAG5-CQIOoc>

- **Soil mission session (EU R&I Days)**

<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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