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Mission Soil Update

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

The <u>Mission Soil</u> continues to prove to be a unique and crucial instrument in helping to restore soil health in the EU and beyond, stimulating knowledge, innovation, investment, synergies, best practices and more. It also provides scientific advice and policy support in line with the EU's objective of achieving healthy soils by 2050 and is working on mobilising private funds.

Healthy soils are the foundation of a more efficient, sustainable and resilient agriculture, capable of facing extreme weather conditions and increasingly frequent market disruptions. Through the Mission Soil and the <u>Agroecology Partnership</u>, more and more Living Labs and Lighthouses in agriculture are being established. They ensure that all types of farms (small and large, conventional and organic, etc.) have access to regional and local spaces where innovation is developed and tested directly on farms, and solutions are presented for faster adoption. These Living Labs and Lighthouses are also working on solutions in different geographical and socio-economic contexts, such as forests, natural landscapes and urban settings.

The first projects related to Living Labs included <u>PREPSOIL</u>, which has been preparing the ground for the implementation of regional Living Labs by assessing regional soil needs, and by providing a harmonised monitoring mechanism and business models guidance; <u>SOILL-Startup</u>, a one-stop support structure for Living Labs; and <u>NATIOONS</u>, which has been supporting the establishment of Living Labs through awareness raising, capacity building and matchmaking.

Now, the first 25 Mission Soil Living Labs are kicking off their work. They are brought together by five translational projects funded under the Mission Soil Work Programme 2023. These are <u>LivingSoill</u>, <u>GOV4LL</u>, SOILCRATES and <u>iCOSHELLs</u>, all of which are working on co-creating solutions for soil health, and LILAS4SOILS, which is focusing on carbon farming. If you are interested in learning more about these Living Labs, they will be presented at the upcoming European Mission Soil Week 2024, which will take place on 12-13 November (see **'Events'** section for more details).

Regarding soil health monitoring, the Mission's projects are developing harmonised indicators and data based on digital technologies, remote sensing and artificial intelligence, in cooperation with the <u>Joint Research Centre</u>. Discover the new soil degradation indicators and functionalities of the <u>Soil Degradation Dashboard of the EU Soil Observatory</u>.

In addition to <u>SOILL-Startup</u>, a total of 21 projects out of the 22 expected to be funded under the Mission Soil Work Programme 2023 (including the Joint Calls

with Missions Ocean and Climate) have signed their grant agreement and will soon start their activities.

In terms of research and innovation, the Mission launched a new Work Programme in April with a total budget of EUR 134.5 million. Projects are expected to work on soil biodiversity, monitoring of soil erosion and nitrogen fluxes, soil health and pollinators, carbon farming and forest peat soils. Additionally, there is another call for the creation of further Living Labs on soil health, including in urban areas. The calls also include a topic on soil health monitoring in Africa, which reinforces the international dimension of the Mission.

Don't miss your chance to submit your proposal by 8 October 2024! Click the 'more' button to learn about the calls for proposals.

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The first episode of the Mission Soil Podcast is out!

This podcast explores the vital role of healthy soil, featuring insights from top experts in the field. Learn more about why soil health is crucial for life on Earth and discover the European Commissions efforts to address soil degradation.

Click the 'more' button to listen to the episode.

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The Mission Soil Manifesto

The Mission Soil Manifesto is a non-legally binding document open for signature by municipalities, regions, public and private organisations, NGOs, educational and research institutions, individuals and others. Signatories become part of a dynamic community of soil health advocates, gaining access to the latest research outcomes and funding opportunities, and can promote action, seek partnerships and collaborate to advance soil health.

The Manifesto acts as a lever to raise awareness of the Mission, promote soil literacy, encourage local action for soil health, and foster collaboration between different stakeholders

To date it has collected more than 3,000 signatures from countries around the world, including over 500 from legal entities, all of which are <u>publicly available</u> <u>here</u>.

Recent Manifesto signatures include: <u>Ihobe, the Basque Government's Public Environmental Management Company</u> (ES); the <u>Agriculture Department of the Autonomous Province of Bolzano – South Tyrol</u> (IT); <u>Aland Foundation for landscape restoration</u> (ES); the <u>European Network of Living Labs-ENoLL</u> (BE); the NGO <u>Humus+</u> (AT); the Research organisation <u>Academy of Entrepreneurship</u> (GR) and the non-EU private company <u>Coastal Biotech</u> (TZ).

Legal entities can play a key role in raising awareness of the Mission Soil and in promoting sustainable land management practices. Companies and organisations can support the Mission's objectives by financing or implementing soil health initiatives and/or research projects. Investing in soil health is crucial to tackling climate change, addressing global food insecurity, and ensuring farmers' and communities' resilience.

Click the 'more' button to sign the Manifesto and join the Mission Soil community!

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Project News



The Innovative Business Models for Soil Health (NOVASOIL) project has <u>launched</u> <u>its Digital Hub</u> – a comprehensive tool that allows users to explore effective business models and incentives for achieving healthy soils. It also serves as an interactive platform to showcase and exchange sustainable land management practices.



Two cutting-edge soil monitoring techniques, 'Spectrometry' and 'Eddy covariance flux tower', were showcased at the demo site of the MRV4SOC project (Monitoring, Reporting and Verification of Soil Organic Carbon and Greenhouse Gas Balance) in Lonzée, Belgium. <u>Visit the webpage to learn more</u>.



The first newsletter of the EDAPHOS project ('Advanced mapping, risk assessment and nature-based depollution methods are combined to accelerate the recovery of contaminated soils and ensure that ecological restoration enters mainstream business') has been published. Sign up for the newsletter to not miss any future updates!



From mid-April to mid-July 2024, the NATIOONS project ('National engagement activities to support the launch of the Mission "A Soil Deal for Europe" 100 Living Labs and Lighthouses') wrapped up its second round of National Engagement Events, assisting nearly 2,600 participants across 44 countries in preparing their applications for funding under the Mission Soil. Over 850 participants have also registered for the NATIOONS Soil Living Labs Online Matchmaking Event, running from March 2023 to October 2024, which has so far led to 188 opportunities.



The Healthy Municipal Soils project (HuMUS) has <u>launched a new course</u> to facilitate soil health dialogues at regional or municipal levels. The course aims to build a network of Soil Stewards. Also, congratulations to the <u>winners of the</u>

<u>HuMUS open call</u>, who received EUR 30,000 each to bring their innovative local soil health projects to life!



On 29 July 2024, the project Startup of the SOILL Support Structure for SOIL Living Labs (SOILL-Startup) <u>launched its community mapping campaign</u>, inviting stakeholders to join a dynamic network dedicated to soil health across Europe.



The Soils for Europe (SOLO) project has <u>published its first round of roadmaps</u> identifying knowledge gaps in the objectives of the Mission Soil. Later this year, all documents will be assessed once again and updated by the project's think tanks.



On 17 July 2024, the University of Jaén hosted the <u>first international competition</u> of the <u>Soil O-Live project</u> ('The soil biodiversity and functionality of mediterranean olive groves: a holistic analysis of the influence of land management on olive oil quality and safety'), awarding winners from Spain, Italy and Greece for their exceptional soil and olive oil quality.



The DeliSoil project (Delivering Soil Improvers Through Improved Recycling and Processing Solutions for Food Industry Residues Streams) <u>held its annual consortium meeting</u> in Rome and Parma on 27-29 May, where participants discussed soil health improvements and circular food production processes. The event featured presentations, stakeholder engagements and visits to local Living Labs, and was a significant step forward in advancing the project's goals.



This project has recently published a paper on <u>Incentivising the transition to soil</u> <u>health and regenerative farming practices</u> and is organising an online webinar to further discuss how to leverage Blended Finance for effective incentives design. To register click <u>here</u>.

Mission Soil Ambassadors

Soils are essential for sustainable food production, climate neutrality, clean water and biodiversity, but they are often overlooked in public discourse. To fill this gap and contribute to the achievement of the Mission Soil objective 'Increase soil literacy in society', **the Mission Soil Ambassadors programme** has been launched. Mission Soil Ambassadors are passionate advocates dedicated to raising awareness in their communities about the importance of soil health and sustainable soil management practices.



Alfred in his lentils field cultivated with the roller-crimper method, which involves flattening the crops and crimping the stems.

Meet our first Mission Soil Ambassador, Alfred Grand (in the picture). Alfred is committed to advancing soil health and sustainable farming practices through his work at GRAND FARM and various European research projects.

Could you tell us a bit about yourself and the work you do on GRAND FARM?

I am an organic farmer from Austria. I own <u>GRAND FARM</u>, a 90-hectare research and demonstration farm focusing on soil health, agroforestry and market gardening. I am also an entrepreneur at <u>VERMIGRAND Naturprodukte GmbH</u>, where earthworms produce organic fertiliser through vermicomposting. I am also involved in various research and consultancy projects under Horizon Europe, the EU's Common Agricultural Policy Network, and Erasmus+ programmes.

What are some of the practices you apply on your farm to keep your soil healthy?

In our organic arable field farming, we use crop rotation, cover cropping, agroforestry, flower strips, seed coating with vermicompost, minimal tillage, notill and reduced tyre pressure to regenerate the soil. In market gardening we use all of the above as well as compost, vermicompost and alfalfa hay as transfer mulch. We do not use heavy machinery, pesticides or mineral fertilisers.

Can you tell us about your plans to disseminate the results of your work and raise awareness about soil health and sustainable farming practices?

Our slogan is 'We grow food, soil and people'. As a demonstration farm, we host many visitors (between one and four tours per week) and give talks and training. We also receive significant media interest due to my role as a Mission Soil Ambassador. We collaborate with researchers, non-governmental organisations, policymakers and citizens on both national and international levels. We are part of the Global Network of Lighthouse Farms and train managers within the Lighthouse Farm Academy.



What would be your advice to other farmers who want to manage their soil more sustainably and improve its health?

Connecting with like-minded farmers through field tours or regional activities is crucial. Use the resources provided by independent advisory services and EU initiatives (e.g. the agricultural European Innovation Partnership (EIP-AGRI), the Mission Soil, Horizon Europe projects). Start slowly and experiment with new methods and machinery on small areas first. Invest more in knowledge rather than expensive machinery initially.

Events

Mission Soil Week 2024 is coming soon!

Mark your calendars for the European Mission Soil Week 2024, set for 12-13 November at BluePoint Brussels. This two-day event will feature engaging activities, keynote speeches, panel discussions and ample networking opportunities. For those unable to attend in person, the event will be livestreamed. Additionally, on 14 November, an exclusive side event will be held for Mission Soil-funded projects, focusing on data management, soil indicators,

monitoring and stakeholder engagement. Register for the Mission Soil Week 2024.

Upcoming events

<u>NetworkNature annual event: Busting myths – people with nature</u> (Brussels, Belgium, 25 September)

Focusing on nature-based solutions (NbS), the event will reveal how restoring nature is essential and economically beneficial. Attendees will explore case studies, research and interactive discussions on how NbS can create synergies between people and nature. The conference will feature panel discussions, presentations and artistic elements, addressing key areas like regenerating nature actions, governance and economic valuation. This event is being organised by NetworkNature, which creates opportunities for local, regional and international cooperation to maximise the impact and spread of NbS.

Open Living Labs days, Living Labs frontiers, driving systemic change through soci(et)al engagement for real impact (Timişoara, Romania, 25-27 September)

The event will delve into how Living Labs can catalyse societal transformation through active collaboration. Attendees will participate in interactive sessions, workshops and site visits to explore Living Labs as platforms for tackling major societal challenges. The conference will cover their roles in shaping policy and governance, fostering inclusive engagement, and supporting businesses and society in adapting to new technologies. Key discussions will also address the operational aspects of Living Labs, including tools, services and business models. Several Mission Soil representatives will be presenting at the event, including Kerstin Rosenow, who is Head of the Research and Innovation Unit at DG AGRI and Head of the Mission Soil Secretariat. Mission Soil Board members Anna Krzywoszynska, Associate Professor of Transdisciplinary Human-Environment Relations at the University of Oulu, Finland, and Iustina Boaja, Senior Researcher at the Geological Institute of Romania, will also be presenting. The event is organised by the European Network of Living Labs (ENOLL) and West University of Timişoara.

<u>Global Symposium on Soil Information and Data</u> (Nanjing, China, 25-28 September)

This hybrid event will serve as an international forum for stakeholders, including policymakers, researchers, and practitioners, to explore the important role of comparable and reliable soil data and information in addressing global challenges. Co-organised by the Food and Agriculture Organization, its Global

Soil Partnership, and the Institute of Soil Science, Chinese Academy of Sciences, this symposium will explore challenges such as food security, climate change, and sustainable soil management. Emphasising the significance of data-driven decision-making, it aims to catalyse the development and implementation of policies grounded in robust soil data, thereby enhancing the efficacy of global efforts towards sustainable development and climate resilience.

<u>Policy workshop on international carbon certification schemes</u> (Brussels, Belgium, 26 September)

Organised by the project 'Operationalising the International Research Consortium on Soil Carbon' (ORCaSa), this workshop will explore global approaches to soil organic carbon storage. Attendees will gain insights into public and private schemes from the United States, Australia and the Pacific region, and their relevance to the European Commission's Carbon Removals Certification Framework. This event will bring together experts and policymakers to discuss advances in soil carbon policy, with the results contributing to a policy brief aimed at supporting the Paris Agreement, the EU Green Deal and the Mission Soil.

<u>Financing Soil Protection and Restoration</u> (Online Workshop, 24 October)

The workshop, organised by the European Commission Directorate-General for Environment, will explore how different sources of funding and financial mechanism are relevant to enabling the transition towards the vision of healthy soils across the EU by 2050. This discussion is also relevant in the context of the proposal of the Commission on a Soil Monitoring Law to protect and restore soils and ensure that they are used sustainably (Proposal for a Directive on Soil Monitoring and Resilience (europa.eu). Deadline for registration: 11th October.

<u>ECOMONDO – The Green Technology Expo</u> (Rimini, Italy, 5-8 November)

This key event, organised by the Italian Exhibition Group, serves as the meeting place where industrial groups, stakeholders, policymakers, local authorities, research bodies and institutions come together to define strategies for the development of EU environmental policy. On 7 November, the event will feature a session on soil health titled 'States General for Soil Health', including a presentation on the progress of the Mission Soil by Kerstin Rosenow, Head of the Research and Innovation Unit at DG AGRI. The session will also provide an overview of the key elements needed to protect soil health, such as carbon farming and nature-based solutions, as well as best practices for soil regeneration across different types of land use.

Past events

<u>Regenerative Agriculture Summit Europe 2024</u> (Amsterdam, the Netherlands, 3-5 September)

The three-day event brought together leaders from the food and textiles industries to accelerate the transition to regenerative practices. Hosted by Kisaco Research with a variety of partners, the conference featured Innovation Showcase start-up pitches, a visit to a regenerative farm, and many one-to-one meetings, all designed to forge new partnerships and drive collaboration. A notable highlight was a session with Gijs Schilthuis, Head of the Policy Perspectives Unit at DG AGRI, who addressed the implications of the evolution of the 'Farm to Fork' legislation and the next steps in EU agricultural policy.

<u>International Symposium on One Health by Sustainable Bio-ecosystem</u> (Tokyo, Japan, 6 September)

The hybrid event focused on understanding and using plant-microbe interactions in agricultural soils. Hosted by Waseda University and the Institute of Global Innovation and Research at Tokyo University of Agriculture and Technology, the symposium featured a keynote speech by Diego Canga Fano, Director of Outreach, Research and Geographical Indications at DG AGRI. Director Canga Fano presented the Mission Soil and highlighted opportunities for international cooperation, stressing the importance of global partnerships in advancing soil health.

LANDSCAPE 2024 (Berlin, Germany, 17-19 September)

Under the theme 'Agroecosystems in transformation: visions, technologies, and actors', the triannual conference emphasised the crucial role of clear visions, innovative technologies and key stakeholders in driving sustainable changes. Organised by the Leibniz-Centre for Agricultural Landscape Research (ZALF), the event facilitated in-depth discussions on how to navigate and implement transformative practices within agroecosystems, showcasing the latest advancements and fostering collaboration among professionals dedicated to enhancing agricultural sustainability.

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

Click the 'more' button to promote your soil event on the Mission Soil website.

EU policy news

Soil monitoring law: EU on the pathway to healthy soils by 2050

The Council defined its general approach to soil health monitoring, requiring Member States to monitor and assess 'the health of all soils on their territory' using a common EU methodology. This approach allows existing monitoring systems and data to be used for soil measurements. The framework establishes minimum quality requirements for laboratories analysing soil samples to ensure the comparability of soil measurements. Within five years of the Directive's entry into force, Member States will need to define their plans for sustainable soil management practices, in line with the EU target of no-net land take by 2050. Additionally, a risk-based approach will be employed to identify and address contaminated sites, with national lists of potentially contaminating activities. The next step involves negotiating the final details of the Directive text with the European Parliament.

Nature restoration law: Council gives final green light

The Council has officially adopted the Nature Restoration Law, a landmark regulation aimed at restoring at least 20% of the EU's land and sea areas by 2030 and all ecosystems in need by 2050. This first-of-its-kind law sets legally binding targets for terrestrial, marine, freshwater and urban ecosystems, including wetlands, forests, rivers and seagrass beds. Member States are tasked with prioritising Natura 2000 sites and implementing measures to restore degraded habitats, targeting 30% restoration by 2030, 60% by 2040, and 90% by 2050. The regulation also introduces specific measures to protect pollinators, enhance biodiversity in agricultural and urban areas, and restore drained peatlands. Member States must submit national restoration plans and report on progress using EU-wide biodiversity indicators.

European Council announces strategic agenda 2024-2029

The EU has unveiled its strategic agenda for 2024-2029, setting ambitious priorities to make Europe more sovereign and better equipped to deal with immediate and future challenges. Under the pillar 'a prosperous and competitive Europe', green and digital transition are confirmed as key elements for long-term competitiveness and for improving the economic and social well-being of citizens. The EU will strive to promote a sustainable and resilient agricultural

sector, vibrant rural communities and strengthen the position of farmers in the food chain. The EU's political priorities for the future are determined every five years by EU leaders. The work on the agreed priorities is then taken forward by the EU institutions and the Member States, and is reflected in the multiannual financial framework, the EU's long-term budget.

Click the 'more' button to stay updated with the latest soil news.



Resources and Readings

- Let's play! Apple soil game, Joint Research Centre, February 2021
- How the EU Soil Observatory is providing solid science for healthy soils,
 Panagos, P., Broothaerts, N., Ballabio, C., et al., May 2024
- <u>Tracking soil health: Monitoring and modelling the soil-plant system,</u> *Yijian Zeng, Anne Verhoef, Harry Vereecken, et al., June 2024*

Click the 'more' button to view the latest Mission Soil resources.



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