

SOIL HEALTH NOW!



*Science, technology and business intelligence
for measuring, monitoring and increasing
soil health*

FULL AGENDA

7-10 December 2026

Center for the Dissemination of Research Results of the Aristotle
University of Thessaloniki (KEDEA)

Thessaloniki, Greece



The AI4SoilHealth project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101086179

OUR SOIL HEALTH NOW! 2025 WAS A SUCCESS

An immense thank you to all participants, presenters, keynotes and the soil health community for this first edition. It was an exciting experience having so many people whose perspectives could only make richer our original idea of having an urgent call for Soil Health in Europe. It proved a point, and we are proud to be soil stewards today and for future years. We hope we can bring once again in December a great time for you to delve deeper into multiple topics but with a common purpose: monitor, improve and generate long-lasting strategies to have healthy soils.

See you in December,

The Soil Health Now! team



TOPICS

This conference focuses on the urgent need for common soil health indicators, technology, and standards. This event aims to connect EU Agencies and Programs, researchers, farmer associations, technology leaders, and business intelligence to develop tools, protocols, standards, and datasets for measuring, monitoring, and increasing soil health across the European continent.

Specific topics of interest include:

- Soil health indicators
- Pan-EU soil health assessment
- In-situ measurement of soil health
 - Soil organic carbon
- Soil-climate-agriculture
- Carbon farming & regenerative agriculture
 - Soil biology
- Technology for monitoring soil health
- Methods for reducing soil degradation
 - Soil and nutrition nexus
- Soil Health beyond Europe



ORGANIZING COMMITTEE

Beatriz Sarabia, *OpenGeoHub Foundation*

Gülten Inan, *OpenGeoHub Foundation*

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Dan Iles, *AI4SoilHealth Project*

Antonella Totaro, *RegenEarth*

Koen van Seijen, *RegenEarth*

DAY 1 - MONDAY, DECEMBER 7

AMPHITEATHER I LIVE REC		AMPHITEATHER II REC		AMPHITEATHER III REC	
Registrations					
Opening with AI4SoilHealth Project, i-BEC and Opendeohub Foundation					
Keynote: Ministry of Agriculture Greece TBC					
Keynote: "Building Scalable Solutions for Soil Health" by George Zalidis (i-BEC, Aristotle University Thessaloniki):					
Keynote by Panos Panagos (JRC)					
Coffee Break (Break Area, Basement floor)					
Keynote: "Why human health starts in the soil?" by Eirini Tsirimokou (Regenerative Healthcare European Association)					
Panel Discussion: TBC					
Lunch area or outdoor terrace (TBC)					
Oral Talk: "Deriving spatially explicit tolerable soil loss rates from a global synthesis of soil production rates" by Chris Feeney		Oral Talk: "From Field to Cloud: Operational AI Pipelines for Real-Time Soil-Health Measurements" by Jan Bauwens		Oral Talk: "Green Earth Program - Earth Observation-Supported Soil Rehabilitation in Drylands using Biological Soil Crusts" by Jessica Friedrichs	
Oral Talk: "Pan-European organic carbon trends in mineral agricultural soils - what do we know?" by Ali Sakhaee		Oral Talk: "Fusion of vis-NIR spectroscopy and ISE for online mapping of key soil fertility attributes" by Abdul Mounem Mouazen		Oral Talk: "Living Lab for Sustainable HOP Agroecosystem Health Monitoring Through Soil and Plant Microfungal Indicators" by Rasime Demirel	
Oral Talk: "ASSESSING THE CZECH REPUBLIC'S SOIL HEALTH FROM SPACE" by Asa Gholizadeh		Oral Talk: "LIFE MONITOR: AN EMERGING METHOD FOR SOIL MONITORING AND QUALIFICATION" by Peter den Hartog		Oral Talk: "Development of a Multifunctional Biopreparation for Sustainable Maize Cultivation" by Justyna Szulc	
Oral Talk: "High-Resolution Global Mapping of Peat Depth and Organic Soil Occurrence" by Mustafa Serkan Isik		Oral Talk: "Scaling Ecological Management Unit (EMU) Synthesis with a Domain-Specific AI Knowledge Engine" by Travis Nauman		Oral Talk: "Evaluation of survival, growth, and phytoremediation potential of Populus trees exposed to hydrocarbon-polluted soils" by Mir Md Abdus Salam	
Oral Talk: "Satellite-Based Assessment and Neural Network Prediction of Desertification Risk in Mediterranean Agricultural Landscapes" by Adrian Canovas-Rodriguez		Oral Talk: Deriving soil health indicators through multi-tiered assessment methods and AI modeling" by Thomas Gumbrecht		Oral Talk: "Food processing residues as circular soil improvers for soil health" by Vera Proskynitopoulou	
Oral Talk: "Soil Health Trends Index (SHTI): a pan-EU index quantifying soil health at 30 m resolution for 2000-2025 period" by Tom Hengl		Oral Talk: "Empowering Soil Decisions: New AI Assistant Trained on EcoDataCube Layers" by Octavian Chiriac		Oral Talk: "Monitoring Hidden Microfungal Biodiversity from Urban Forest to Agricultural Soils" by Rasime Demirel, Merve KESKINOGLU INCE	

	AMPHITEATHER I LIVE REC	AMPHITEATHER II REC	AMPHITEATHER III REC
15:30 - 16:00	Coffee Break (Break Area, Basement floor)		
16:00 - 16:15			
16:15 - 16:30	Panel discussion 2: Soil Health monitoring in South-eastern Europe and the Balkans (i-BEC)	Workshop TBC	Workshop 2 "From eDNA to Decisions: A Live Demonstration of the Soilytix MySoil Dashboard for Soil Biodiversity Monitoring and MRV" by Julien Winkel
16:30 - 16:45			
16:45 - 17:00			
17:00 - 17:15	Poster and networking session + Drinks and Bites (Basement Foyer)		
17:30 - 18:00			
18:00 - 18:30			
18:30 - 19:00			
19:00 - 19:30			
19:30 - 20:00			

AMPHITEATHER I LIVE REC		AMPHITEATHER II REC		AMPHITEATHER III REC	
Registrations					
Recap & run of the day					
Keynote: "Bridging Soil Data and Real farm Decisions?" by John Gilliland (Arc Zero)					
Keynote: "Pan-European Soil Health Indicators: Progress, Challenges, and Opportunities from the AI4SoilHealth Project" by David Robinson (UKCEH):					
Keynote by Pietro Baldrighi (Confagricultura ANGA)					
Coffee Break (Break Area, Basement floor)					
Keynote: "From Field to Lab: Integrating In-Situ and Laboratory Indicators for Soil Health Assessment" by Fatemeh Hateffard (Stockholm University):					
Panel discussion 3: TBC					
Lunch area or outdoor terrace (TBC)					
Oral Talk: "In Situ Soil Health Measurement to Support Regenerative Grazing Practices Across European Living Labs (GroundWork project)" by Justine Luca		Oral Talk: "Building African Union Soil Observatory" by Thaïsa van der Woude		Oral Talk: "A Digital Twin of Ecosystem for the climate-biodiversity nexus: the TerraTwin project. Soil biodiversity and compound flooding, the Belgian Use Case" by Radu Giurgiu, Theodoros Chalazas	
Oral Talk: "A comparison of model performances and uncertainty of soil remote sensing products calibration for large-scale carbon farming accounting" by Maria Fantappie, Carlos Lozano Fondón		Oral Talk: "SHERPA in Action: Soil Health Quantification on European scale across different land cover and use" by Christine Alewell		Oral Talk: "Soil Community Attributes as Indicators of Soil Health under Anthropogenic and Environmental Pressures" by Nikolaos Monokrousos	
Oral Talk: "Sample Size Requirements for Carbon Farming Projects with Baseline Control Sites" by Erik Scharwächter		Oral Talk: "Shaping NextSoils+ Soil Health Services with Stakeholders for the Sentinel Expansion Missions" by Konstantinos Karyotis		Oral Talk: "Organic carbon dominates soil porosity across environmental gradients, with OC-clay balance providing secondary structural insight" by Amy Thomas	
Oral Talk: "Agricultural liming: an overlooked climate-smart practice for soil health and carbon farming in Europe" by Louis Hody		Oral Talk: "Implications of total and active soil microbiome dynamics for long-term soil health monitoring" by Lur Epelde		Oral Talk: "Global Soil Footprint Index: linking SOC change to crop production" by Octavian Chiriac	
Oral Talk: "'Multi-Faceted Biodiversity Integration for a Healthy Soil and Resilient Crop Management - SOILRES" by Davide Cammarano		Oral Talk: "Advancing soil monitoring through citizen science-generated data" by Céline Laurent		Oral Talk: "A framework for soil health assessment and monitoring across scales" by Lucas Gomes	
Oral Talk: "'Toward a Digital Twin for Agriculture: Soil Health and Carbon Assessment with MODASYS" by Mohammad Ibrahim Khalil		Oral Talk: "SoilHive: An Open-Source Platform for Global Soil Data Harmonisation" by Ester Miglio		Oral Talk: "Cluster-Informed Soil Spectroscopy for Predicting Soil Health Indicators Across the European Pilot Sites of AI4SoilHealth" by Konstantinos Karyotis	

	AMPHITEATHER I LIVE REC	AMPHITEATHER II REC	AMPHITEATHER III REC
15:30 - 16:00	Coffee Break (Break Area, Basement floor)		
16:00 - 16:15	SOB4ES special session:		
16:15 - 16:30	1. Oral talk: "Linking Soil Biodiversity, Environmental Constraints and Ecosystem Services across European Landscapes using Earth Observation and Machine Learning" by Maria Marily Christou		
16:30 - 16:45	2. Oral talk: "Data-driven ecosystem management: assessing soil carbon responses to land use and restoration practices using spectroscopy and digital soil mapping" by Katen Vancampenhout, Sam Ottoy		
16:45 - 17:00	3. Oral talk (TBC) 4. Oral talk (TBC)		
17:00 - 17:15	Social Dinner		
17:30 - 18:00			
18:00 - 18:30			
18:30 - 19:00			
19:00 - 19:30			
19:30 - 20:00			

	AMPHITEATHER I LIVE REC	AMPHITEATHER II REC	AMPHITEATHER III REC
08:00 - 09:00	Registrations		
09:15 - 09:30	Recap & run of the day		
09:30 - 10:00	Keynote: "Understanding the Barriers to Regenerative Agriculture Adoption: A Behavioral Pathway Analysis for Greek Farmers" by <i>Sheila Damos (The Southern Lights)</i>		
10:00 - 10:30	Keynote: "On the Value of Soil Knowledge in the Era of Data-Driven Soil Modelling by <i>Sarem Norouzi (Aarhus University)</i>		
10:30 - 11:00	Keynote: "African Union Soil Observatory (AUSO): Innovative delivery of AI-ready datato power continental soil health policy implementation and soil intelligence systems" by <i>Christian Omuto (FARA)</i>		
11:00 - 11:30	Coffee Break (Break Area, Basement floor)		
11:30 - 12:00	Keynote: "Setting up the Danish Monitoring Infrastructure" by <i>Mogens Humlekrog Greve (Aarhus University/AI4SoilHealth)</i>		
12:00 - 13:00	Panel discussion 4: TBC		
13:00 - 14:00	Lunch area or outdoor terrace (TBC)		
14:00 - 14:15	Oral Talk: "Understanding soil health from hierarchical and thermodynamic perspectives" by Thomas Gumbrecht	Oral Talk: "Scores of Visual Evaluation of Soil Structure (VESS) as a Soil Health Indicator Across Contrasting Land Use Types and Soil Textures" by Niklas Schmücker	AI4SOILHEALTH PROJECT FINAL MEETING & SPECIAL SESSION
14:15 - 14:30	Oral Talk: "The Role of the Western Macedonia Living Lab in Soil Health: From Co-Creation to Harmonized Monitoring" by Savvas Karagiorgos	Oral Talk: "A comparison of DSM-based SOC stock estimators: Uncertainty reductions and practical insights" by Erik Scharwächter, Ahmad Awad	
14:30 - 14:45	Oral Talk: "From Funding Individual Projects to Building a Territorial Innovation Portfolio: Lessons from 25 Experimental Sites in the French Landes Living Lab" by Wafa Guida	Oral Talk: "Linking soil organic matter, bulk density and runoff thresholds under extreme rainfall: a modelling study using GB national soils data" by Maud van Soest	
14:45 - 15:00	Oral Talk: "Influence of Biochar, Limestone, and Their Combination on Cadmium and Zinc Immobilization in Metal-Contaminated Boreal Soils" by Irini Papageorgiou	Oral Talk: "Towards High-Resolution Soil Type Mapping across Europe Using Machine Learning and Earth Observation Data" by Mehmet Furkan Celik	
15:00 - 15:15	Oral Talk: "Living Labs as engines for soil health governance, monitoring, harmonization, and the road ahead" by Ioannis Varvaris	Oral Talk: "Evaluation of New Metrics for the selection of soil health indicators" by Vince Chukwu	
15:15 - 15:30	Oral Talk: "From Soil Monitoring to Soil Intelligence: Building Governance-Ready AI Systems for Tropical Agricultural Landscapes" by Suzie Haryanti Husain	Oral Talk: "Decadal soil organic carbon and nitrogen decline across contrasting arable management in a long-term experiment in Northern France" by Frida Keuper	

	AMPHITEATHER I LIVE REC	AMPHITEATHER II REC	AMPHITEATHER III REC
15:30 - 16:00	Coffee Break (Break Area, Basement floor)		
16:00 - 16:15	Workshop 5: Help shape the African Union Soil Observatory (AUSO): share your user perspective and expert feedback by Eng. Thaïsa van der Woude (ISRIC), Prof. Christian Omuto (FARA), Dr. David Robinson (UK-CEH), Dr. Ulan Turdukulov (ISRIC)	Oral Talk: "A Multi-View Hypergraph Convolutional Network for Joint SOC and Clay Prediction from Sentinel-2 Imagery" by Konstantinos Karyotis, Christos Chadoulos	AI4SOILHEALTH PROJECT FINAL MEETING & SPECIAL SESSION
16:15 - 16:30		Oral Talk: "SoilWise - Advancing a fair data and knowledge infrastructure for healthier soils in Europe" by Radu Giurgiu	
16:30 - 16:45		Oral Talk: "The fraction of carbon in soil organic matter as a national-scale soil process indicator" by Sabine Reinsch	
16:45 - 17:00		Oral Talk: "Patterns and thresholds for soil pH across Europe in relation to soil health and degradation" by Inma Lebron Robinson	
17:00 - 17:15	End of the program		

FIELD EXCURSION TO KTIMA GEROVASSILIOU VINEYARD – AI4SOILHEALTH PILOT SITE

The field excursion to **Domaine Gerovassiliou**, located in the wine-growing region of Epanomi, approximately **40-60 minutes from Thessaloniki**, offers participants the opportunity to experience how soil health monitoring and regenerative viticulture are applied in practice. Internationally recognised for its commitment to quality winemaking and environmental stewardship, the estate is also home to one of the **AI4SoilHealth pilot sites**, where innovative soil monitoring methods and sustainable vineyard management practices are being demonstrated.

During a guided tour of the vineyard, participants will explore how soil health indicators and digital technologies support decision-making, while learning about the regenerative practices implemented to enhance soil functions, biodiversity, and long-term resilience.

What to expect during the excursion:

AI4SoilHealth Pilot Site: Discover how soil health is monitored using innovative methods and how the resulting data support sustainable vineyard management.

Regenerative Viticulture: Learn about the practices implemented to improve soil health, biodiversity, and ecosystem resilience in a working commercial vineyard.

Guided Vineyard Tour: Explore the estate with local experts and gain insight into its history, viticultural practices, and the relationship between healthy soils and wine production.

Wine Tasting: Conclude the visit with a guided tasting of a selection of Domaine Gerovassiliou wines, showcasing the distinctive character of the region.

Transportation will be provided from Thessaloniki, with the excursion lasting approximately 4-5 hours, including travel, the vineyard visit, and the wine tasting before returning to the city in the afternoon.



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POSTER SESSIONS

Soil health monitoring in nature conservation across European protected areas, Jasmin Liedtke

Green Field Landscapes for Resilient Agriculture and Carbon Sequestration - a pilot scheme for an outcome-based incentive, Kaj Granholm

SOB4C: The relative importance of biotic and abiotic drivers of soil carbon stocks at the European scale, Astrid Sneyders

Assessing Soil Health Across Europe Using Collembola Diversity Indicators, Fiera Cristina

Can Biological Indicators Capture Soil Health Differences Across Farming Systems? Evidence from 135 Samples in the French Living Lab, Wafa Guiga

Use and Substitution Potential of Agricultural Plastics in Apple Orchards, Mirjam Hofer

LandPrint: Mapping the Human Imprint on Soil Health Drivers, Costs, and Solutions Across Europe, Georgios Chatzichristos, Emanuel Lekakis, Sofia Magopoulou, Eleni Kalopesa

Selecting Phytoremediation Strategies for Acidic Boreal Forest Soils: A Comparison of Chelator-Assisted Phytoextraction and Biochar-Assisted Phytostabilization Across Contamination Levels, Darshani Kumaragamage Srimathie Indraratne

Assessing soil biological quality in Mediterranean horticultural systems using the QBS-ar: Evidence from the SoilLife1st project, Maria Godinho

Application of Portable NIR Spectroscopy and Machine Learning for Soil Health Assessment in Swedish Grassland, Hsiang-Ju Fan

SOC enrichment and GHG mitigation in Greek Mediterranean vineyard, Paraskevi Chantzi, Daphne Kitsou

Deep Learning-Based Crop Type Classification Using Multitemporal Sentinel-2 Data, Giorgos Varras

Soil fauna responses to agricultural management across Europe: a meta-analysis of biological metrics and decomposer taxa, Nga Thi Thanh Mai

Building the MRV4SOC Knowledge Hub: An Interoperable Digital Platform for Soil Monitoring, Data Integration, and Open Science, Dimitra Palantza

UAV-Based Hyperspectral SOC Mapping Using a Tunable Fabry-Pérot Imager and Machine Learning, Wannes De Man, Haris Ampas, Tuna Coppens, Nick Berkvens

SoilWise project: the journey of a FAIR metadata record from publication to reusability, Radu Giurgiu, Wannes De Man

Cultivating Soil Literacy: Bridging the Science-Society Gap through Arts and Participatory Engagement, Mackenzie Baert

Towards a Soil Resilience and Food Security Index for Climate-Resilient Agricultural Landscapes, Konstantinos Karyotis, Maria Marily Christou

Setting up Agro Living Labs: Focus on the Financial Support to Third Parties (FSTP) process to support on-the-ground research, Clémentine Eynard

More to be announced.

PARTNERSHIPS WITH HORIZON EUROPE AND OTHER SOIL HEALTH PROJECTS

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