RÉPUBLIQUE FRANÇAISE
Liberté
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INSTITUT FRANÇAIS

MAKSYM MATSALA

From Sweden to France

Project: **The behavioral patterns of the flying collar in AI programming**

Research topic: **Environment**

Swedish Institution: **Swedish University of Agricultural Sciences**

French Institution: **INRAE, Montpelier**

Dates of mobility: **02/09/2024** to **13/09/2024**

Program: **SFVE-A**

PRESENTATION

Maksym Matsala is a postdoctoral researcher at the Southern Swedish Forest Research Centre (Swedish University of Agricultural Sciences) in Alnarp. He focuses on natural forest dynamics and remote sensing applications. His work in Sweden aims to capture landscape characteristics of forest fires using satellite data and to apply laser scanning for monitoring impacts of conservation burns. Maksym Matsala also works on mapping the damage to Ukraine's forests caused by Russian invasion. Maksym Matsala obtained his PhD in Forest Science in 2022 at National University of Life and Environmental Sciences of Ukraine.

ACTIVITIES IN FRANCE

Maksym Matsala has visited Research Group in Biodiversity and Ecosystem Services at integrated united TETIS (Land, environment, remote sensing and spatial information) at INRAE, Montpelier. Head of this group, Dr. Sandra Luque is a prominent expert in remote sensing of forest biodiversity and leader of multiple research projects. Sandra Luque discussed with Maksym the main directions of their current projects and connected with experts in fire remote sensing and drone laser scanning at the group.

Maksym Matsala gave a research seminar on the topic of natural forest dynamics and how remote sensing data can help to capture it. He explained the differences in forest disturbance regimes between Sweden and Ukraine, how data availability impacts the accuracy of analysis, and which satellite products can be beneficial in mapping wildfires or ignitions caused by military activities.

Maksym Matsala worked together with Dr. Sylvie Durrieu with drone laser scanning data he collected in Sweden before and after conservational burns. Sylvie Durrieu shared her rich experience in processing 3D data and gave advices how to normalize laser point clouds obtained at different dates. They worked together to uncover the best approaches to detect changes in lower vegetation strata after the low-severity fire in mixed oak-spruce-pine forest.