FOREST4EU

ITHub 1 - Wood Mobilization

FOREST4EU partner: UNIFI
OG: FOR.TRACK
OG's country: Italy
Type of Innovation: Process

Growing Stock Volume mapping using Remote Sensing Data

Introduction

The objective of the OG-FOR.TRACK was to develop and test a structured modular decision support system that simplifies the implementation of Precision Forestry practices. This system enables the transfer of research-based procedures to companies in the forestry sector, including technologies like Geographic Information Systems (GIS) and multi-scale remote sensing, forest spatial modelling, and computer algorithms integrated into Decision Support Systems.

Within this context, partner companies of the project have emphasized the need to map the volume of growing stock present in the forests throughout their entire company area, which amounts to approximately 1000 hectares per company. This mapping is essential to identify the variability within each individual forest parcel.

To accomplish this, an area-based approach was employed, linking field plot data acquired in the context of forest management plans with freely available remote sensing data, such as Sentinel-2 multi-temporal products and GEDI Lidar. As a result, a map of growing stock volume within the area of interest was generated and integrated into the GIS Decision Support System. This map can be utilized for future forest management planning activities.

Lessons learned

The data used to map the growing stock volume were already pre-existing within the companies, as they were acquired for forest management plans as required by the regional law of Calabria.

However, it would have been preferable to use a sampling plan that also considered the variability of remotely sensed variables to achieve more accurate maps. Nevertheless, the system that exclusively relies on freely available data enables the mapping of woody volume and the analysis of variability within a forest parcel.

For further information contact

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Further information

https://fortrack.it/

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