

From ground to orbit
Combining in-situ and satellite monitoring of water and forest
resources for adaptation to climate change

Monday 10th November, 18:30-20:00 - Blue Zone, Side-Event Room 9

Translation: English only

Coordinators:

- PFE: French Water Partnership
- INBO: International Network of Basin Organizations
- COMIFAC: Central African Forest Commission
- INRAE: France's National Research Institute for Agriculture, Food and Environment



Description:

Satellite data enhances climate change adaptation by providing comprehensive, real-time monitoring of both water resources and forests, even in the most remote areas. This capability improves risk prediction and enables more effective adaptive strategies. Integrating satellite observations with ground-based measurements increases the accuracy of management decisions, supporting global initiatives such as One Water Vision (OWV) and collaborative efforts toward sustainable resilience.

Forests play a critical role in the water cycle: they regulate infiltration, evapotranspiration, and aquifer recharge, while influencing local and regional climate. Effective forest management is therefore closely linked to water resource management. Collecting reliable data in these environments is often challenging due to dense vegetation, difficult accessibility, and limited in-situ monitoring networks.

Satellite observations complement these efforts by providing high-resolution, repeatable, and synoptic measurements that can track changes in forest cover, water levels, soil moisture, and ecosystem health. Partners such as INBO, INRAE, PFE, and COMIFAC contribute a mix of technical expertise, research methodologies, and user perspectives at local, regional, and national levels. By combining satellite data with on-the-ground knowledge, these collaborations support practical decision-making, improve ecosystem management, and strengthen climate resilience across forested watersheds.

Program (1h30):

Introduction (10 min)

- **Mr. Eric Tardieu**, Secretary General, International Network of Basin Organizations (INBO) (5 min)
- **Mr. Thierry Caquet**, Vice-President of International Relations, French Institute for Agriculture, Food and Environment (INRAE) (5 min)

Moderation:

- **Mr. Edouard Boinet**, Head of project, International Network of Basin Organizations (INBO)

Key speaker (10 min)

- **Ms. Afke Van Rijn**, Vice-Minister for the Environment and International Affairs, Ministry of Infrastructure and Water Management, Netherlands

Panelists (50 min)

1. **Dr. Stefan Uhlenbrook**, Director Hydrology, Water and Cryosphere - World Meteorological Organization (WMO) (7 min)
2. **Mr. Eric Brel**, Applications Engineer, National Centre for Space Studies, Guiana (CNES) (7 min)
3. **Mr. Jean-Michel Martinez**, Spatial Hydrologist Researcher, French Institute of Research and Development (IRD) (7 min)
4. **Dr. Hironori Maejima**, Senior Chief Officer for Earth Observation, Japanese Aerospace Agency (JAXA) (7 min)
5. **Mr. Clement Albergel**, Head of ESA's Actionable Climate Information Section, European Space Agency (ESA) (7 min)

Q&A (20 min)

Conclusion (5 min)

- **Ms. Marie-Laure Vercambre**, General Director, French Water Partnership (PFE)