



EJP Soil Annual Science Days 2021: call for active participations

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FIRST TIMESLOT SESSIONS

1. Carbon sequestration potential of European agricultural soils (CarboSeq project)

Convener

- Axel Don (Thünen)

Programme outline

Opening with keynote speaker	25'
4 presentations selected of abstracts <i>(15' each with 12' presentation and 3' questions)</i>	60'
Conclusion and wrapping up	5'

Description

Starting with the 4p1000 initiative in 2015, farmers, politicians, industry and scientists got increasingly excited about the possibility to actively remove CO₂ from the atmosphere by increasing soil carbon stocks – a negative emission technology. Theoretically all anthropogenic greenhouse gas emissions could be offset by soil carbon sequestration. But what is the feasible, practical implementable C sequestration potential? Which are agricultural measures that can contribute to C accumulation in cropland and grassland soils and how much at regional to continental scale? What are the constraints for the implementation of these measures? In this session we provide examples of different agricultural options and their potential impact on soil carbon, other greenhouse gases and finally on climate mitigation. Studies covering regional to continental scale are welcome. The session results will guide the work in the CM2 project CarboSeq that started a few days ago.

Instructions for participants

Please submit an abstract (max. 500 words) for an oral presentation on your research on the topic outlined above. We will give preference to completed studies and studies that encompass more than one agricultural management option for C-Sequestration.

2. Wet management of cultivated peatlands a sustainable land use option for peat soils (INSURE project)

Conveners

- Tuula Larmola (Luke)
- Kristiina Regina (Luke)

Programme outline

Introduction of topic and speakers by chair	5'
6 presentations of ongoing and recent research <i>(13' each, including time for questions)</i>	80'
General Discussion	5'

Description

Wet management with raised ground water table and flood-tolerant crops is an option to reduce peat decomposition and the related greenhouse gas emissions and water contamination from cultivated peatlands while still providing income for the farmers. This session seeks to improve our understanding of wet management of cultivated peatlands as well as its integration into greenhouse gas inventories, and its impacts for biodiversity and water quality. We welcome contributions covering a wide range of experimental and modelling studies, addressing biogeochemical, biological and policy aspects of paludiculture and other wet management of peatlands from local to regional to global scales.

Instructions for participants

Submit an abstract for oral presentations on earlier research on wet management of cultivated peatlands (max. 300 words)

3. Towards a sustainable agriculture: strategies for minimizing GHG emissions and enhancing soil C sequestration (SOMMIT project)

Conveners

- Eugenio Diaz-Pines (BIOS (BOKU))
- Alessandra Lagomarsino (CREA)

Programme outline

Welcome words, introduction and setting of objectives (Diaz-Pines)	5'
Overview on the SOMMIT project (Lagomarsino)	15'
4 short talks on similar past/on-going projects (4 x 10')	45'
Discussion table with presenters (moderated by Diaz-Pines)	20'
Conclusion and wrapping up	5'

Description

The main aim of this session is to exchange experiences from projects (either past or on-going) dealing with sustainable soil management at the European scale. We are specially (but not exclusively) interested in projects investigating soil greenhouse gas emissions and C sequestration in agroecosystems. Speakers are expected to provide an overview on their respective experiences, focusing not only on success stories but also on pitfalls they fell in: What management strategies worked specially well in their project? How was the European heterogeneity addressed? How did you engage and consider stakeholders? What would be done differently if you had the chance to start over? These are the questions we want to answer in the short talks and the discussion table, so that lessons can be learned for an efficient development of the SOMMIT project. This workshop is relevant not only for researchers but also for a broad public interested in the adequate implementation of soil management practices with low environmental costs.

Instructions for participants

- We highly welcome abstracts (about 300 words) on agricultural projects which will be presented in short talks. We are looking forward to hear about projects that have worked in the investigation and implementation of sustainable soil management practices in the European context. Presenters will be kindly asked to take part in the discussion table after the short-talks
- We also welcome active contributors that are not presenting projects to join the discussion table. Each participant is invited to provide topics of interest (max. 3 for each participant) that will be debated in the discussion table. This is especially encouraged for non-research stakeholders.

4. Sensor technologies for downscaling soil maps (SensRes project)

Conveners

- Anders Bjørn Møller (AU)
- Mogens H. Greve (AU)

Programme outline

Opening with keynote presentation	15'
4 presentations of previous results (15' each)	60'
Questions and discussion	10'
Conclusion and wrapping up	5'

Description

Proximal and remote sensors have gained widespread use for soil mapping. Today, a large number of sensors exists, which can quickly and cheaply map soils with unprecedented detail. In the SensRes project, we aim to leverage these sensors as a means to downscale existing soil maps to higher resolutions, thus combining two important sources of information. We therefore call for researchers to present their previous experiences with soil sensors. We hope the session will give an image of the breadth and versatility of the available soil sensors and foster a fruitful discussion on how we can use them for downscaling purposes.

Instructions for participants

Please submit the title of your presentation, the names of the presenter and the coauthors as well as a short abstract (maximum 100 words) explaining the subject and main points of your presentation.

SECOND TIMESLOT SESSIONS

1. [Trade-offs between soil carbon sequestration, greenhouse gas emissions and nutrient losses in agricultural soils across Europe: mechanisms and management options \(TRACE-Soil project\)](#)

[Convener](#)

- Cristina Aponte (INIA)

[Programme outline](#)

Keynote speaker #1 <i>(15' + 5' questions, Sara Hallin- SLU, focus on soil biota)</i>	20'
2 short presentations <i>(10' each, including time for questions)</i>	20'
Keynote speaker #2 <i>(15' + 5' questions, Lars Munkholm- AU, focus on soil physical properties)</i>	20'
2 short presentations <i>(10' each, including time for questions)</i>	20'
Conclusion and wrapping up	5'

[Description](#)

Soil carbon sequestration in agroecosystems can promote soil quality and biodiversity, but come at a cost of increased nutrient losses and greenhouse gas emissions. Understanding the mechanisms underpinning these trade-offs is essential to better predict the outcome of management options aimed at increasing soil carbon storage.

In this session we will gain knowledge of the biological, physical and chemical mechanisms that underlie these trade-offs and synergies for different management options. The session will count with two exceptional keynote speakers: Sara Hallin (SLU) and Lars J. Munkholm (AU) who will discuss the influence of soil microbial and physical properties on these trade-offs.

[Instructions for participants](#)

Participants are invited to apply for 10' oral contributions to present earlier research on the topic. Please submit an abstract of max. 500 words.

2. Earth remote observation of soil carbon: recent premises (STEROPES project)

Conveners

- Emmanuelle Vaudour (INRAE)
- Johanna Wetterlind (SLU)

Programme outline

Opening with conveners	5'
5 presentations of abstracts from past projects <i>(12' each)</i>	60'
Questions and discussion	20'
Conclusion and wrapping up	5'

Description

This break-out session of 90 minutes is dedicated to the recent research conducted on the topic of Earth observation of soil carbon. It is focused on exchanging knowledge that already exists within the consortium about this topic. It intends to improve the networking and serve as a starter for the upcoming workpackages to carry out throughout the STEROPES project. Candidate talks will preferably give an overview of the varied approaches developed in their country, using satellite images in combination or not with other data.

Instructions for participants

The participants wanting to apply for active contributions are invited to submit an abstract for oral presentation on earlier research (max. 500 words) before deadline.

3. Managing Sediment Connectivity in Agricultural Landscapes for reducing water Erosion impacts (SCALE project)

Conveners

- Elmar Schmaltz (BAW)
- Lisbeth Johannsen (BAW)
- Peter Strauss (BAW)

Programme outline

Opening with keynote presentation + discussion	20' + 5'
Three presentations of previous results <i>(15' + 5' discussion each)</i>	60'
Conclusion and wrapping up	5'

Description

This session will cover important aspects of the SCALE project, which aims to answer how the understanding of future flow connectivity and monitoring techniques can be improved to better implement effective mitigation measures for soil erosion and sediment transport and how to bridge the gap between spatial and administrative scales.

Come join our session to hear more about how harmonisation of data sets and up- and downscaling methods, and how the implementation of connectivity elements may improve soil erosion modelling at regional and national level. We also want to investigate how well this may help developing best management practices to be incorporated into policy and practice.

Instructions for participants

We welcome active contributors that are not presenting projects to join the discussion and provide valuable inputs on the presented topics and the keynote. If interested contributors would like to address certain topics beforehand, as a basis for discussion, please send an e-mail to Elmar Schmaltz (elmar.schmaltz@baw.at) or Lisbeth Johannsen (lisbeth.johannsen@baw.at).

4. Stocktaking for agricultural soil quality and ecosystem services indicators and their reference values (SIREN project)

Convener

- Jack Faber (WR)

Programme outline

Introduction	5'
Presentation draft conceptual framework connecting soil quality and ecosystem services (Isabelle Cousin, INRAE)	15'
Discussion	25'
Presentation draft questionnaire for the stocktaking across EJP Soil member states (Marjoleine Hanegraaf, WR)	15'
Discussion	25'
Conclusion and wrapping up	5'

Description

The aim of this session is to present the SIREN project which is about to take inventory of the use of indicators for agricultural soil quality and ecosystem services as used in the EJP SOIL Member States. The SIREN project will obtain overview and synthesis of current scientific developments of indicators used in assessment of soil quality and ecosystem services in agricultural landscapes in the literature and as implemented by Member States. The project will record actual reference values of specific indicators for soil quality and ecosystem services implemented by MS, and will identify remaining knowledge gaps and research needs. In preparation for the stocktaking activity, the Lead Partners in the consortium have drafted a conceptual framework linking soil quality and ecosystem service, which will serve to guide the inventory amongst all consortium partners. The inventory itself will be done by means of a questionnaire, which will also be presented during the session. There will be ample opportunity for participants for clarification and discussion of both drafts, helping Lead Partners to make adjustments where necessary before circulating a final version the questionnaire as soon as possible thereafter.

This workshop is relevant not only for SIREN consortium partners, but also for a wider public interested in (standardisation and harmonisation of) the assessment of soil quality under sustainable land management.

Instructions for participants

- We highly welcome constructive discussion to improve the conceptual framing and actual stocktaking, helping to increase the potential impact of SIREN in EJP SOIL.
- We invite all consortium partners to participate.

5. Publication bias in soil science and agronomy: impact on our vision on soil as climate adaptation tool? (CLIMASOMA project)

Conveners

- Sarah Garré (ILVO)
- Gilberto Bragato (CREA)
- Claudia Di Bene (CREA)

Programme outline

Opening with keynote speaker	20'
Questions	5'
Introduction of the CLIMASOMA project and link to publication bias (Sarah Garré, ILVO)	5'
Presentation by Gilberto Bragato (CREA) on results of survey on presentation bias in our research field	20'
General questions	5'
Turning discussion groups on key outcomes of the survey and own experiences, groups of max 4-5 persons <i>2x15 min (supported by MURAL containing key outcomes with room to add thoughts by the groups) (2 moderators, 2 note-takers)</i>	30'
Conclusion and wrapping up	10'

Description

Have you ever not published a scientific results because it didn't fit to what you would expect? Or did that one paper describing negative results never pass the review process although it was a scientifically sound story? Publication bias is a widespread problem that may seriously distort attempts to estimate the effect under investigation in meta-analyses and reviews. In this session, come discover together with us what publication bias is, how your colleagues experience it in their daily practice and how it could be affecting our scientific views.

Instructions for participants

Please fill out [the EJP soil survey on publication bias](#) at least one week before the Science days, so that we can use those results from the EJP soil community to fine-tune our investigation on the effects of publication bias in soil science and related disciplines within the CLIMASOMA project. Apart from that, we just need your attention and your active participation in the break-out sessions discussing the survey results.