

## FOREST VALUE2 - SUMMER TRAINING COURSE

### Forest health and monitoring in the age of remote sensing

HORIZON-WIDERA-2022-ERA-01-10  
Grant Agreement No. 101094340

Braşov, INCDS Marin Drăcea

12<sup>th</sup>-16<sup>th</sup> of May 2025

“Marin Drăcea” National Institute for Research and Development in Forestry, Romania, as partner of the **ForestValue2 Innovating Forest – based bioeconomy” Project** <https://forestvalue.org/> (Horizon Widera-2022-ERA-01, Grant agreement ID: 101094340), will organise within the **WP6 – Others joint activities - Task 6.2. Summer training courses for early-stage researchers, the Summer Training Course Forest health and monitoring in the age of remote sensing**

#### **Main topic - Active sensors in forest monitoring**

The aim of the Summer Training Course „Forest health and monitoring in the age of remote sensing” is to improve the capacity of early-stage researchers in the forest monitoring and forest resources management field to understand climate risk and to design local adaptation measures tailored to decision-makers’ needs.

The main topic to be addressed during the Summer Training Course will be forest monitoring, and the underlying methods for assessing, measuring, analysis, and data validation to process and link information to science and practice. Novel methods based on the integration of active remote sensing (Earth Observation data, Close Range Terrestrial Laser Scanning, as well as Aerial Laser Scanning) data with in situ measurements will be presented. Within the Training Course, theoretical and practical lessons will be held on the research/monitoring of Level I and Level II ICP Forests Networks and LTER sites.

#### **Participants**

Early-stage researchers belonging to any partner in the ForestValue2 Project are welcome to participate and are eligible to apply. The training course is intended for early-career researchers from the EU-13 countries (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia) as well as Ukraine, the Republic of Moldova.

A maximum of 20 persons can participate (Master's, Doctoral or Post-doctoral researchers and Others)



### **Financial support**

The financial support is assured by the ForestValue2 Project and cover the costs for travel, accommodation and subsistence.

### **Organizer**

*National Institute for Research and Development in Forestry" Marin Drăcea"* (INCDS), with the support of the *Transilvania University of Braşov*.

### **Invited lecturers**

- **Prof. dr. Sorin POPESCU**, Texas A&M University, United States of America
- **Prof. dr. Mihai Andrei TĂNASE**, Spanish National Research Council (CSIC), Spain
- **Dr. Ihor BUKSHA**, Ukrainian Research Institute of Forestry and Forest Melioration named after G. M. Vysotsky, Ukraine

### **Application and approval**

To apply, please fill the online application form using the [link](#) and send an email with your:

- Europass CV;
- Contact details and full address;

Subject of the mail "FOREST VALUE2 - SUMMER TRAINING COURSE" to: Ecaterina Apostol, [ecaterina.apostol@icas.ro](mailto:ecaterina.apostol@icas.ro).

Selected trainees will receive information about registration and presentation of their own research (details about abstract and presentation form).

### **Location and accommodation**

The Summer Training Course will be hosted by *National Institute for Research and Development in Forestry" Marin Drăcea"* ([www.icas.ro](http://www.icas.ro)) and *Transilvania University of Braşov* ([www.unitbv.ro](http://www.unitbv.ro)).

### **Deadlines**

All applications must be submitted by email to Ecaterina Apostol. ([ecaterina.apostol@icas.ro](mailto:ecaterina.apostol@icas.ro)), by **6<sup>th</sup> of March, 2025**. Applicants will be informed about the application result **14<sup>th</sup> of March, 2025**.

## Programme of the Training Course

### Day 1: 11<sup>th</sup> of May 2025

*Arrival of invited lecturers and participants*

**18:00** – Registration and Welcome reception

### Day 2: 12<sup>th</sup> of May (09:00-18:00) – Joint session

**Training course opening – Ecaterina Apostol** [*Senior Scientist, National Institute for Research and Development in Forestry" Marin Drăcea"*]

- **LiDAR (Airborne and Satellite)** - **Sorin POPESCU** [*Professor, Department of Ecology and Conservation Biology, College of Agriculture and Life Sciences, Texas A&M University, United States of America*]

- **Introduction to Airborne Lidar and Forest Measurements** (2.5 hs)

- **Introduction to Spaceborne Lidar and Applications for Characterizing Vegetation 3D structure** (1.5 hs)

### **Lunch break 13:00-14:00**

- **Synthetic Aperture Radar (SAR)** - **Mihai Andrei TĂNASE** [*Research Scientist, Spanish National Research Council (CSIC), Spain*]

- **Introduction to SAR remote sensing** (3hs)

- **SAR data applied to forest management and monitoring** (1h)

### Day 3: 13<sup>th</sup> of May (09:00-13:00) – Joint session

- **Forest Monitoring** - **Ștefan LECA** [*Head of Forest Monitoring, National Institute for Research and Development in Forestry" Marin Drăcea", Romania*]

- **Forest monitoring and methodologies within ICP Forests and LTER networks** (1 h)

- **Romanian study case (Long term monitoring networks and data measurements)** (1h)

- **Forest Monitoring in Ukraine** - **Ihor BUKSHA** [*Senior scientist, Head of Inventory, Monitoring, Certification and Forest Management Planning Department, Ukrainian Research Institute of Forestry and Forest Melioration named after G. M. Vysotsky*]

- **National Forest Inventory as a key element of forest monitoring system in Ukraine** (1 h)

- **Mobile GIS Field-Map for forest ground survey in Ukraine: lessons learned and potential synergies with remote sensing data interpretation** (1 h)

**Lunch break 13:00-14:00**

**Excursion 14:00-20:00 – Fieldtrip Bran forests (Salvamont Bran monitoring site)**

**Day 4: 14<sup>th</sup> of May (07:30-20:00) – Joint session**

**Fieldtrip – ICP/LTER monitoring network**

- **Romanian Forest Monitoring Network: ICP Forest Level II - Ștefan LECA and Alexandru Claudiu DOBRE**
- **Field measurements with Terrestrial Laser Scanning – Ionuț Silviu PASCU and Alexandru Claudiu DOBRE**

**Day 5: 15<sup>th</sup> of May (09:00-18:00) – Parallel sessions**

- **RADAR processing (I) - Mihai Andrei TĂNASE (8 hs)**
- **Satellite LiDAR data processing (I) - Sorin POPESCU (8 hs)**
- **Aerial LiDAR processing – Bogdan APOSTOL (8 hs)**

**Lunch break 13:00-14:00**

**Day 6: 16<sup>th</sup> of May (09:00-13:00) – Parallel sessions**

- **RADAR processing (II) - Mihai Andrei TĂNASE (4 hs)**
- **Satellite LiDAR data processing (II) - Sorin POPESCU (4 hs)**
- **Terrestrial Laser Scanning processing – Ionuț Silviu PASCU (4hs)**

**Lunch break 13:00-14:00**

**Training course closure - 14:00-16:00**

**16:00 – 20:00**

**Field Excursion around Brasov - Kronstadt Private Forest District**

**Day 7: 17<sup>th</sup> of May**

**Departure of the participants**