

## FIRST NEWSLETTER JULY 2024

### 1st MC meeting (6/11/2023; Brussels, Belgium)



At the first Management Committee (MC) meeting of the PANGEOS COST Action, 35 members gathered in person to cast their votes for key positions. The meeting marked a significant step in advancing collaborative research efforts. Members elected the Chair, Vice-Chair, Grant holder institute and other essential roles, setting the stage for effective governance and project execution. The successful election highlights the commitment and active participation of the PANGEOS community in driving forward their ambitious scientific agenda, fostering international cooperation, and promoting innovative solutions in agriculture and geosciences.

PANGEOS held a series of virtual meetings led by **Work Package (WP) leaders**, with at least 50 participants in each. On February 26, 2024, **WP1 Field Phenotyping: Sensor Synergies for Biophysical Trait Retrievals** was led by Sven Fahrner. The following day, **WP2 Precision and Regenerative Agriculture**, led by Offer Rozenstein, convened. Laura Mihai led the **WP4 Uncertainty Analysis and Standardization** meeting on March 1. Finally, Holly Croft led the **WP3 Sustainable Land Management of Complex European Landscapes** meeting on March 3. These meetings introduced objectives and facilitated interactions among WP members, fostering collaboration and knowledge sharing.



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PANGEOS has awarded two Short-Term Scientific Missions (STSM), two ITC conference grants, and one Dissemination Conference (DC) grant. Laura Mihai received an STSM for optimizing practices in vegetation reflectance measurements, while Enrico Tomelleri's STSM focused on BIOMASS Cal/Val activities. Mar Albert Saiz's ITC grant explored high-resolution satellite images of vegetation phenology and lake areas, and Fuat Kaya's ITC grant investigated machine learning models for pedotransfer functions. Dessislava Ganeva received a DC grant for the Pan-European Network of Green Deal Agriculture and Forestry Earth Observation Science. Several additional grants are planned to further research initiatives.



## 1<sup>st</sup> WORKSHOP and MC 2 MEETING POZNAN, POLAND



From May 8-10, 2024, the PANGEOS COST Action organized a workshop titled "Optimal and Cost-Effective UAV Sensor Synergies for Trait-Based Field Phenotyping and Precision Agriculture" in Poznań, Poland, alongside the MC2 meeting. The event featured 25 in-person participants and 70 virtual attendees. Sessions included expert lectures on various agricultural and UAV-related topics, such as nitrogen fertilization, evapotranspiration, and crop yield mapping. Key presentations addressed the integration of UAV and ground-based sensors in precision agriculture. The program also included breakout sessions, tours, and discussions on future plans.





## 2nd WORKSHOP SOFIA, BULGARIA



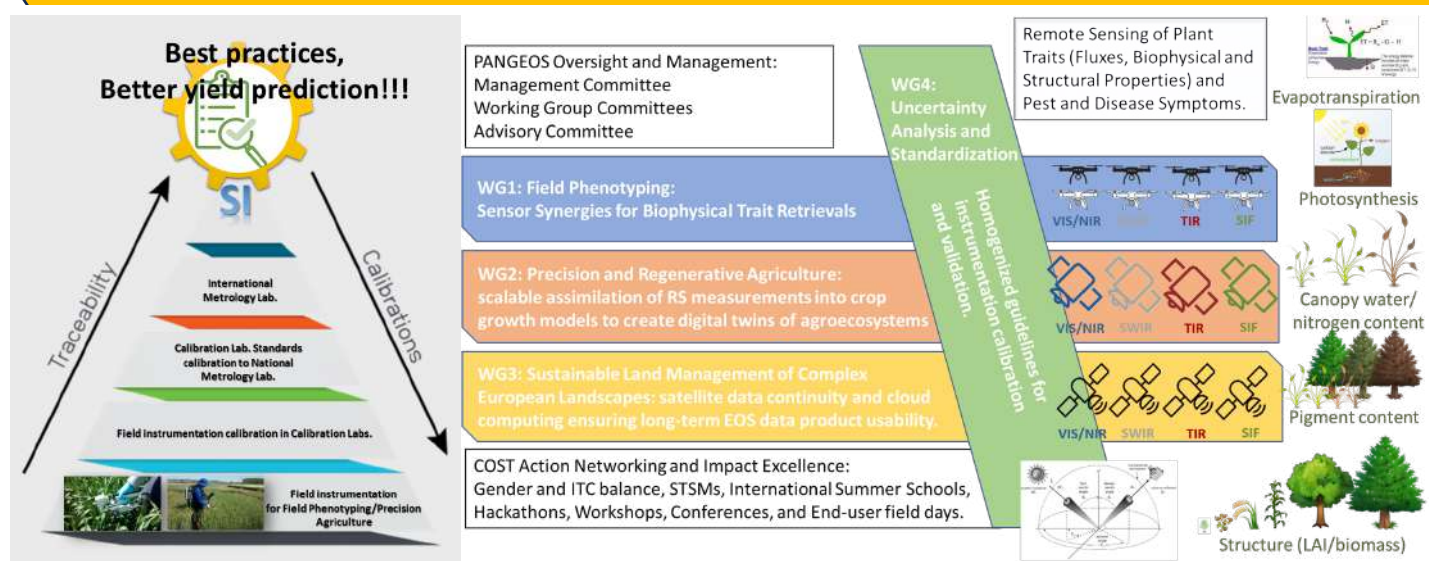
The 2nd workshop organized by PANGEOS took place in Sofia, Bulgaria, on **July 3-4, 2024**, focusing on **"Hyperspectral RTM and Data Assimilation Techniques and Digital Twin Models for Precision Agriculture and Sustainability."** Thirty scientists from around the world gathered to present their research. The event, held at the Scientific and Technical Union of Agricultural Specialists building, featured multiple sessions covering various topics related to precision agriculture. Activities included discussions, presentations, and a tour of the Boyana Church and Vitosha Mountain, fostering collaboration and knowledge exchange among participants.





## COMING UP...

The PANGEOS COST Action CA22136 Joint **WG1-WG4 Summer School**, "Uncertainty Analysis and Protocol Standardisation Assessment on Novel and Operational Hyperspectral Data Products," will take place from **September 30 to October 4, 2024**, in **Bucharest, Romania**. Hosted by the University of Agriculture and Veterinary Medicine (USAMV), and led by Dr. Laura Mihai and Dr. Ana Butcaru, the event has received 70 applicants for 25 spots, marking a highly competitive inaugural year. Applicants come from 35 different countries, representing 29 COST member countries, with 31.5% female, 68.6% male, and 77.1% young researchers



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**AVAILABLE STSM AND ITC GRANTS !!! for information contact  
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## Research Coordination Objectives

- ✓ Build a network of applied RS experts
- ✓ Identify optimal and cost-effective proximal and UAV sensor synergies
- ✓ Develop a transferable framework for the integration of RS data inputs into precision agriculture
- ✓ Explore RS data assimilation techniques and digital twin models for precision agriculture and forestry
- ✓ Promote cross-calibrated long term data product continuity
- ✓ Foster bottom-up, multi-actor stakeholder feedback and technological application usability assessments
- ✓ Synthesize knowledge and protocols across the network
- ✓ Raise public awareness for the added value of RS data products

