

EO for Monitoring, Reporting, and Verification of Carbon Removals

Copenhagen, 8-11 October 2024

AGENDA

Conference venue: CPH Conference DGI Byen Tietgensgade 65, 1704 København V, Denmark

TUESDAY, 8 OCTOBER 2024

DAY 1: EO APPLICATIONS FOR LULUCF MONITORING, REPORTING AND VERIFICATION

- 08:30-09:30 **Welcome coffee and registration**
- 09:30-12:30 **Session 1 - Opening, Scientific overview, EU policy landscape, EEA activities in support of LULUCF MRV activities**
- Chairs: John Van Aardenne (EEA) and Giulio Volpi (European Commission)*
1. Opening remarks - *John Van Aardenne (EEA)*
 2. 2040 target and role of Carbon dioxide removals - *François Dejean (Secretariat to the European Scientific Advisory Board on Climate Change)*
 3. EU policy landscape: LULUCF updates and forthcoming instruments (Soil and Forest monitoring regulations) - *Giulio Volpi (European Commission)*
 4. EEA LULUCF group: role and supporting activities - *John Van Aardenne (EEA)*
- 12:30-13:30 **Lunch**
- 13:30-17:00 **Session 2 - EO and LULUCF MRV: spatially explicit monitoring – Status, examples, good practice and discussion on challenges and how to overcome them, focusing on follow up activities**
- Chairs: Lucia Perugini (EEA) and Bradley Matthews (UBA AT)*
1. Overview of the EU NIR inventory - *Peter Iversen and Raúl Abad Viñas (EEA)*
 2. Interoperability requirement and use of IACS - *Rafal Zielinski (EEA)*

Land representation in LULUCF reporting:

3. Austria - *Bradley Matthews (UBA AT)*
4. Portugal - *Paulo Canaveira (APA PT)*
5. Denmark - *Steen Gyldenkærne (Aarhus University)*
6. Netherlands – *Sven Van Baren (Wageningen University)*
7. Panel discussion

WEDNESDAY, 9 OCTOBER 2024

DAY 2 MORNING: EO APPLICATIONS FOR LULUCF MONITORING, REPORTING AND VERIFICATION

- 08:00-09:00 **Welcome coffee and registration for participants arriving on the morning of Day 2**
- 09:00-12:30 **Session 3 - EO derived products in support of MRV activities, with current and potential application in the inventory**
- Chairs: Frank Martin Seifert (ESA) and Tobias Langanke (EEA)*
1. Copernicus Land Monitoring Service high resolution layers - *Usue Donezar (EEA)*
 2. Copernicus CLC+: the LULUCF instance - *Tobias Langanke (EEA)*
 3. Estimation of Biomass from space - *Frank Martin Seifert (ESA)*
 4. Data fusion for Forest carbon and biodiversity - *Martin Herold (GFZ Potsdam)*
 5. Estimation of Soil Organic Carbon from space - *Julia Yagüe (GMV)*
 6. Peatlands – a carbon rich environment - *G. Lopez-Saldana (Assimila)*
 7. Panel discussion

DAY 2 AFTERNOON: SECOND FORUM ON EO FOR CARBON MARKETS

- 12:30-13:30 **Registration for participants arriving on the afternoon of Day 2**
- Lunch**
- 13:30-17:00 **Session 4 - Opening and linkages between the EU Carbon Removals and Carbon Farming Certification (CRCF) Regulation and the LULUCF regulation**
- Chairs: Antony Delavois (ESA) and Lucia Perugini (EEA)*

1. EO Missions and solutions relevant to carbon monitoring – *Giuseppe Ottavianelli (ESA)*
2. EO in support of result-based policies for sustainable management in the EU - *Valeria Forlin (European Commission)*
3. Panel discussion on the expectations on CRCF from different stakeholders:
Basanta Gautam (South Pole), Michelle Hermes (EARSC), Paulo Canaveira (APA), Mila Luleva (ACORN – Rabobank), Valeria Forlin (DG CLIMA)
4. Introduction to the breakout groups

17:30-18:30

Icebreaker

THURSDAY, 10 OCTOBER 2024

DAY 3: SECOND FORUM ON EO FOR CARBON MARKETS

08:00-09:00

Welcome coffee and registration for participants arriving on Day 3

09:00-12:30

Session 5: Breakout groups* (parallel sessions - duration: 3 hours)

BOG1 - Enhancing Earth Observation Monitoring Capabilities

Chairs: Nathalie Morin (Geoville) and Michelle Hermes (EARSC)

BOG2 - Monitoring sustainability of CRCF

Chairs: Basanta Gautam (South Pole) and Frank Martin Seifert (ESA)

12:30-13:30

Lunch

13:30-17:00

Session 6: Breakout groups* (parallel sessions - duration: 3 hours)

BOG 3 - Data needs in Support of baseline definition

Chairs: Mirco Migliavacca (JRC) and Lucia Perugini (EEA)

BOG 4 - Addressing Uncertainties and Benchmarking in EO-based MRV for Carbon Removals

Chairs: Antonella Succurro (CINSOIL) and Michelle Hermes (EARSC)

BOG 5 - Blue Carbon

Chairs: Antony Delavois (ESA) and Marie-Aude Sevin (BlueSeeds)

* See Breakout Groups Description below

DAY 4 - SECOND FORUM ON EO FOR CARBON MARKETS

08:30-09:00 **Welcome coffee**

09:00-12:00 **Session 7: Wrap-up**

Chairs: Lucia Perugini (EEA), Frank Martin Seifert (ESA), Antony Delavois (ESA)

1. Reporting back from the breakout groups
2. Conclusions and closing remarks

For those interested:

18:00-23:00 **Europe's environment seen from space: EEA event for the Culture Nights of Copenhagen - EEA, Kongens Nytorv 6, 1050 Copenhagen. For more information: [Europas miljø set fra rummet | kulturnatten](#)**

BREAKOUT GROUPS DESCRIPTION

BOG1 - Enhancing Earth Observation Monitoring Capabilities

Chairs: Nathalie Morin (Geoville) and Michelle Hermes (EARSC)

This session will delve into advanced monitoring techniques and various data sources to track and verify carbon activities. We will explore different methodologies and tools that can contribute to enhanced accuracy and efficiency of monitoring. The session will include presentations and Q&A sessions with stakeholders, followed by an interactive discussion format to gather best practices and address remaining challenges from breakout group participants.

Speakers:

- *François Schmitt (DG CLIMA)*
- *Nathalie Morin (GeoVille)*
- *Eric Ceschia (Irstea)*
- *Federica D'Acunto (Up to Earth GmbH)*
- *Johannes Hansen (Sylvera)*

BOG2 - Sustainability of CRCF

Chairs: Basanta Gautam (South Pole) and Frank Martin Seifert (ESA)

Carbon removals will play a growing role and become the focus of action after climate neutrality is achieved. Solutions from resilient natural ecosystems and industrial carbon capture and storage (CCS) need to be both efficient and sustainable. This session will focus on how EO can support monitoring to ensure high-quality carbon removals from ecosystems and technological solutions, as well as the sustainability and permanence of the sequestered carbon.

Speakers:

- *David Gazdag (Verra)*
- *Basanta Gautam (South Pole)*
- *Frank Martin Seifert (ESA)*

BOG3 - Data needs in Support of baseline definition

Chairs: Mirco Migliavacca (JRC) and Lucia Perugini (EEA)

It is essential that the baselines are robust and the CRCF regulation envisages a strong use of remote sensing technologies in this process. Earth observation can help by providing high-resolution maps of biomass stocks, stock changes, land management and activities. In this breakout session we will discuss the data needed to establish baselines for carbon farming. We will engage with the participants on available data, the recent key advances in the field and discuss data gaps, challenges and how to overcome them.

Speakers:

- *Eric Ceschia (INRAE)*
- *Marta Gómez-Giménez (GMV)*
- *Jukka Miettinen (VTT)*
- *Ruben Valbuena (Swedish University of Agricultural Sciences)*

BOG4 - Addressing Uncertainties and Benchmarking in EO-based MRV for Carbon Removals

Chairs: Antonella Succuro (CINSOIL) and Michelle Hermes (EARSC)

This breakout session will explore the critical role of benchmarking and uncertainty assessment in Earth Observation-based Monitoring, Reporting, and Verification (MRV) for carbon removals. Through presentations and interactive “speed-dating” brainstorming sessions, participants will discuss key challenges and solutions, with the aim of defining critical requirements for a potential data challenge framework for EO MRV services in Carbon Farming and Carbon Removals. A multi-actor and multi-disciplinary approach will be encouraged.

Speakers:

- *Antonella Succuro (CinSOIL GmbH)*
- *Ann Mari Fjæraa (NILU)*
- *Christopher Anderson/ Flávia De Souza Mendes (Planet)*
- *Clement Atzberger (Mantle Labs)*
- *Aleksi Lehtonen (LUKE)*

BOG5 - Blue Carbon

Chairs: Antony Delavois (ESA) and Marie-Aude Sevin (BlueSeeds)

This session explores the emerging role of Blue Carbon ecosystems in the evolving landscape of carbon markets. Experts will delve into the unique potential of coastal and marine ecosystems such as mangroves, seagrasses, and salt marshes in carbon sequestration and storage. Participants will gain insights into the latest scientific understanding of Blue Carbon, methodologies for quantifying and monitoring these carbon sinks, and the challenges and opportunities in integrating Blue Carbon projects into existing carbon market frameworks and policy developments such as within CRCF.

Speakers:

- *Aurélie Dehouck (i-sea)*
- *Rainer Ressler (EOMAP)*
- *Federica D'Acunto (Up to Earth GmbH)*
- *Åsa Lindh (Initiativ1415)*