

PREPSOIL: What's the deal? Supporting 'A Soil Deal for Europe' to favour soil health in Europe and beyond

Perhaps you don't stop to think every time you walk on the dirt beneath you what precious a resource you have underfoot, or that **just once centimetre of the soil that you tread on can take hundreds of years to form**. Our **life on earth is dependent on soil**. It endows the clean water that we need to drink, vigorously supports our food chain, fosters biodiversity and is a **potent ally in fighting climate change**.

Soils contribute to ecosystem services that, in turn, contribute to the **UN Sustainable Development Goals** (SDGs) and [more recently] to the **EU Green Deal**. Relevant soil ecosystem services are biomass production (SDG 2 – zero hunger), providing clean water (SDG 6), climate mitigation by carbon capture and reduction of greenhouse gas emissions (SDG 13 – climate action), and biodiversity preservation (SDG 15 – life on land)¹.

Currently, an estimate of between 70-80% of soil within the European Union are unhealthy. This demands that land managers, industries, soil monitoring agencies, consumers and society at large become agents of soil sustainability, rather than soil degradation.

Having this in mind, the European Union launched its **'A Soil Deal for Europe' Mission, with the main aim of establishing 100 living labs and lighthouses to lead the transition towards healthy soils by 2030**.

Supporting the EU Mission on Soil Health is the Horizon Europe project "**PREPSOIL – Preparing for the Soil Deal for Europe Mission**" which will raise awareness and knowledge on soil health through the interaction, knowledge sharing and co-learning on the role of healthy soils for our society. Driven by a vibrant consortium of 20 partners at the forefront of European and national initiatives in soil. From the 14-15 September 2022 in Aarhus (Denmark), the first face-to-face meeting of the PREPSOIL consortium took place enabled further discussion and planning of the future activities of the project to ensure its successful implementation.

Creation of an EU online community embracing sustainable soils

A wide and diverse range of agents have an impact on soil health. To deliver an impactful communication and dissemination strategy this will imply seamless delivery of **distinct engagement tools carefully tailored** to show the **positive impact soil health** can bring to each one, as well as to "A Soil Deal for Europe" overall. PREPSOIL **will make a number of tools available at the touch of a fingertip**, including the creation of a **webportal**, which will act as a "one-stop-shop" in support of Mission's implementation. This will connect and improve access to existing quality resources including to science-based information on sustainable soils. It will host digital tools for community engagement with a wide range of audiences interested in the topic, such as Living Labs atlas, online forum and gamification activities. A **multilingual knowledge-hub** is also foreseen, which will host a cross-disciplinary knowledge base about "sustainable soils" information, with a self-serve online library of information and data sets. The platform will also support the "**Soil Ambassadors Programme**", engaging with inspiration advocates and agents of change, eager to help PREPSOIL spread soil literacy across all sector of society, from industries to schools, at a local and regional levels.

Identifying European Soil Needs to support future Soil Policies

European soils need urgent action plan to become healthier. However, soils are destined to various purposes (forest, agriculture, industrial, urban), implying a diverse set of needs for each one. PREPSOIL **will develop guidelines to identify these soil needs** and put them into practice to **as drivers of change across Europe, based on the different land-use types**. PREPSOIL will also engage other soil monitoring methods such as citizen science and satellite-based earth observation at different scales.

This information will **provide guidance for the new first wave of Living Labs (LLs) and Lighthouses (LHs)** and shape the **region-focused research and innovation agenda**. PREPSOIL will provide **a better understanding** of how LLs and LHs can improve soil health, while helping the existing LLs and LHs to prioritise specific soil needs and **access a business plan modelled to different soil use types and socio-economic conditions**. This will support the **Mission of a Soil Deal for Europe ambition to rollout 100 successful LLs and LHs across EU to lead the transition towards healthy soils by 2030**.

Knowledge is Power – An informed Europe

Helping Europe become more knowledgeable on sustainable soil practices is also part of PREPSOIL's agenda. PREPSOIL will promote a soil education campaign, awareness and engagement of communities of practice not only for young people of school age, but also for professionals and society at large. This will be done through a series of webinars, interviews, vocational training centres and schools focusing on soil health, land use and ecosystem services used in urban, agricultural, natural land use.

PREPSOIL, a wrap-up

PREPSOIL will help key-players beyond the agricultural field in reducing soil degradation, while increasing soil awareness and soil literacy. **PREPSOIL mission on healthy soils is focused in three key impact pathways:**

- Improve the knowledge-base and access to critical information for land managers on soil health;
- Establish an overview of soil needs and status regarding monitoring Living Labs and Light Houses;
- Increase soil literacy and awareness to citizens and society at large, through education, dissemination and access to information.

PREPSOIL will increase networking and knowledge exchange between communities across Europe at regional/local level on soil health taking into account various type of land uses and based on the work undertaken in existing and new LLs and LHs. All research data and PREPSOIL outputs will be available under FAIR principles, maximising their usefulness and allowing the whole research community to benefit from them.

In a nutshell, PREPSOIL will support the “A soil Deal for Europe” Mission deliver meaningful impact in Europe for higher levels of soil sustainability and less soil degradation throughout Europe and beyond.

For more info and to stay up to date, you can follow PREPSOIL via:

- Website: prepsoil.eu
- Twitter: twitter.com/prepsoil
- LinkedIn: linkedin.com/company/prepsoil

Do you want to learn how we can help with your communication, dissemination and exploitation needs? Do you want us to build a beautiful and functional website for your project? Contact us, we're happy to help!

ⁱ Bonfante, A., Basile, A., and Bouma, J.: Targeting the soil quality and soil health concepts when aiming for the United Nations Sustainable Development Goals and the EU Green Deal, *SOIL*, 6, 453–466, <https://doi.org/10.5194/soil-6-453-2020>, 2020.