Second conference on Earth Observation for Monitoring, Reporting and Verification of Carbon Removals

Copenhagen, 7-10 October 2025

7 OCTOBER 2025 13:30-17:30 (19:30)

Session 1: Opening, Scientific overview, EU policy landscape, earth observation in support of LULUCF MRV activities

Chaired by: Lucia Perugini and Neha Hunka

12:30-13:30	**Registration**
13:30-15:05	**Opening remarks by the European Environment Agency and European Space Agency** *Leena Ylä-Mononen (European Environment Agency Executive Director)* *Inge Jonckheere (Head of Green Solutions Division at European Space Agency)* **Scientific advice for an EU policy framework on carbon removals** *Elsa Malika Malki (Secretariat to the European Scientific Advisory Board on Climate Change)* **Developments in LULUCF and related policies** *Ivan Martinez (DG CLIMA)* **Only what you measure gets done: LULUCF in the EU GHG inventories** *Lucia Perugini, Peter Iversen, Linde Zuidema (European Environment Agency)*
15:05-15:35	Coffee break
15:35-17:30	**Supporting EU Climate Goals through improved forest monitoring and modelling: a suggested research roadmap** *Mirco Migliavacca (DG JRC)* **Monitoring of Agricultural land in practice, concepts, solution, and relevance for LULUCF** *Philippe Loudjani (DG JRC)* **Aspects of interoperability in LULUCF** *Rafal Zielinski (European Environment Agency)* **Geospatial and EO data usage for LULUCF monitoring and ongoing developments covering EU27** *Tobias Langanke (European Environment Agency)* **Discussion**
17:30-19:30	**Networking event and poster session**

8 OCTOBER 2025 09:00-15:00

Session 2: EO and LULUCF MRV: spatially explicit monitoring - Status, examples, good practice and discussion on challenges and how to overcome them

Chaired by: Rafal Zielinski and Ivan Martinez

09:00-10:15	**Remote Sensing Solutions for Estonian Forest Monitoring: Forest Mask Development and Clear-Cut Detection for LULUCF MRV** *Madis Raudsaar (Estonian Environment Agency)* **An evaluation of options to improve GHG emission estimates from forest fires in Sweden** *Mattias Lundblad (Swedish University of Agricultural Sciences/Swedish Environmental Protection Agency)* **Q&A and discussion**
10:15-10:45	Coffee break
10:45-12:00	**Completing the picture: Satellite-based mapping of agricultural land-use to gap-fill the Austria IACS geodatabase** *Sebastian Boeck (Environment Agency, Austria)* **Land monitoring in the LULUCF reporting - Poland** *Agata Hościło and Marcin Żaczek (Institute of Environmental Protection, Poland)* **Spatial explicit land-use monitoring for LULUCF in Flanders** *Guillaume Vandekerckhove (Department of Environment and Spatial Development of Flanders, Belgium)* **Q&A and discussion**
12:00-13:30	Lunch break

13:30-15:00	**Spatially explicit land use data for Italy: evaluation and comparison of sample based and wall-to wall methods using Collect Earth software and CLMS-derived data** *Angela Fiore (ISPRA, Italy)* **EO-based MRV for Non-Forest Land Categories in Romania - Progress, Limitations, and Improvement Perspectives** *Marius Constantinescu and Antoaneta Roman (ICSI, Romania)* **Updates and lessons learned from the French spatially explicit approach for LULUCF inventories** *Melanie Juillard (CITEPA, France)* **Summary discussion**
15:00-15:30	Coffee break

8 OCTOBER 2025 15:30-17:00

Session 3: EO derived products in support of MRV activities, with current and potential application in the LULUCF inventory and CRCF

Chaired by: Antony Delavois and Tobias Langanke

15:30-17:00	**On ESA missions and projects relevant to carbon monitoring** *Inge Jonckheere (European Space Agency)* **Copernicus land service to support carbon removal related policies** *Usue Donezar (European Environment Agency)* **Earth observations for aboveground carbon estimation** *Martin Herold (GFZ)* **EO-based monitoring of cropland management and soil carbon dynamics** *Yue Zhou (Earth and Life Institute, Université catholique de Louvain)* **Pan-European forest structure maps and estimates integrating Sentinel-2 and National Forest Inventory data** *Jukka Miettinen (VTT Technical Research Centre of Finland)* **Closing remarks**

9 OCTOBER 2025 09:00-12:00

Session 4: Third Carbon Markets Forum

Chaired by: Christian Retscher and Antony Delavois

08:00-09:00	**Registration**
09:00-10:00	**Opening of the Third Carbon Markets Forum** **Policy update on the EU Carbon Removal and Carbon Farming Regulation (CRCF)** *Lucia Causey-Hugecova (DG CLIMA)* **Identifying hotspots of greenhouse gas emissions from drained peatlands in the European Union** *Alexandra Barthelmes (GMC)* **Remote sensing based forest biomass assessment for the European bioenergy sector** *Janik Deutscher (JOANNEUM RESEARCH Forschungsgesellschaft mbH)* **An Earth-Observation framework for soil Carbon Sequestration Monitoring - A case study for the Netherlands** *Wouter Meijninger (Wageningen University)*
10:00-10:30	Coffee break
10:30-12:00	**Co-benefits of CRCF** *Gerry Lawson (European Agroforestry Federation)* **Earth Observation for MRV of Carbon Farming - Uncertainty and Benchmarking** *Antonella Succurro (CinSOIL GmbH)* **In-Situ data needs and challenges in the context of CRCF** *Jose Miguel Rubio Iglesias (European Environment Agency)* **Intergenerational Open Geospatial Carbon Registry - OGCR project** *Ichsani Wheeler (OpenGeoHub)*

Developing a parcel-level based monitoring and reporting system for Carbon Farming in Europe - CAFAMORE project
Jan Peter Lesschen (Wageningen University)

Introduction to the breakout groups
Antony Delavois, Lucia Perugini and Neha Hunka

12:00-13:30 Lunch

9 OCTOBER 2025 13:30-17:00 (19:00)

Session 5: CRCF Methodologies - Breakout groups

Parallel sessions covering each of the 3 Carbon Farming CRCF methodologies: agriculture and agroforestry on mineral soils, planting of trees and rewetting of peatlands.
Each group will go through an introduction of the draft CRCF methodologies, including latest elements related to the role of remote sensing, overview of existing solutions and open discussions.
Outline of breakout sessions:

- Introduction of the topic and elements of CRCF methodology
- Presentation of relevant research/projects
- Questions and open discussions
- Summary of the breakout group

13:30-15:00 **BOG 1 - Agriculture and agroforestry on mineral soils**
Co-Leads: Eric Ceschia (CESBIO) and Emanuele Lugato (DG JRC)
BOG 2 - Planting of trees
Co-Leads: Eric Arets (Wageningen University) and Joanne Nightingale (NPL)
BOG 3 - Rewetting of Peatlands
Co-Leads: Parvez Rana (LUKE) and) Lucia Causey-Hugecova (DG CLIMA)

15:00-15:30 Coffee break

15:30-17:00 **BOG 1 - Agriculture and agroforestry on mineral soils**
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BOG 3 - Rewetting of Peatlands
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17:00-19:00 **Networking event and poster session**

10 OCTOBER 2025 09:00-12:45

Session 6: Third Carbon Markets Forum

Chaired by: Usue Donezar and Neha Hunka

09:00-11:00 **Feedback from breakout discussions**

The impact of Uncertainty - Agroforestry Carbon Projects
Mila Luleva (Rabobank)
Forest owners' views on CRCF - Opportunities and Threats of EO
Alina Lehikoinen (Confederation of European Forest Owners)
A Tool for Monitoring, Reporting and Verification of Carbon Farming as well as large-scale analyses on carbon sequestration - EO4CarbonFarming
Silke Migdall (VISTA)

11:00-11:30 Coffee break

11:30-12:30 **Panel discussion**

The session will explore the role of EO in enabling robust MRV of carbon removals in voluntary markets, taking a big picture, value chain approach.
By connecting perspectives from the CRCF, voluntary carbon markets, and the broader carbon removal value chain, the discussion will seek to highlight how EO can enhance credibility, transparency, and scalability, while addressing key challenges and barriers.

12:30-12:45 **Closing remarks**

European Environment Agency

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POSTER EXHIBITION

Abbessi E. et al. *MEO-Carbon: A multi-scale EO-based tool for monitoring and assessing carbon sequestration from land use change and agricultural practices*

Anderson C., Joseph M. *Spatially explicit uncertainty propagation for global forest carbon maps*

Broeg T. et al. *Spatiotemporal Monitoring of Cropland Soil Organic Carbon Changes From Space*

Colovic M. *Satellite-Based Estimation of Crop-Specific Irrigation Requirements in Mediterranean Agriculture: A GAN-Augmented Framework for Water Management*

Deutscher J. et al. *Remote sensing based forest biomass assessment for the European bioenergy sector*

de Wasseige C. et al. *Monitoring tree growth and assessment of biomass in planted forest plots in Madagascar*

Dowd L., Tobin B. *Handheld LiDAR: Delivering a Transparent, Efficient, and Accurate Workflow for Forest Carbon Assessment*

Filchev L. et al. *Data harmonisation strategies for the estimation of GHG emissions from anthropogenic sources for improving the national annual reporting of Denmark, Bulgaria, and Turkey*

Filchev L., Radeva K. *From Landscape Metrics to Carbon Intelligence*

Franciamore F. *Tree Biomass Estimation in Agroforestry for Carbon Farming: A Comparative Analysis of Timing, Costs, and Methods*

Franke J. *VerifAId Transparency – A digital Monitoring, Reporting & Verification Platform*

Goga T. *Refining Greenhouse Gas Monitoring in the LULUCF Sector in Czechia and Slovakia Using Earth Observation*

Langner A. et al. *Deriving Near-real Time Activity Data Using the Tree Cover Disturbance Monitoring Tool (TCDM-radar)*

Langner A. et al. *Large-scale Monitoring of Forest Disturbances – a Future CLMS Prototype*

Meijninger W. et al. *An Earth-Observation framework for soil Carbon Sequestration Monitoring (EO4CSM) - A case study for the Netherlands*

Miettinen J. et al. *Forest Carbon Monitoring Toolset*

Miettinen J. et al. *Pan-European forest structure maps and estimates integrating Sentinel-2 and National Forest Inventory data*

Migdall S. et al. *EO4CarbonFarming – A Tool for Monitoring, Reporting and Verification of Carbon Farming as well as large-scale analyses on carbon sequestration*

Morin N. *GHG-KIT project - Prototyping an EO-enabled kit supporting greenhouse gas reporting*

Nickerson R. et al. *Monitoring saltmarsh restoration from space for UK greenhouse gas inventory reporting*

Nightingale J. et al. *ESA Satellites to Monitor European Forest Carbon Credit Inventory*

Ortiz C., Lundblad M. *Improving emission estimates from land use changes with images*

Palantza D. et al. *EO for Tier-3 MRV Carbon Removal assessment in complex Mediterranean Agroforestry systems*

Pepe M. *Mapping crop residues cover presence, persistence and quantity with EO: solution with current Copernicus data and perspective of new missions for MRV*

Radeva K. et al. *Improving Monitoring, Reporting and Verification Process in GHG Emissions From LULUCF using Remote Sensing Data: A Cross-Country Tool*

Regan S. et al. *Deep Learning Approach to Ecological Mapping of Temperate Raised Peatlands from Multispectral Earth Observation Data: Implications for Policy and Management*

Righi A. et al. *Mapping soil organic carbon using UAV hyperspectral imagery and laboratory reflectance spectroscopy in Po valley region, Italy*

Rimgaila M. *GFARM for LIFE*

Ronn-Andersen K. et al. *Leveraging LPIS data from Member States to estimate agroforestry areas in the EU*

Rossi S. et al. *New JRC LULUCF Data and Tools*

Ruysschaert G., Xu H. *A framework for cost-effective context-specific MRV systems for carbon farming: insights from the MARVIC project*

Succurro A. et al. *Monitoring Regenerative Transition in Cooperative and Smallholder Farms (MoReTraCeS)*

Vannoppen A. et al. *Pan-European High Resolution Layer Croplands for Carbon Monitoring, Reporting, and Verification within the Common Agriculture Plan*

Vira J. et al. *Fusion of remote sensing and in-situ data with soil carbon modeling for accurate parcel-scale carbon balance monitoring*

Vukasinovic D. et al. *Integrating Satellite-Derived Nitrogen Diagnostics into National LULUCF Inventories for Sustainable Horticulture*

Winiwarter W. et al. *The EYE-CLIMA project: Operationalizing CO_2 atmospheric inversions using satellite and in situ observations to validate LULUCF inventories*

PRACTICAL INFORMATION

Venue: CPH Conference DGI Byen, Tietgensgade 65, 1704 København V (Google Maps)

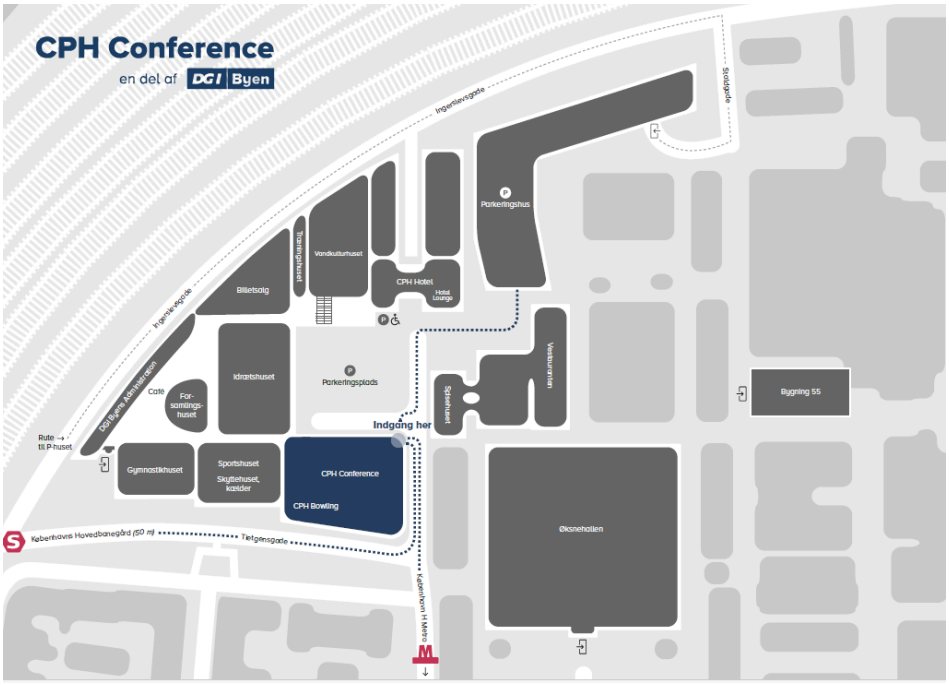
How to get to the venue from Copenhagen Airport

We recommend taking a train directly from the airport to Copenhagen Central Station. The trip takes around 20 minutes, and the venue is only a few minutes' walk from the station.

Alternatively, you can take the metro:

- From the airport, take line M2
- Change at Kongens Nytorv to line M3
- Get off at København H/Central Station, just a short walk from the venue.

For more information about getting around in Copenhagen, you can use the city's public transport journey planner.



Online streaming of selected sessions

All sessions, except for Session 5, will be streamed online. Please note that this is a streaming-only option, with no active participation.

If you would like to follow the conference online, please use the link below:

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