



# My Sustainable Forest

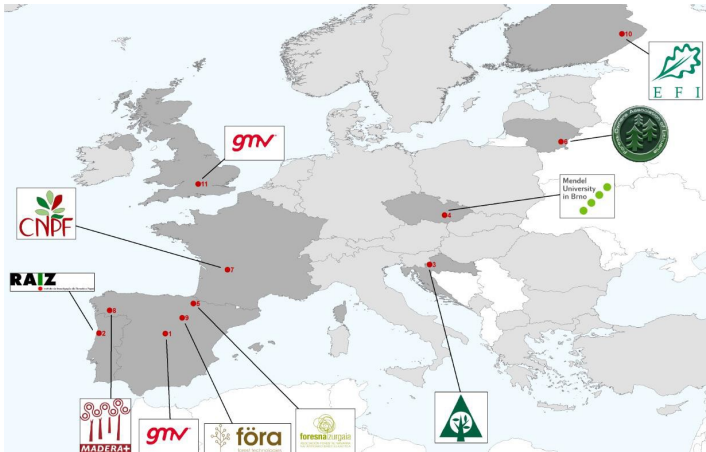


## OPERATIONAL SUSTAINABLE FORESTRY WITH SATELLITE-BASED REMOTE SENSING

<https://mysustainableforest.com/>

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776045.

Earth observation services for silviculture

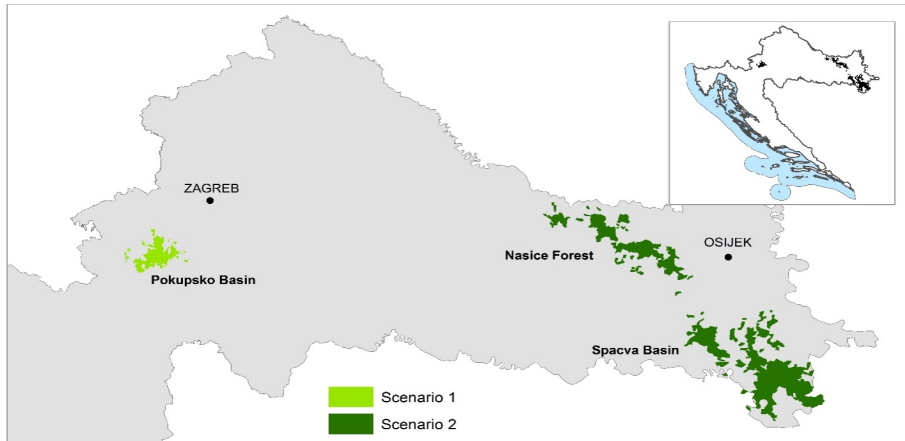
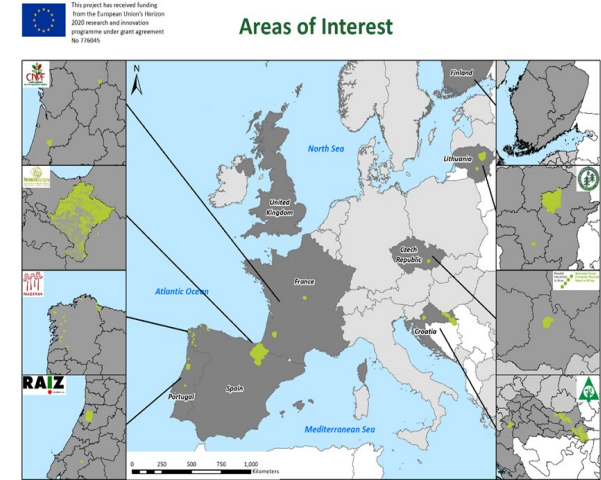


### Services

MySustainableForest provides kits of specialised forest or wood quality geo-information products that support sustainable forest management, good forest practices and high standards of wood quality entering the industry. The following six services are offered:

- Forest site characterisation**: Provides information on the status and condition of forest components, such as forest extension; stand delineation; forest infrastructures; main forest types; stand variables, consisting of dominant height, stand age, and stand density; forest disturbances, including clear cuts and fire scars; and topography, which considers DEM, slope, and aspect.
- Wood characterisation**: Models and maps wood fibre attributes linked to the wood product potential and performance such as pulp yield, density, strength and stiffness of lumber.
- Biomass and CO2 stocking**: Estimates the living volume of trees in a forest and its CO2 stock. The above ground biomass and CO2 stock products are key for the biomass industry and carbon accounting.
- Forest condition**: Monitors and measures forest health condition, identifying stressed vegetation due to drought, frost, plagues or any other hampering cause.
- Ecosystem vulnerabilities**: Identifies and informs an array of ecosystem descriptors and vulnerabilities, namely: watershed extent, hydrological network, biodiversity indicators, habitat fragmentation, floods and soil erosion.
- Socioeconomic conditions**: Produces analytics based on the System of Environmental Economic Accounting (SEEA) proposed by United Nations.

### Areas of Interest



Service code	Product name	Sensor
S1	Forest mask	Landsat archive
	Main forest types	
S2	Forest age	
	Wood Density Ranking	
S3	Strength Class	
	Drought Estimation	
S4	Forest Vitality	
	Biodiversity Indicator	
S5	Habitat Fragmentation Indicator	
	Soil Erosion Risk Indicator	
S6	Monetary wood accounts	
	Land Physical Asset Account	

Service code	Product name	Sensor
S1	Forest mask	S2 new
	Main forest types	
	Burnt scars	
	Clear cuts	
	Wood Density Ranking	
	Strength Class	
S3	§ AGB	
	§ CO2 Stock	
S4	Biotic Damages	
	Drought Estimation	
	Snow-Damages	
	Forest Vitality	
S5	Biodiversity Indicator	
	Habitat Fragmentation Indicator	
S6	Physical wood accounts	
	Physical supply and use of wood	

Service code	Product name	Sensor
S1	Forest mask	VHR optical
	Stand Delineation	
	Forest Infrastructures	
	Main forest types	
	Stand height	
	DEM Elevation	
	DEM Slope	
	DEM Aspect	
	DEM Slope	
	DEM Aspect	
S3	§ AGB	
	§ CO2 Stock	
S4	Biotic Damages	
	Drought Estimation	
	Snow-Damages	
	Forest Vitality	
S5	Biodiversity Indicator	
	Habitat Fragmentation Indicator	
S6	Physical wood accounts	
	Physical supply and use of wood	

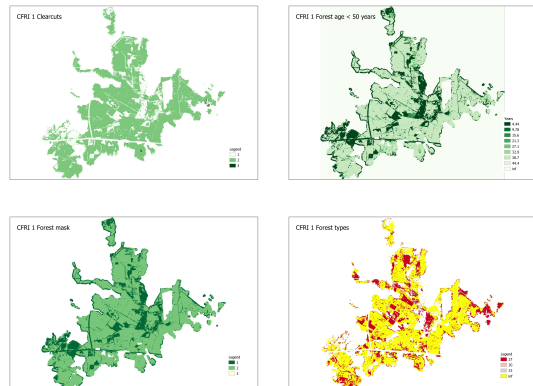
Service code	Product name	Sensor
S1	Forest mask	LIDAR
	Stand height	
	DEM Elevation	
	DEM Slope	
	DEM Aspect	
S2	Wood Density Ranking	
	Strength Class	
S3	§ AGB	
	§ CO2 Stock	
S5	Watershed Delineation	
	Stream Network	
S6	Physical wood accounts	
	Physical supply and use of wood	

Service code	Product name	Sensor
S1	Stand height	VHR SAR
	Wood Density Ranking	
	Strength Class	
S3	§ AGB	
	§ CO2 Stock	
S5	Watershed Delineation	
	Stream Network	
S6	Physical wood accounts	
	Physical supply and use of wood	

Service code	Product name	Sensor
S1	Stand height	S1 new
S2	Wood Density Ranking	
S3	Strength Class	
S5	§ AGB	
S6	§ CO2 Stock	

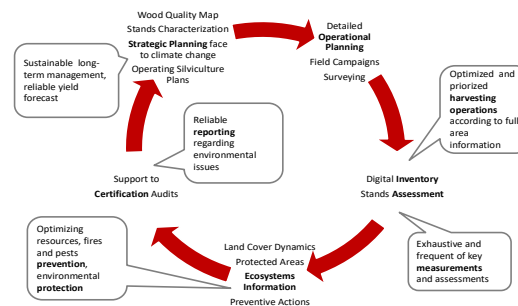
SFM services :

1. Forest Site Characterization
2. Wood Characterization
3. Biomass and CO2 stocking
4. Forest Condition
5. Ecosystem vulnerabilities
6. Socioeconomic Functions and Conditions



**WP5 Fully Operational Service Concept & Usability Gap Analysis (CFRI lead)**

This task is to drive project results looking into long term added value for End Users and considering their feedback (based on training, demonstration trials and pre-commercial activities) on pending or new needed features, with special interest on enhanced performances or complementary features (e.g. data fusion, etc.). A proposal on prioritized features, derived from such usability gap, for further service concept will be prepared. (SFM SERVICES, BASIC, ENHANCED, ADVANCED)



**EU FORESTRY IN THE FUTURE**



Digital forest inventory

Sustainable forest management based on the wood quality indicators

Forest emergency management system/rapid change detection (Pest & diseases, natural disturbances)

Forest ecosystems mapping & monitoring

Sustainable forest management enhancing Socioeconomic Functions and Conditions