

Small Diameter Wood utilization with Innovative Stand Management for Multifunctional Forests and a Growing Sustainable Bio-economy (SMALLWOOD)



SMALLWOOD aims to develop and evaluate new technologies and new business and operational models that can support a sustainable management and utilization of different types of small diameter wood. To this end, the project

- 1) Evaluates the innovation potential of wood harvesting and extraction innovations by assessing functionality, time consumption, productivity, economy, possible bottlenecks and need for logistic changes;
- 2) Investigates the social and economic aspects of small diameter stand management, including innovation uptake and new business models, as well as boosting of new small- and medium-sized enterprises, in particular in rural areas;
- 3) Establishes the environmental profile of the harvesting and extraction innovations in different operational systems, including soil and tree damages, material and energy consumption; and
- 4) Determines and compares the overall sustainability impacts and value-creation effects of the studied innovations in a multi-criteria framework.

The project operates in four countries: Finland, Sweden, Slovenia, and Spain.

In the Finnish boom-corridor thinning trials with two types of harvesting heads, it was learned that skilled drivers can use their expertise to select the most suitable boom corridors places and directions. While some systematics is used, one shall avoid too much systematics. In this way, silvicultural features of selective harvesting may be combined with the productivity benefits resulting from the bit more systematic boom-corridor thinning method.

The work will continue to analyse private forest owners' experiences, perceptions, and intentions of small-diameter stand management via analysing representative panel data. The

aim is to learn what kind of evidence and communication would encourage forest owners to conduct small-diameter stand operations and buy related services. Furthermore, logging contractors and forestry service providers will be interviewed to learn about existing good practices and devise potential new business and collaboration models for small-diameter stand management.

After the economically, environmentally, and socially oriented sub studies have been conducted, the work will proceed to employ participatory multi-criteria assessment and study the overall sustainability and value creation impacts of the studied innovations and business and operational models. Eventually, the project will result in increased sustainable mobilization of small trees at the European level, specifically adapted to multiple different forest conditions and with increased resilience in the remaining stands as well high-quality wood in the future.

Further information:

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