

SMALLWOOD

Small diameter wood utilization with innovative stand management for multifunctional forests and a growing sustainable bio-economy

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Overall objective:

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.

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The hypothesis are that Small Diameter Stand (SDS) management and the studied techniques have an interesting innovation potential in terms of economy, social acceptance, sustainability, SME business opportunities and rural development especially if identified bottlenecks are solved.

A background image of a forest with tree trunks and foliage, partially obscured by a white banner.

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- 1. improve the techniques and work methods up to the level where a profitable business can be built on SDS management and utilization,**
- 2. develop strategies for SDS management that is sustainable, with a positive environmental profile, and long-term added values for a number of actors in the society.**

The project focuses on four stand types

1) Conventional thinning stands with small diameter trees;



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- 1) Conventional thinning stands with small diameter trees;
- 2) Traditional coppice stands;



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- 1) Conventional thinning stands with small diameter trees;
- 2) Traditional coppice stands;
- 3) Areas for forest fire prevention with small trees or bushes;



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- 1) Conventional thinning stands with small diameter trees;
- 2) Traditional coppice stands;
- 3) Areas for forest fire prevention with small trees or bushes;
- 4) Linear cleaning areas like roadsides, power line corridors and strips just outside agricultural farm land



Two types of technologies will be studied and further developed

1) Multi-tree harvesting technique combined with the working method “Boom corridor Thinning”









Two types of technologies will be studied and further developed

- 1) Multi-tree harvesting technique combined with the working method “Boom corridor Thinning”**
- 2) Combined harvesting and chipping technique**



Project partners



Partner	Country	Respective funding organization	Contact person
 Swedish University of Agricultural Sciences (SLU)	Sweden	Vinnova/Formas/SWEA	Prof.dr. Tomas Nordfjell
 Universidad Politécnica de Madrid (UPM)	Spain	ES/MINECO-AEI	Prof.dr. Eduardo Tolosana
 GOZDARSKI INŠTITUT SLOVENIJE SLOVENIAN FORESTRY INSTITUTE	Slovenia	SI/MIZS	Dr. Nike Krajnc
 UNIVERSITY OF EASTERN FINLAND	Finland	FI/MMM and FI/AKA	Prof.dr Teppo Hujala
 University of Maribor Faculty of Economics and Business	Slovenia	SI/MIZS	Prof.dr. Zdenka Ženko
 Bracke Forest	Sweden	Vinnova/Formas/SWEA	CEO Klas-Håkan Ljungberg

SMALLWOOD Project WPs

WP1 Project management and monitoring

SDS1 Conv. thinning stands

SDS2 Coppice stands

SDS3 Fire prev. bush areas

SDS4 Linear areas

WP2 Harvesting- and supply systems for innovative and sustainable management of multifunctional SDS

Functionality, productivity, possible logistic systems, future development of treated stands, economic system analysis, applicability within different management systems

WP3 Socio economic aspects of the SDS stand managements

Private forest owner motivation, acceptance from the public opinion, business opportunities and rural development.

WP4 Environmental assessment of the SDS managements

Tree damages, soil damages like rutting and soil compaction, material and energy consumption and emissions to air, water and soil.

WP5 Overall analyses of the economic, social and environmental values of the SDS managements

Analyses that include results from traditional economic system analysis (WP2), socio economic analyses (WP3) and LCA analyses (WP4) into multi criteria decision analyses.

WP6 Communication and project transnational outreach



Project ID card



Countries involved: Sweden and Finland from north + Spain and Slovenia from South



Duration: from 2019 till 2022



Total budgeted: 1.225.000 €



Thematic research area: Innovative sustainable management of multifunctional forests



Overall objective: to develop and evaluate new technologies, business and operational models that can support a sustainable management and utilization of different types of small diameter wood.



Target groups: forest owners, forest contractors, Forest practitioners, general public



THANKS

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