DATA TERRA for BioSpace25

Tuesday February 11, 2025

8h45-9h45		**The future of biodiversity monitoring: New Earth Observation missions. PHILIPPE MAISONDGRANDE**
		CNES Space missions for the study of biodiversity - *Philippe Maisongrande* - **THEIA**
10h-11h30		**EO conceptual approaches to improve biodiversity monitoring**
	10h30-10h40	Biodiversity in changing terrestrial, aquatic, and marine Ecosystems: Calling for a unifying earth observation perspective - *Laurent Barille, Pierre Gernez, Wilfried Thuiller* - **ODATIS**
	10h40-10h50	An EO-based framework for monitoring tropical forests ecosystems in Costa Rica: extent, condition and composition - *Jean-Baptiste Féret, Samuel Alleaume, Mona Bonnier, Rémi Cresson, Florian de Boissieu, Sandra Luque, Mairi Souza Oliveira* - **THEIA PNDB**
12h-13h30		**Ecosystem Extent**
	13h-13h12	Increasing engagement of the Committee on Earth Observation Satellites (CEOS) with biodiversity - *Sandra Luque* - **THEIA PNDB**

18h-19h30	**Posters Session 1**
	A new operational approach for landscape characterisation and mapping based on radiometric information - *Alexandre Defossez, Samuel Alleaume, Yonas Alim, Agnès Bégué, Laurent Demagistri, Anne-Elisabeth Laques, Louise Lemettais, Sandra Luque, Simon Madec* - **THEIA PNDB**
	ESA Coastal Blue Carbon Project : Towards Earth-Observation-based solutions for coastal blue carbon monitoring - *Amélie Séchaud, Benoit Beguet, Elodie Blanchard, Alvise Ca'zorzi, Thibault Catry, Pierre Coan, Thimothée Cook, Aurélie Dehouck, Christine Dupuy, Imad El-Jamaoui, Nicolas Lachaussee, Virgine Lafon, Christophe Proisy, Marie-Aude Sévin, Manon Tranchand-Besset, Natacha Volto* - **THEIA**
	Estimation of forest EBVs with imaging spectroscopy: two cases studies - *Xavier Briottet, Sophie Fabre, Jean-Baptiste Feret, Adeline Karine, Marc Lang, David Sheeren* - **THEIA**
	Evaluating Sentinel-2-derived spectral biodiversity metrics for forest biodiversity monitoring in African tropical conservation landscapes - *Jean-Baptiste Feret, Clovis Grinand, Frédérique Montfort, Marie Nourtier* - **THEIA**
	Monitoring Climatic Anomalies and Vegetation Functioning in Italian Protected Areas through Satellite and Climatic Indices - *Francesca Pretto* - **THEIA**
	The Hyperspectral Bio-Optical Observations Sailing on Tara (HyperBOOST) dataset: relevance for the development and validation of coastal and oceanic biodiversity applications - *David Doxaran* - **THEIA**
	Two decades of Spectral Variation Hypothesis: advances and challenges in estimating biodiversity with remote sensing - *Jean-Baptiste Feret* - **THEIA**

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Wednesday February 12, 2025

10h-11h30		**Marine Ecosystems**
	10h11-10h22	Absorption diversity of bloom-forming phytoplankton species, toward hyperspectral remote sensing identification of red tide events ?- *Pierre Gernez, Tristan Harmel, Thomas Lacour, Victor Pochic*. - **ODATIS**
12h-13h30		**Freshwater and Inland Wetland Ecosystems**
	12h44-12h55	Assessment of eutrophication dynamics of lakes at a large scale by coupling Sentinel-2 remote sensing, machine learning and field observations - *Roxelane Cakir, Vanessa Dos Santos, Mathilde Joffre, Jean-Michel Martinez, Sabine Sauvage, Matheus Tavares* - **THEIA**
12h-13h30		**Coastal Ecosystems**
	12h00-12h11	Effect of Marine and Atmospheric Heatwaves on Reflectance and Pigment Composition of Intertidal Nanozostera noltei - *Anne-Laure Barillé, Laurent Barillé, Bede Ffinian Rowe Davies, Augustin Debly, Pierre Gernez, Nicolas Harin, Simon Oiry, Philippe Rosa* - **ODATIS**
	12h11-12h22	A Full Map of European Intertidal Seagrass - *Laurent Barillé, Bede Ffinian Rowe Davies, Pierre Gernez, Simon Oiry, Philippe Rosa* - **THEIA ODATIS**
	12h22-12h33	Developing EO-based framework for estimating biodiversity variables of coral reef and seagrass ecosystems at Large Scale - *Touria Bajjouk, Benoit Béguet, Lionel Bigot, Sylvain Bonhommeau, Malik Chami, Mauro Dalla Mura, Lucas Drumetz, Magali Duval, Jean-Baptiste Féret, Antoine Huguet, Antoine Lavrard-Meyer, Sophie Loyer, Audrey Minghelli, Pascal Mouquet* - **PNDB ODATIS**
	12h33-12h44	Space-based monitoring of mangroves for anticipatory Nature-Based Solutions: a three-point research agenda - *Gwenaël Abril, Léa Ackerer, Edward Anthony, Paul-Emile Augusseau, Elodie Blanchard, Fabien Blanchard, Elodie Boriau, Thibault Catry, Médie Collet, Jean-Bernard Duchemin, Antoine Gardel, Ludovic Granjon, Martine Hossaert, Dominique Joly, Johanna Jupin, Quentin Marsal, Tanguy Maury, Christophe Peyrefitte, Christophe Proisy, Philip Roche, Pierre Scemama, Adrien Staquet, Olivier Thebaud* - **THEIA**
	12h44-12h55	Spatiotemporal Evaluation and Hyperspectral Modelling of Microphytobenthos Gross Primary Productivity in France Estuarine Environments - *Augustin Debly, Julien Deloffre, Regis Gallon, Adrien Jacotot, Patrick Launeau, Vona Meleder, Simon Oiry, Philippe Rosa, Hajar Saad El Imanni* - **ODATIS**
	12h55-13h06	Improving the assessment of Blue Carbon stock of mangroves using remote sensing along the Amazon coast - *Gwenaël Abril, Benoit Béguet, Elodie Blanchard, Thibault Catry, Jean-François Faure, Johanna Jupin, Quentin Marsal, Christophe Proisy* - **THEIA**
	13h17-13h28	A innovative approach for remote sensing methods and sensors benchmarking prior to BCE monitoring at large scale - *Benoit Béguet, Rémi Budin, Cécile Curtie, Nicolas Debonnaire, Aurélie Dehouck, Virginie Lafon, Julie Mollies, Clemence Rozo, Amélie Sechaud, Manon Tranchand-Besset* - **THEIA**

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Thursday February 13, 2025

10h-11h30 — **Ecosystem Condition and Restoration**

10h55-11h06

A multisource adaptive strategy for the characterization and monitoring of ecological corridors by remote sensing - *Rémi Budin, Benoit Beguet, Clemence Rozo, Nicolas Débonnaire, Nicolas Durou, Virginie Lafon* - **THEIA**

12h-13h30

DEMO: TerEcoData: a webservice to monitor terrestrial ecology changes from Earth Observing systems - *Aline Deprez, Jean-Philippe Malet, David Michea, Anne Puissant* - **THEIA**

18h-19h30 — **Posters Session 2**

GeoPlAntNet: A Remote Sensing-Based Deep Learning Workflow for Biodiversity Mapping and Monitoring - *Antoine Affouard, Pierre Bonnet, Christophe Botella, Benjamin Deneu, Maxime Fromholtz, Alexis Joly, César Leblanc, Rémi Palard, Maximilien Servajean* - **PNDB**

Analyzing post-disturbance recovery dynamics in European forests using remote sensing data - Samuel Alleaume, Eatidal Amin, Cássio Fraga Dantas, Dino Ienco, Sandra Luque, Lukas Picek - **THEIA PNDB**

Biodiversity monitoring by species distribution modelling using species association interactors from Sentinel-2 data: A case study of the GUARDEN project - *Alexis Joly, Maxime Ryckeweart* - **PNDB**

Comprehensive regional assessment of brood habitat suitability for Alpine black grouse - *Samuel Alleaume, Alexandre Defossez, Nadia Guiffant, Dino Ienco, Sandra Luque, Marc Montader* - **THEIA PNDB**

Estimation of river wildness with Artificial Intelligence, Remote Sensing and Citizen Science - *Nicolas Mouquet* - **PNDB**

Evaluating MULTIOBS Chlorophyll-a with ground-truth observations in the Eastern Mediterranean Sea - *Raphaëlle Sauzède* - **ODATIS**

Exploring the potential of hyperspectral data from space supporting harmful algal bloom studies - *Pierre Gernez, Thomas Lacour, Soazig Manach, Victor Pochic, Michael Retho* - **ODATIS**

From presence-only to abundance species distribution models using transfer learning - *Simon Bettinger, Benjamin Bourel, Alexis Joly, David Mouillot, Maximilien Servajean* - **PNDB**

Linking Earth Observations and in situ omics data via machine learning to estimate plankton biodiversity in the Mediterranean Sea - *Pierre Galand* - **ODATIS**

Monitoring of wetland restoration trajectories combining machine learning based VHR vegetation mapping and Sentinel-2 derived rewetting - *Benoit Beguet, Marie-Lise Beno, Rémi Budin, Virginie Lafon, Julie Mollies* - **THEIA**

Phytoplankton Community Composition in European Coastal Waters: Impact of Particle Concentration on Phytoplankton Absorption and Pigment Retrieval Accuracy - *David Doxaran* - **ODATIS**

Plankton biodivErsity Through Remote sensing and omIcs in the MEDiterranean Sea: The PETRI-MED project - Pierre Galand - **ODATIS**

Species distribution modelling (SDM) based on neural networks and maximum entropy principle: a case study using Landsat time series - *Christophe Botella, Alexis Joly, Diego Marcos, Maxime Ryckeweart, Maximilien Servajean* - **PNDB**