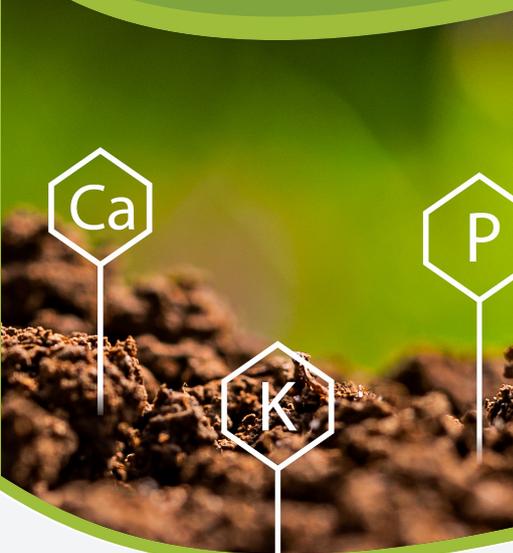


OFFICIAL PROGRAMME

UNFORGETTABLE
ANNUAL
SCIENCE
DAYS 2025

Aarhus University in Denmark
6th and 7th of October 2025



DAY 1

MONDAY 6TH OF OCTOBER

“Advances in science”

Topics: Sustainable soil management / Climate change adaptation / Climate change mitigation / Assessing & Monitoring soil health

DAY 2

TUESDAY 7TH OF OCTOBER

“Impactful dialogue”

Topics: Long-term needs in soil knowledge / knowledge to practice, pedoclimatic zones / practices & innovations and market

8.30 - 9.00 Opening registration

9.00 - 9.30 Opening

By Claire Chenu (EJP SOIL Coordinator) & Brian Bech Nielsen (Rector, Aarhus University)

9.30 - 11.00 Advances in sustainable soil management

This session highlights recent scientific advances on the use of sustainable soil management practices within a changing climate.

Keynotes:

“Indicators and thresholds to guide sustainable soil management”
by Olivier Heller (Agroscope, Switzerland)

“SOC sequestration for climate change adaptation and mitigation – what have we learned?” by Katharina Meurer (SLU, Sweden)

Facilitated by: David Wall

Panel Members: : Jan Verhagen (WUR) and Lars Munkholm (AU)

11.00 - 11.30 Coffee

11.30 - 13.00 Breakout sessions

Breakout session 1 (Room 1)

Sustainable soil management practices

Facilitated by Lars Munkholm (Aarhus University, Denmark)

This session explores soil management related to different soil amendments and their impacts on crop yield and quality, soil carbon and nitrogen dynamics, and greenhouse gas emissions.

- **Yield Responses of Major European Crops to Reduced Mineral Nitrogen Fertilizer Application** Sevinc Madenoglu, Ministry of Agriculture and Forestry, Turkey
- **European-scale trade-off analysis of reduced mineral nitrogen fertilization on cropland** Sonja Keel, Agroscope, Switzerland
- **Reduced N₂O emissions - Results from a two-year biochar field experiment** Jonathan Lindhardt, Copenhagen University, Denmark
- **Short-term interaction between earthworms, compost and biochar on GHG emissions and N mineralization** Nicholas Clarke, Norwegian Institute of Bioeconomy Research, Norway

- **Recycling Marine residues: Field results from blue-green fertilizer trials** Tatiana Rittl, Norwegian Center for Organic Agriculture, Norway
- **1-minute-madness: Impact of Anaerobically Digested Slurry on SOC Dynamics and GHG Emissions in a Long-Term Field Trial** Johanna Zimmermann

Breakout session 2 (Room 2)

From data to decisions

Facilitated by Maria Fantappie (CREA, Italy)

This session explores innovative methods and tools for soil data collection, harmonization, and monitoring to support healthier soils and informed land management across Europe.

- **SoilWise: Advancing a FAIR Data and Knowledge Infrastructure for healthier soils in Europe** Fenny van Egmond, Wageningen University and Research/ISRIC, The Netherlands
- **Comparison of the efficiency of EnMAP with other sensors for soil organic carbon and clay prediction** Luboš Borůvka, Czech University of Life Sciences, Czech Republic
- **Novel Approach for Field Harmonization of Soil Spectral Measurements** Eyal Ben Dor, Tel Aviv University, Israel
- **High-resolution thematic soil mapping at EU level based on the combined use of LUCAS and national soil monitoring data in the framework of the EJP SOIL project** Maria Fantappie, CREA, Italy
- **Soil health indicators and monitoring relevant scientific findings from EJP SOIL** Antonio Bispo, INRAE, France

Breakout session 3 (Room 3)

Adoption of sustainable management

Facilitated by David Wall (TEAGASC, Ireland)

This session explores how cultural heritage, carbon farming, learning strategies, living labs, and a forward-looking research agenda contribute to the adoption of sustainable soil management.

- **How to accelerate the adoption of soil management practices? - A cross-country comparative approach** Pia Piroeschka Otte, Ruralis, Norway
- **Heritage Impact Assessment of the soil cultural resources exposed to Climate Change impacts** Sabina Asins-Velis, Centro de Investigaciones sobre Desertificación, Spain

- **Soil Health concept adoption and learning strategies across seven European countries** Jorge Federico Miranda Vélez, Aarhus University, Denmark
- **From Carbon Metrics to Systemic Change: Lessons from the 2nd European Carbon Farming Summit** Saskia Keesstra, Climate KIC Foundation, The Netherlands
- **1 minute madness: A European Knowledge Agenda for Agricultural Soils for 2025-2035** Saskia Keesstra, Climate KIC Foundation, The Netherlands
- **1 minute madness: The SOILL Learning Journey: Building Capacity for Climate-Smart Soil Management through Living Labs** Saskia Visser, Climate KIC Foundation, The Netherlands

13.00 - 14.00 Lunch

14.00 - 15.30 Advances in soil monitoring and resilience

This session highlights recent scientific advances in soil health assessment and management strategies.

“Crop diversification – a climate-smart and resilient option for agricultural management? Highlights from internal projects within EJP SOIL” by Anke Hermann (SLU, Sweden)

“Comparing LUCAS Soil and National systems: convergence and divergence, with insights from France” by Emile Maillet (INRAE, France)

Session chair: Maria Fantappie (CREA, Italy)

Facilitated by Fenny van Egmond

Panel Members: Alar Astover (Estonian University of Life Sciences, Estonia) and Zsofia Bakacsi (Centre for Agricultural Research, Hungary)

15.30 - 16.00 Coffee

16.00 - 17.30 Breakout sessions

Breakout session 4 (Room 1)

Sustainable soil management and biodiversity

Facilitated by Francesco Vitali (CREA, Italy)

This session focuses on sustainable land management in relation to biodiversity, highlighting innovative research on plant-soil interactions, soil organisms, bioindicators, and the effect of management

- **Soil Health and Sustainable Land Management** Marcel van Der Heijden, Agroscope, Switzerland

- **Intercropping effects on mycorrhizal intensity and its interaction with the main crop yield** Agnė Veršulienė, Lithuanian Research Centre for Agriculture and Forestry, Lithuania
- **WISH-ROOTS: Wheat root traits can turn the tide of the nitrogen cycle in soil** Maria Hernandez-Soriano, John Innes Centre, United Kingdom
- **Response of Soil Organisms to Climate-Smart Sustainable Soil Management Techniques** Sophie Zechmeister-Boltenstern, BOKU University, Austria
- **On-farm assessment of cover crops on carrot and potato production under Norwegian Conditions** Tatiana Rittl, Norwegian Center for Organic Agriculture, Norway
- **Establishing assessment criteria for soil bioindicators: challenges and next steps** Laura Riggi, Wageningen University and Research, The Netherlands

Breakout session 5 (Room 2)

Workshop on national hubs and mirror groups

Facilitated by Irene Criscuoli & Chiara Piccini (CREA, Italy)

This workshop session will highlight the experiences from select case studies, followed by an interactive discussion on national hubs, mirror groups, and other forms of knowledge exchange.

- **The Italian Soil Hub experience: an ongoing roadmap fostering the EJP SOIL results to the society** Chiara Piccini, CREA, Italy
- **EJP SOIL in Switzerland: A National Synthesis** Klaus Jarosch, Agroscope, Switzerland
- **The Dutch Soil Hub** Janjo De Haan, WUR, The Netherlands
- **Mirror groups and Guidelines for establishment of Soil Health National Hubs** Line Friis, Prepsol, Aarhus University, Denmark
- **Workshop rounds with feedback and summary**

Breakout session 6 (Room 3)

Climate change mitigation and carbon sequestration

Facilitated by Saskia Keesstra (Climate KIC, The Netherlands)

This session presents research on soil organic carbon dynamics, highlighting measurement, modeling, and management strategies.

- **Soil Carbon Stocks and Sequestration rates in Northern Irish Grasslands** Selva Dhandapani, Agri Food & Biosciences Institute, United Kingdom
- **Soil organic carbon and yield temporal stability in no-till systems** Ana Campos-Càliz, Institute of Agricultural Sciences, Spain

- **A result-oriented AECM to improve the Organic Carbon status of agricultural soils in Belgium** Bruno Huyghebaert, Walloon Agricultural Research Centre, Belgium
- **Modelling the Impact of Fresh and Treated Crop Residues on Soil Carbon in Europe** Arezoo Taghizadeh-Toosi, Danish Technological Institute, Denmark
- **Functions and Shiny App to Support Crop Rotation Design and Soil Carbon Modelling** Frédéric Vanwindekens, Walloon Agricultural Research Centre, Belgium
- **BeSOCCC A Tier-3 approach for SOC stocks modelling in Flanders, Belgium.** Ionna Panagea, Flanders research institute for agriculture, fisheries and food, Belgium
- **1-minute-madness: Soil organic carbon modelling by two different approaches** Stefan Koco, National Agricultural and Food Center, Slovakia

17.45 - 18.00 **Closing of Day 1**

By Claire Chenu (INRAE, France) & Jesper Emborg (Aarhus University, Denmark)

18.00 - 19.00 **Poster Session (See list at the end of the programme)**

19.00 **Standing dinner**

20.00 - 24.00 **DJ and dance floor**

21.30 **Late night snack for the hungry: Pølsevogn (Traditional Danish hot dog stand)**

8.00 - 9.00 **Registration and Coffee**

9.00 - 9.15 **Opening and Welcome**

By dr Saskia Visser and Raisa Gerasina (Climate KIC)

This session will be streamed online

9.15 - 10.15 **From Crisis to Resilience: The Soil Revolution That Changed Agriculture**

“Tracing the evidence behind 20 years of soil-based climate resilience”

Panel discussion featuring Henri DeLanghe (DG Research and Innovation), dr. Lutz Merbold (Agroscope) and Maurits Voogt (Eurofins Agro)
Facilitated by dr. Saskia Visser (Climate KIC)

This session will be streamed online

10.15 - 10.45 **Coffee**

10.45 - 12.00 **Breakout sessions**

Breakout session 1 (Room 1)

Future-Proofing Soil Expertise: Education for the Next Generation

Featuring Katharina Meurer (Swedish University of Agricultural Sciences), Loraine ten Damme (Aarhus University), Esben Mortensen (Aarhus University), Rasmus Jensen (SEGES Innovation)

Facilitated by Amanda Matson (Wageningen Research)

The session will cover EJP SOIL surveys on soil science in Higher Education and future skills and expertise needs, from a European perspective. The panel discussion will address the question how do we adjust HE to serve the new insights of EJP SOIL (and maybe others)? And especially around such ‘non academic’ topics and generic/transversal skills such as innovations and entrepreneurship?

Breakout session 2 (Room 2)

Validation session - Soil management practices

Facilitated by Raisa Gerasina (Climate KIC)

Farming decisions shape landscapes, emissions, and long-term food security. Emerging tools are helping farmers make smarter, data-driven choices for soil health. This session highlights the latest innovation in decision support tools and management practices. A key opportunity to support scalable, farmer-centred soil stewardship.

- **Development of a decision support system for soil health in living labs** Marjoleine Hanegraaf, Wageningen University
- **Hybrid Incentives Framework for Soil-Based Nature Credits** Nidhi Raina, University of Bologna
- **Decision Support Tools and soil compaction literacy** Mathieu Lalandé, Aarhus University
- **Handbooks with essential knowledge on soil management topics for advisors and farmers** Janjo de Haan, Wageningen University
- **Insights from Long-Term Experiments: Phosphorus Management Effects on Soil Carbon,**
- **Nitrogen Dynamics, Microbial Communities, and Greenhouse Gas Emissions** David Wall, Giulia Bondi, TEAGASC, Ireland

Breakout session 3 (Room 3)

Future looking Dialogue - From algorithms to earthworms

Featuring Mogens Greve (Aarhus University), Maria Fantappie (CREA) and Davide Cammarano (Aarhus University)

Facilitated by Olivier Heller (Agroscope)

This panel explores how artificial intelligence can help turn scientific knowledge into practical action for the green transition. From e.g. precision farming and carbon monitoring to evidence-based policy-making, AI offers powerful tools to bridge the gap between data and sustainable practice. The discussion will also address ethical challenges around data ownership, transparency, and equitable use.

Breakout session 4 (Room 4)

Validation session - Soil biology and soil management practices

Facilitated by dr. Saskia Visser (Climate KIC)

Unlocking the hidden potential beneath our feet. Soil biology is central to resilient ecosystems and healthy food production. New insights into microbial life and soil-plant interactions open doors to low-input, regenerative farming. Explore how investing in living soils and new soil management practices can yield environmental and societal returns.

- **Crop control of soil microbiome recruitment for sustainable agriculture** Maria Hernandez-Soriano, John Innes Centre, United Kingdom
- **Artificial macropores - A new approach to enable plant root access into subsoils, in the presence of soil compaction** Elron Wiedermann, Thuenen Institute, Germany
- **Green Horizons Farmers Network: A Collaborative Network Advancing Sustainable and Climate-Smart Agriculture in Europe** Saskia Keesstra, Climate-kic Foundation, The Netherlands
- **Evaluation of decision support tools for the estimation of soil carbon stock change under sustainable soil management practice** Sharon O'Rourke, University College Dublin

12.00 - 13.00 Lunch

13.00 - 14.00 Accelerating transformation for sustainable agricultural production systems NOW

Turning urgency into action for climate-smart, sustainable agriculture

Panel discussion featuring prof. dr. Claire Chenu (INRAE), Ben Honan (Climate-KIC) and Mona Ebdруб (farm Andelsgaard). Facilitated by dr. Niels Halsberg (Aarhus University)

This session will be streamed online

14.00 - 15.15 Breakout sessions

Breakout session 5 (Room 3)

Enhancing the role of soils in nutrient supply in the future

Facilitated by Janjo de Haan & Saskia Keesstra (Wageningen University)

Soils are key in the provision of nutrients to crop. What knowledge do we need to enhance this role of soils? How can we the role as nutrient reservoir and as a gradual supply of nutrients to crops and how can we prevent losses? Think along with us to identify the most important new practical solutions and research questions on this topic.

Breakout session 6 (Room 2)

Valorisation session - MRV and soil management practices

Facilitated by Raisa Gerasina (Climate KIC)

Trustworthy data is key to rewarding sustainable practices. MRV systems ensure that climate-smart farming gets recognised and financed. Join the discussion on the newest innovations that contribute to building credible, farmer-friendly MRV and soil management practices for soil health. Strategic for impact investors looking to back measurable transformation.

- **Monitoring and verification for carbon farming: insights from the MARVIC project for soil research** Ruyschaert Greet, Flanders research institute for agriculture, fisheries and food
- **Balancing Accuracy and Efficiency in Soil Carbon Monitoring** Sofia Biffi, Aarhus University, Denmark
- **Soil type mapping, including SOM, directly in the field** Bo Stenberg, Swedish University of Agricultural Sciences, Sweden
- **Sensor system for real-time soil solution monitoring in agricultural systems** Iris Vogeler, Aarhus University, Denmark
- **The LIFE Monitor** Bob Klein Lankhorst, HAL24K Agri, The Netherlands

Breakout session 7 (Room 1)

Climate ready by Design: Future production systems rooted in Soil health

Facilitated by Klaus Jerosch (Agroscope)

What will climate resilient farming look like in 2050? And how will healthy soils be the foundation? This session dives into future production systems shaped by digital tools, biological solutions, and adaptive practices. We'll explore resilient crop rotations, soil-biological innovations, and the new balance between arable and livestock systems, all built to thrive under changing climate conditions and shocks.

Breakout session 8 (Room 4)

Valorisation session - Increasing soil organic matter and soil management practices

Facilitated by dr. Saskia Visser (Climate KIC)

Soil organic matter is a foundation for fertility, carbon storage, and climate resilience. Learn how targeted interventions can restore soil function and reverse degradation.

The round table pitches science-backed pathways for building organic matter at scale, across different pedo climate zones. A compelling entry point for climate, food, and nature investors alike.

- **Crop yields and soil carbon modelling in long-term experiments across Europe** Magdalena Necpalova, University College Dublin
- **Grassland mixtures with legumes and forbs facilitate soil carbon storage and reduced N fertilization without compromising yield** Esben Øster Mortensen, Aarhus University
- **Simplified farm-level CO₂ eq emission accounting using key input indicators as proxies for LCA-derived CO₂-eq emissions** Roberto Garcia-Ruiz, University of Jaén
- **Web-Based Inventory of European Soil Management Practices: Pathways for Validation Across Pedo-Climatic Zones** Frédéric Vanwindekens, Centre Wallon de Recherches agronomiques

15.15 - 15.45 **Coffee**

15.45 - 16.15 **“United by Soil, Driven by Impact: The Innovation Partnership Begins”**

By: Prof. Claire Chenu (INRAE) and dr. Saskia Visser (Climate KIC)

This closing plenary will provide a synthesis of the day's conclusions and formally launch the scoping phase of the Soil Innovation Partnership

This session will be streamed online

LIST OF POSTERS

- **Long-term effects of conservation agriculture on soil properties - A case study** Alae BADDOU, Rachid MOUSSADEK, Mohamed CHIKHAOUI
- **Functional response of soil microbial communities to agroecological intensification across Europe** Arman Shamshitov
- **LILA: Towards Region-Specific Emission Factors in Flemish Agriculture** Astrid François
- **Organic Carbon Trends in European Agricultural Soils** Florian Schneider
- **Monitoring Organic Soils with VIS-NIR Spectroscopy: pH and Carbon Prediction** Guillaume Debaene
- **National hub and Mirror group activities supporting the sustainable soil management in Slovakia** Jaroslava Sobocka
- **Impact of Anaerobically Digested Slurry on SOC Dynamics and GHG Emissions in a Long-Term Field Trial** Johanna Maria Zimmermann
- **Influence of agroecological diversification on microbial biomass and necromass in soil** Kirsten Lønne Enggrob
- **An open framework for downscaling soil carbon and clay maps using sensor data** Lucas Gomes
- **Indicators for Soil Biodiversity: From European Recommendations to Danish Practice** Machteld Verzijden
- **Regional differences in POM and MAOM in Dutch arable farming** Marjoleine Hanegraaf
- **Effect of fertilization and the share of cereals in crop rotation on the soil chemical properties** Miriam Kizeková
- **Enhancing Sandy Soil Resilience to Drought through Biochar: A Climate Adaptation Strategy** Monica Shree Chandramohan
- **SOIL MANAGEMENT EFFECTS ON CROP PRODUCTION AND SOIL HEALTH** Olivier Heller
- **Novel biotechnology for improved N₂O mitigation and N retention in agricultural soils** Pawel Lycus

LIST OF POSTERS

- **ENHANCED EFFICIENCY UREA A SUSTAINABLE APPROACH TO CURB GREENHOUSE GASES AND MITIGATE CLIMATE IMPACT** Samar Swify
- **The SOILL Learning Journey: Building Capacity for Climate-Smart Soil Management through Living Labs** Saskia Visser
- **LILA: Towards Region-Specific Emission Factors in Flemish Agriculture** Astrid Françoys
- **Agroecological Intensification Enhances Soil Structure and Carbon Dynamics across Cropping Systems** Skaidre Suproniene
- **Soil organic carbon modelling by two different approaches** Stefan Koco
- **Managing soil health for climate resilience and crop productivity in a changing environment** Wogene Kabato
- **Rehabilitation of Saline Soils with Clonostachys, Trichoderma, and Talaromyces Fungi** Akın Ün
- **Assessment of Phosphorus-Solubilizing Fungi in Agricultural Soils from Şanlıurfa, Türkiye** Akın Ün
- **The effect of different agricultural treatments on carbon sequestration and aggregate stability** Miroslav Fér

GETTING TO THE EVENT:

ADDRESS:

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INFORMATION ABOUT AARHUS:

