## Issue N 4

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## Mission Soil Update

#### You can also read the French and German version of this Newsletter here.

The year 2024 will mark a significant milestone for the <u>EU Mission 'A Soil Deal for Europe'</u> (Mission Soil) with the launch of the first set of 25 Living Labs. These initial Living Labs include hundreds of individual real-life sites where land managers will test innovative soil health solutions on their plots. A similar number of Living Labs are expected to emerge from each future annual Work Programme. The Mission is thus making rapid progress on its goal of establishing a network of 100 Living Labs and Lighthouses to lead the transition towards healthy soils by 2030.

The results of the Mission's Living Labs are expected to be replicated and scaled up by around 1 000 <u>Operational Groups</u> to work on soil quality improvement, financed by the Common Agricultural Policy (CAP), bringing together farmers, scientists and industry at the local level to find solutions to soil challenges, such as fertility, water management or pest control.

The Mission has built a strong connection with the <u>CAP</u>, which will invest more than €40 billion to improve soil quality. The Mission is involved in two thirds of the CAP strategic plans at the national level.

Last year, progress was made in monitoring soil health in the EU with the launch of the EUSO Soil Health Dashboard, led by the Joint Research Centre. The dashboard provides a comprehensive and user-friendly overview of the state of soil health in the EU through 19 indicators. It shows where scientific evidence converges to indicate areas that are likely to be affected by soil degradation processes and areas where no available soil degradation indicator exceeds the established thresholds. The dashboard also aims to support the implementation of the European Commission's proposal for a Directive on Soil Monitoring and Resilience.

On 10 April 2024 the European Parliament adopted its position on the Commission's proposal for a Soil Monitoring Law with 366 votes in favour. Members of the European Parliament support efforts to monitor and improve the EU soil status and foster sustainable soil management practices. The document will be followed up by the new Parliament after the European elections on 6-9 June.

Read on to learn more on the latest news and developments within the Mission Soil.

# Commission launches new calls for proposals under Horizon Europe

The Horizon Europe Work Programme 2023–2025 was published on 17 April 2024. The Mission Soil Work Programme 2024 includes nine topics, with submission opened since 8 May 2024 and a total indicative budget of €134.5 million. Projects are called to work on monitoring soil erosion and nitrogen fluxes, soil health and pollinators, soil biodiversity for healthy crops, carbon farming, and forest peatsoils. Moreover, new funding opportunities are available to establish more soil health Living Labs (with a specific topic on urban areas), and to cooperate for soil health in Africa. **The application deadline is 8 October 2024**.

Learn more about the calls for proposals.

#### **EU Missions and Cross-Cutting Activities Info Days**

The EU Missions and Cross-Cutting Activities Info Days took place on 25 and 26 April 2024. The event aimed to inform individuals about funding opportunities for projects aligned with the five EU Missions' goals in health, climate and the environment. The Mission Soil was featured on the first day of the event. Participants had the opportunity to learn more and ask questions about the Mission's implementation and the nine topics from its 2024 Work Programme.

### **New Mission Soil video on soil biodiversity**

Dive into the world of soil biodiversity with Mission Soil's latest video and help spread the message! Share the video to raise awareness about the crucial role soil organisms play in our ecosystem and the importance of Mission Soil's goal to protect and restore soil health. Together, let's make a difference and ensure a sustainable future for our planet. Watch the video.

## Help us select the best research proposals to deliver on the EU Mission Soil

The Mission Soil 2024 call for proposals opened in May and will be evaluated from October. We are seeking experienced and motivated specialists in soil-related areas to help us evaluate project proposals and select innovative ideas to accelerate restoration and ensure soil protection.

Interested in working with us as an evaluator? Here's what you need to know:

- 1. If you haven't already, register in the <u>Commission's experts database</u> to be considered as an evaluator.
- 2. If you're already in the database, ensure you regularly update your profile. Use relevant keywords that align with the objectives of the Mission Soil, such as: soil health business strategies (for soil health, carbon removals); land management policies; modelling approaches; participatory research (including citizen engagement); regional and national decision makers; soil health indicators (including benchmarks and thresholds); soil health restoration; soil monitoring; sustainable soil management practices, solutions and tools for different soil types (including nature-based solutions, agroecology, integrated pest management).
- 3. Update your profile with your experience and expertise in cross-cutting aspects of research and innovation (e.g. co-creation, open innovation, financial management of projects, Intellectual Property Rights).

Learn more and register as an expert.

#### Save the date: European Mission Soil Week 2024!

Mark your calendars for the <u>European Mission Soil Week 2024</u>, which will take place from 12 until 14 November at the BluePoint Brussels at Blvd Auguste Reyers 80. The first two days will be packed with engaging activities, including keynote interventions, panel discussions, networking and more! On the last day, there will be an exclusive side event, featuring cluster meetings tailored for the Mission Soil funded projects. Stay tuned for further details!

#### The Mission Soil Manifesto

The Mission Soil Manifesto aims to foster local knowledge, innovation, and investment in soil health by raising awareness. Signatories of the Manifesto will be able to join a vibrant soil health advocacy community and have access to the latest research results, along with the opportunity to take part in knowledge sharing activities and events to exchange best practices on how to improve soil health in Europe and beyond. This non-legally binding document can be signed, for example, by representatives of municipalities, regions, private or public companies and organisations, NGOs and philanthropic organisations, educational and research institutions and by individuals as well. The Manifesto, available in all EU languages, has so far received 2900 signatures,

including 500 legal entities, publicly visible in the dedicated webpage. Recent signatories include two Spanish regional authorities: the Regional Government of Andalusia and the Provincial Council of Almería.

Sign the Manifesto and join the Mission Soil community!

Discover more about Mission Soil by clicking the "More" button below:

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### **Project News**

The NBSOIL Academy is a blended training programme for existing and aspiring soil advisers. Join now to engage with NBSOIL experts, demonstration sites, advisory services and other Soil Mission projects, and strengthen your knowledge in providing nature-based advice on soils across all land use sectors. The Academy will be launched on 5 June 2024. Learn more and register below:

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The new website of the Mission Soil project 'Startup of the SOILL support structure for SOIL Living Labs' (SOILL-Startup) includes information about the project, upcoming events, relevant news and resources. A special highlight is the project's video gallery with lots of engaging clips, including stories from Living Labs and Lighthouses. Visit SOILL-

Startup's website below:

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The 14 training sessions, organised by the EU-funded project 'The soil biodiversity and functionality of Mediterranean olive groves: a holistic analysis of the influence of land management on olive oil quality and safety' (SOIL O-LIVE) and the olive oil company Deoleo, will run from April to September 2024 in Spain, Italy and Portugal. The sessions aim

to instruct and inform farmers about implementing sustainable practices in their olive groves and caring for the soil. Learn more about the training sessions below:

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We are delighted to announce the addition of a new Mission Soil project – 'Awakening soil curiosity to catalyse soil literacy' (CURIOSOIL). Launched on 1 February 2024, this project aims to revolutionise how we value and perceive soil, as well as how we teach and communicate about it.

Learn more about CURIOSOIL below:

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Watch the video below: to discover how the Mission Soil project 'Sustainable soil management to unleash soil biodiversity potential and increase environmental, economic and social wellbeing' (SoilGuard) is working on sustainable soil management to preserve soil biodiversity and guarantee environmental, economic and social wellbeing of EU

biogeographical regions.

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In the upcoming months, the EU-funded project 'Soils for Europe' (SOLO) will publish roadmaps, inviting soil enthusiasts to review them and provide input. From reducing land degradation to enhancing soil literacy, SOLO's roadmaps will offer valuable insights and strategies for protecting our soils. Register below: to become a reviewer of

these roadmaps and contribute to shaping the future of soil conservation.

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In the interview, SOB4ES Project Coordinator Maria Briones discusses the contribution of women in building a future with healthy soils. The conversation covers several topics, including land management practices, and the importance of inclusivity in science, technology, engineering and mathematics. Read the full interview below:

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EU-funded project 'Achieving remediation and restoration of contaminated soils now' governing (ARAGORN) and a Japanese delegation of experts and representatives from the Ministry of Environment exchanged strategies on polluted sites and remediation actions. Key areas of collaboration included mapping polluted sites and analysing detection methods. Learn more about the visit below:

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**Project Spotlight** 

We talked to Raúl Zornoza Belmonte (in the picture below), coordinator of the EU-funded project **BIOservicES**: 'Linking soil biodiversity and ecosystem functions and services in different land uses: from the identification of drivers, pressures and climate change resilience to their economic valuation'.



## Could you tell us more about the ongoing work and future plans of BIOservicES?

In the initial months of the project, we focused on standardising soil sampling procedures, storage, shipment and analysis methods. We established uniform procedures and methods by collaborating with experts from other Horizon 2020 / Horizon Europe projects, international initiatives (like Soilbon, Global Soil Partnership — Food and Agriculture Organization, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, and the Earth Microbiome Project) and EU institutions and bodies (such as European Commission's Joint Research Centre and the European Environment Agency). All finalised protocols are now available on our website.

From April to June 2024, we'll conduct soil sampling at our 25 study sites across Europe, covering various land uses (agriculture, forestry, seminatural, industrial, mining, wetland) with varying intensity of use. After collecting soil samples, our partners will analyse taxonomic groups and functionalities of various organisms, including viruses, archaea, bacteria, fungi, protists, nematodes, microarthropods, earthworms, isopods, millipedes, insects and spiders. Additionally, we'll assess indicators related to several ecosystem services, such as nutrient storage, filtering, transformation, pollutant transformation, water retention, infiltration, and raw material production.

Following this, we'll use biostatistical analysis and machine learning algorithms to establish relationships between soil organisms and multiple ecosystem services. This approach will not only uncover the links between soil organisms and ecosystem service delivery but also identify keystone organisms that

significantly contribute to ecosystem services either independently or through interactions.

#### Why is the work of the Mission Soil important for Europe?

Before the launch of the Mission Soil, institutions paid little attention to soil. However, soil plays a vital role in food, timber, feed and industrial product production. It also helps maintain forests, natural environments, aquifer recharge and water purification, contributing to environmental and human health. Unfortunately, due to unsustainable soil management practices, many soils in Europe have degraded. They've lost their ability to support human wellbeing and have become sources of pollutants and pathogens.

The Mission Soil aims to reverse this trend by providing robust scientific data to inform regulations on soil actions and establish effective monitoring, conservation and restoration methods. The results of Mission Soil projects will play a crucial role in contributing to the upcoming soil monitoring law and contributing to the development of the EU Soil Observatory.

#### What do you like most about your work on BIOservicES?

The best part of working on BIOservicES is the consortium itself. Comprised of dedicated professionals with high motivation, ambition, skills and a collaborative spirit, the consortium members work together towards common objectives. Additionally, the international collaborations forged with other projects, initiatives and organisations have been immensely rewarding. Working collectively across institutions is the key to our success.

Learn more about the BIOservicES project by clicking the "More" button below:

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### **Events**

#### **Past events**

<u>EU stand at the Salon International de l'Agriculture 2024</u> (Paris, France, 24 February-3 March)

The Salon International de l'Agriculture provided a platform to showcase the EU's commitment to green, resilient and sustainable farming practices. Visitors learned about the pivotal role of the CAP in ensuring safe, affordable food, environmental stewardship and vibrant rural communities while supporting farmers' incomes. Additionally, attendees discovered how the EU promotes healthier food choices and reduces food waste to achieve sustainable food systems targets. Moreover, the event highlighted EU initiatives empowering the farming industry through advanced technologies such as satellite imagery and real-time data, fostering informed decision-making and sustainable farming practices.

#### European Carbon Farming Summit 2024 (Valencia, Spain, 5-7 March)

The inaugural EU Carbon Farming Summit brought together experts, innovators and thought leaders from across Europe to discuss innovation and opportunities for carbon farming. Attendees, including farmers, policymakers, environmentalists, and technology experts, explored innovative techniques to boost the adoption of carbon farming practices. With a focus on techniques that sequester carbon, enhance soil health and promote biodiversity, the summit aimed to catalyse collaboration and drive actionable solutions to address the urgent challenges facing European agriculture.

<u>European Research and Innovation (R&I) Days 2024</u> (Brussels, Belgium, 20-21 March)

The event brought together policymakers, researchers, stakeholders and the public to shape the future of research and innovation in Europe and beyond. Participants engaged in discussions on making Europe greener, fairer and more competitive, reflecting on a 40-year journey through the research and innovation framework programmes. Successful EU-funded research and innovation projects were showcased, highlighting their societal impact.

During the session on EU Missions for the Green Deal, Teresa Pinto Correia, Mission Soil Board Vice-Chair, highlighted the Mission Soil, emphasising the critical role of soils in supporting food production, carbon storage, water infiltration and biodiversity. She outlined the Mission's commitment to financing knowledge and action on soil, disseminating scientific guidance, and engaging society in improving soil management. Teresa stressed the need for interactive innovation, knowledge transfer and monitoring to address gaps in soil research and implementation, advocating for holistic approaches and transformative business models to promote sustainable soil practices. Watch the full opening session.

#### <u>The Land and Soil Management Award ceremony</u> (Brussels, Belgium, 26 March)

In March 2024, the prestigious Land and Soil Management Award was presented to the French project <u>Halage</u>. The award recognises exemplary land use and soil management practices aimed at mitigating various soil threats, including degradation, erosion, contamination and loss of biodiversity. It also promotes innovative concepts of land and soil protection, raising awareness of their vital functions. The jury, comprising representatives from the European Commission, European universities, and the public and private sectors.

#### <u>LIFE Platform Meeting on Soils</u> (Pamplona, Spain, 10-11 April)

The event brought together approximately 50 soil-related projects funded by the <u>LIFE Programme</u>, including <u>LIFE DESERT-ADAPT</u>, <u>LIFE CO2SAND</u> and <u>LIFE FRAC-IN</u>, to showcase their insights and results on bioremediation, soil conservation, contamination and management. Participants delved into horizontal topics including soil health monitoring, climate change and the promotion of soil literacy.

#### Africa Fertilizer and Soil Health (AFSH) Summit (Nairobi, Kenya, 7-9 May)

Africa's land can sustainably produce enough food for its people, but years of use have depleted it. The 2024 AFSH Summit emphasised the need to "Listen to the Land" to understand its restoration need. The summit brought together all relevant stakeholders to highlight the crucial role of fertiliser and soil health in stimulating sustainable productivity growth in African agriculture and to agree on an African Fertilizer and Soil Health Action Plan, as well as the Soils Initiative for Africa. European Commission representatives presented the EU Mission 'A Soil Deal for Europe' and in particular the topic Assessment of Soil Health in Africa currently open for welcome proposals. Expected outcomes of this call include strengthen the international dimension of the Mission Soil and support global commitments to healthy soils and SDGs, in the areas of sustainable agriculture, food and nutrition security, biodiversity, and climate.

## <u>Centennial Celebration and Congress of the International Union of Soil Sciences</u> (Florence, Italy, 19-21 May)

The event was a crucial moment to strengthen inter-disciplinary connections between policy makers, stakeholders, institutions, and associations to effectively respond to societal needs. Plenary and parallel scientific sessions involved soil scientists and specialists from various fields such as agriculture, forestry, environment, urban planning, energy, and education.

<u>Annual Science Days 2024</u> (Vilnius, Lithuania, 10-14 June): hosted by the European Joint Programme Soil (EJP SOIL) project, the event will focus on ensuring accessibility and dissemination of EJP SOIL results.

#### **Upcoming events**

<u>TERRAenVISION 2024</u> (Valencia, Spain, 8-11 July): the conference aims to foster inter-disciplinary collaboration and innovation for a climate resilient society. Sessions will include discussions on integrating multi-level soil biodiversity indicators for comprehensive nature-based solution (NBS) evaluation and monitoring in agriculture and NBS for natural areas (soil, water and landscape).

For more details on global soil-related events, please visit the Mission Soil interactive event map.

You can also promote your soil event on the Mission Soil website by clicking the "More" button below:

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#### News

## Horizon Europe strategic plan 2025-2027 for research and innovation

The Commission has adopted the second strategic plan for Horizon Europe, shaping research and innovation funding for 2025–2027. With key orientations focusing on the green and digital transition, and Europe's resilience and competitiveness, the plan aims to tackle global challenges like climate change and biodiversity loss. Notably, it commits to allocating 10% of the budget to biodiversity-related topics and introduces nine new European partnerships. The plan also introduces the New European Bauhaus Facility, fostering sustainable and inclusive living. Additionally, the plan provides an overview of the achievement of EU Missions over their first years. Horizon Europe's main Work Programme for 2025 will be developed following the orientations of the newly adopted strategic plan. In April 2024, the Commission launched an opportunity for all stakeholders to feedback on the 2025 Work Programme. Learn more about the strategic plan.

#### **Cooperation on soil health challenges in sub-Saharan Africa**

During the <u>2023 United Nations Climate Change Conference</u>, the European Commission and the Bill & Melinda Gates Foundation announced a collaborative effort to address soil health challenges in sub-Saharan Africa. With over 60% of soils in both the EU and sub-Saharan Africa considered unhealthy, the initiative aims to bolster global food security and climate action. The partnership will focus on providing substantial financial support to advance soil health priorities, including farmer livelihoods. The collaboration will enhance soil monitoring, research and innovation, with a focus on scaling up soil knowledge and mapping efforts in Africa. <u>Learn more about this partnership</u>.

#### **EU-wide certification scheme for carbon removals**

The European Commission welcomes the provisional agreement between the European Parliament and the Council on the EU's first voluntary certification framework for high-quality carbon removals. This framework, a significant step towards climate neutrality, will promote innovative carbon removal technologies and carbon farming, crucial for the EU's climate, environmental and zero-pollution objectives. Establishing an EU registry for transparency and credibility, the Regulation prioritises developing certification methodologies, unlocking economic opportunities and incentivising sustainable practices. Financial support mechanisms, including private schemes and public financing, will facilitate the growth of carbon removal technologies, complementing existing EU funding programmes. Learn more about the agreement.

#### How EIT Food supports innovators in improving our food system

EIT Food's Seedbed Incubator offers an opportunity for technology developers to deeply understand their customers and validate market need for their innovations before commercialisation, particularly focusing on improving the food system. Alumni like <u>Azolla Projects</u>, <u>Space Crop</u>, <u>Veridi Technologies</u> and <u>Nerite Tech</u> are good practice examples of the programme's impact in enhancing soil health and food sustainability. By joining the programme, innovators gain access to a vibrant food innovation community, connect with industry leaders for validation, receive equity-free funding, and undergo entrepreneurial training and coaching. <u>View the eligibility criteria and register your interest</u>.

Stay updated with the latest Mission Soil news by clicking the **"More"** button below:

## Resources and Readings

- Report from the Commission on Summary of CAP Strategic Plans for 2023-2027: joint effort and collective ambition, European Commission, November 2023
- <u>Scientific paper on a 1-billion-euro mission: A Soil Deal for Europe</u>, Panos Panagos, Pasquale Borrelli, Arwyn Jones, David A. Robinson, February 2024
- <u>EUSO annual bulletin 2023</u>, Broothaerts, N., Panagos, P., Arias Navarro, C. et al., March 2024
- <u>Mission Soil Board's set of recommendations for the establishment of national Mirror Groups</u>, Mission Soil Board, March 2024
- <u>Leading the transition towards healthy soils: guidelines for living labs proposals</u>, European Commission, May 2024

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