



## **2023 CEOS Plenary Side Event**

### **Satellite Earth Observation & Carbon Accounting**

at 09:00 - 14:00 Hrs on 14 November 2023

at Le Meridien Chiang Rai Resort, Chiang Rai, Thailand

Prescribing monetary value to carbon is an important mechanism for combating climate change. Carbon markets facilitate the exchange of carbon credits, which are issued for the removal of carbon dioxide equivalent from the atmosphere, to net carbon producers to offset their emissions either voluntarily or to provide a means for compliance with regulatory measures that may be imposed.

There are various ways carbon credits can be generated, including afforestation/reforestation, implementing certain agricultural practices, direct carbon capture and storage, vegetation management, energy efficiency measures, etc. These efforts must be monitored and the effectiveness of carbon markets depends on the credibility and transparency of these carbon credits.

Some of these approaches to generating carbon credits are able to be monitored from space-based Earth observation – such as verifying the carbon stock of forest projects, tracking and measuring changes in vegetation cover, or assessing Greenhouse Gas emissions. Satellite EO provides data that is holistic, consistent from local to global scale, spatially homogeneous and explicit, and comparable and coherent. Space agency EO data is independent, unbiased, and available across borders, allowing consistent evaluation of adaptive policies. EO data has the potential to improve the reliability, accuracy, transparency, and consistency of carbon markets. Transparency is a critical element of carbon markets as it ensures that the claimed carbon credits are genuine and accurately reflect the reduction of GHG emissions.

At the occasion of the 37<sup>th</sup> Plenary meeting of the Committee on Earth Observation Satellites (CEOS), hosted by the 2023 CEOS Chair, GISTDA in Chiang Rai, Thailand, heads of the world's major space agencies will convene for a half-day side event on the application of satellite Earth observation for carbon accounting. Carbon market practitioners and policy-makers from across Asia will be invited to attend this event which has the objectives of:

1. Providing an overview of the state-of-the-art of carbon accounting using space-based Earth observation.
2. Presenting an opportunity for international space agencies to hear directly from users regarding their requirements for carbon market applications.

We anticipate a number of presentations from space agency heads as well as organisations that work to build capacity around the use of satellite EO. A networking lunch will be held following the workshop.

**Further details, an agenda and meeting registration link will be provided shortly – in the meantime please save the date!**



## Agenda

- 09:00-09:30**      **Registration**
- 09:30-09:40**      **Welcome Speech**  
*by Pakorn Apaphant, Ph.D.,  
GISTDA, Executive Director and 2023 CEOS Chair*
- 09:40-09:50**      **Opening Remarks**  
*by Chiang Rai Governor or representative*
- 09:50-10:15**      **Topic: Carbon Cycle and Applications: NASA Perspectives & Contributions**  
*by Mr. Lawrence Friedl  
Director of the Applied Sciences Program (NASA)*
- 10:15-10:40**      **Topic: Space Technologies for Addressing Climate Change - Application of Satellite Earth Observation Data to Monitor Sources and Sink of Greenhouse Gases**  
*by Mr. Osamu Ochiai  
Manager, Senior Engineer, Satellite Application and Observation Center (JAXA)*
- 10:40-10:50**      **-- Coffee Break --**
- 10:45-11:10**      **Topic: The U.S. Approach to Greenhouse Gas Inventory Estimation, and NOAA's Emerging Capabilities to Improve It**  
*by Jeff L. Privette, Ph.D Acting Chief, Climate Science and Services Division (NOAA)*
- 11:15-11:35**      **Topic: EO of Carbon Fluxes and Stocks: Scientific Evidence from Space on Carbon Emissions and Removals**  
*by Pakorn Petchprayoon  
Ph.D. ,Director of Geo-Informatics Product Innovation Office (GISTDA)*
- 11:35-12:00**      **Topic: Impressions and findings from ESA's EO for Carbon Market Forum**  
*by Frank Martin Seifer and Antony Delavois (ESA)*
- 12:00-12:30**      **Q&A Panel / Discussion**
- 12:30-14:00**      **-- Lunch Break at Latest Recipe --**

*\*The programme may be subject to change without prior notice.*