Developing a multi-criteria decision support system for a common forest management to strengthen forest resilience, harmonize stakeholder interests and ensure sustainable wood flows.

Sharing forest management solutions in a changing climate, the ONEforest European project

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SUMMARY

Forest ecosystems cover 42 % of the European Union's total land area and strong efforts have been made to facilitate an increase of multiple forest ecosystem services to form robust forest stands. However, within the last decade, forests in all biogeographical regions of Europe have been affected by changing climate conditions, e.g. long lasting droughts, heavy rain events, frequent and intensive storms, pests and forest fires. This has major implications for the overarching forest-wood value chain (FWVC), which includes forest management, wood supply and processing and rural (socioeconomic) development; and the forest ecosystem services (FES).

The EU-funded ONEforest project will address this challenge by studying sustainable forest management (SFM) practices in four European biogeographical case study regions, which shall ensure or even increase FES at the same time. This includes also forest operations and the application of engineered topsoil cover. The basic idea of the ONEforest project is that resilient forests can only be created through a common understanding and agreement between all stakeholders within the FWVC.

This changing scenario is even worse in a climate change hotspot as the Mediterranean area is today widely recognized. But here the search for management solutions to deal with forest fires and drought has a long history that resulted in strong knowledge and best practices ready to be replicated in EU countries that due to climate change are now facing similar challenges. Within the project the Mediterranean Model Forest Network will work on guidelines to mobilize local stakeholders linked to the forest ecosystems and harmonize their needs within a FWVC that can include them in a common strategy for the future of the European Forests.

CSRs AND SUPPORTING EXPERIMENTAL SITES

Locations of the four ONEforest Case Study Regions (CSRs) (red pins), five supporting experimental sites (orange pins) across four biogeographical regions and one site with a supportive set of boreal forest inventory data (yellow pin)



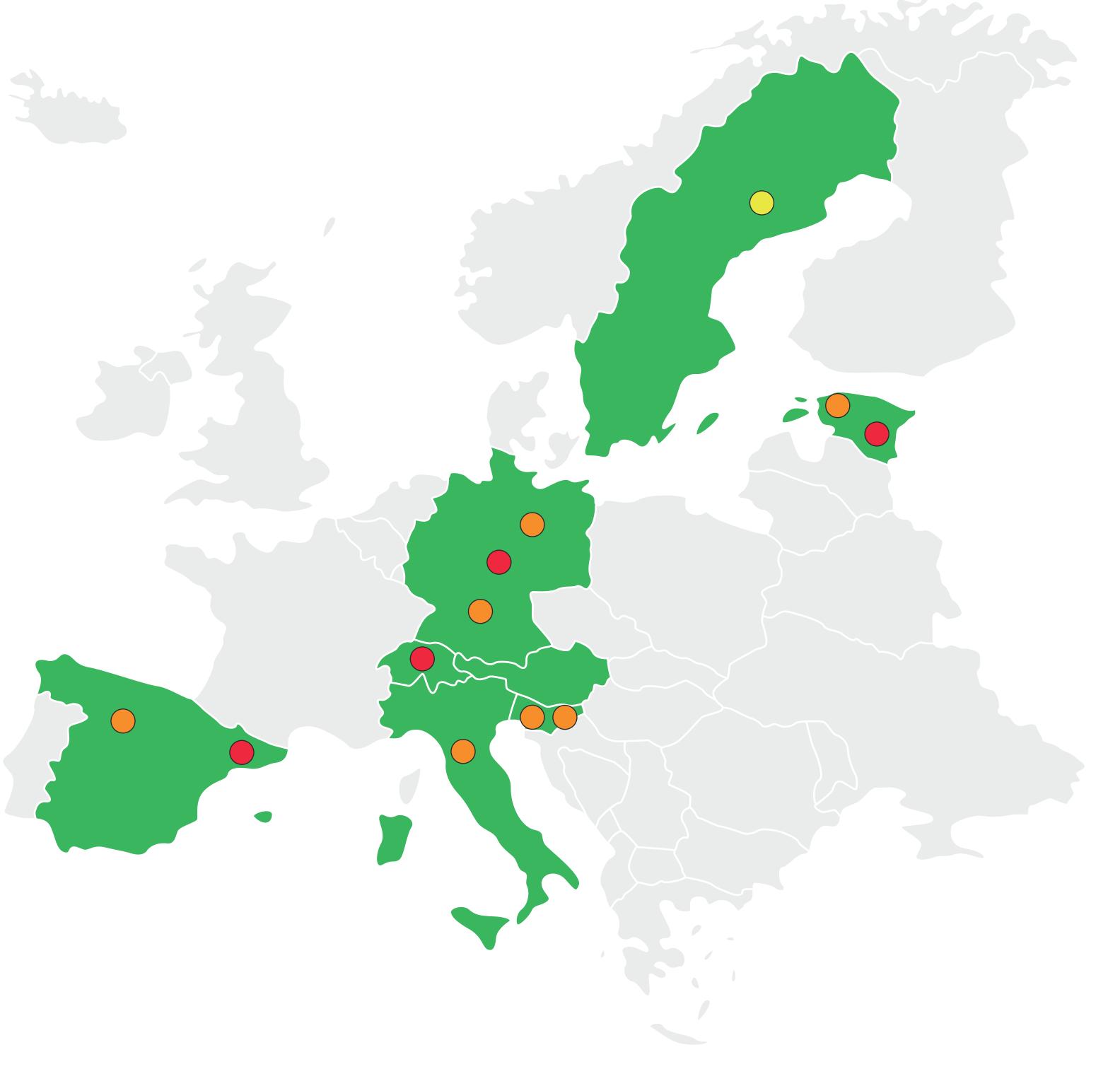
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OBJECTIVE

A newly developed Multi-Criteria Decision Support System (MCDSS) and Dynamic Value Chain Model (DVCM) will provide information for decision-making to stakeholders by assessing SFM, synergies and trade-offs of FES, reliable wood supply, and stakeholder interests through FWVC indicators of social, economic, and environmental dimensions.

GOALS

- Increase long-term resilience of forest production systems and associated value chains
- Protection and restoration of biodiversity
- Climate change mitigation by increasing the carbon sinks
- Positive change to European landscapes and rural economies
- Sharing best practices from the Mediterranean area to other EU countries
- Create guidelines on how to mobilize local stakeholders linked to the forest ecosystems and harmonize their needs
- Starting the process to create new Model Forests in the CSRs



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