Master Thesis: Assessing consistency of different forest disturbance maps for Europe

Earth Observation for Ecosystem Management

Start Date: Anytime

Description of Project:
In this thesis, you will conduct a comprehensive statistical comparison of different satellite-based forest disturbance datasets available for Europe (e.g. Hansen et al. 2013, Turuvanova et al. 2023, Viana-Soto & Senf 2025). The goal is to evaluate their accuracy, agreement, and biases in detecting forest disturbances over time and across different forest ecosystems. To achieve this, you will apply statistical techniques to quantify the differences between datasets, compare their spatial and temporal consistency, and assess their sensitivity to disturbance magnitudes/types. This research will provide insights into the strengths and limitations of widely used disturbance mapping products.

Research Question: How similar are forest disturbance maps derived from different satellite data and algorithms?

Objectives:

- *Perform a statistical assessment using independent validation dataset (e.g., reference plots, high-resolution imagery) to quantify the accuracy and biases of the dataset.*
- *Investigate how different datasets perform in detecting disturbances over time and across different forest ecosystems*

Additional information about the ForestPaths and AI4Forests projects can be found here:

ForestPaths ***AI4Forests***

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