Seeing trees and forests for the future

Assess4EST: assessment of trade-offs and potentials to breed and manage forests to meet sustainability goals

Madrid 28th September 2022

Website: https://www.luke.fi/en/projects/assess4est
Project acronym: Assess4EST

Katri Kärkkäinen, Natural Resources Institute Finland Luke

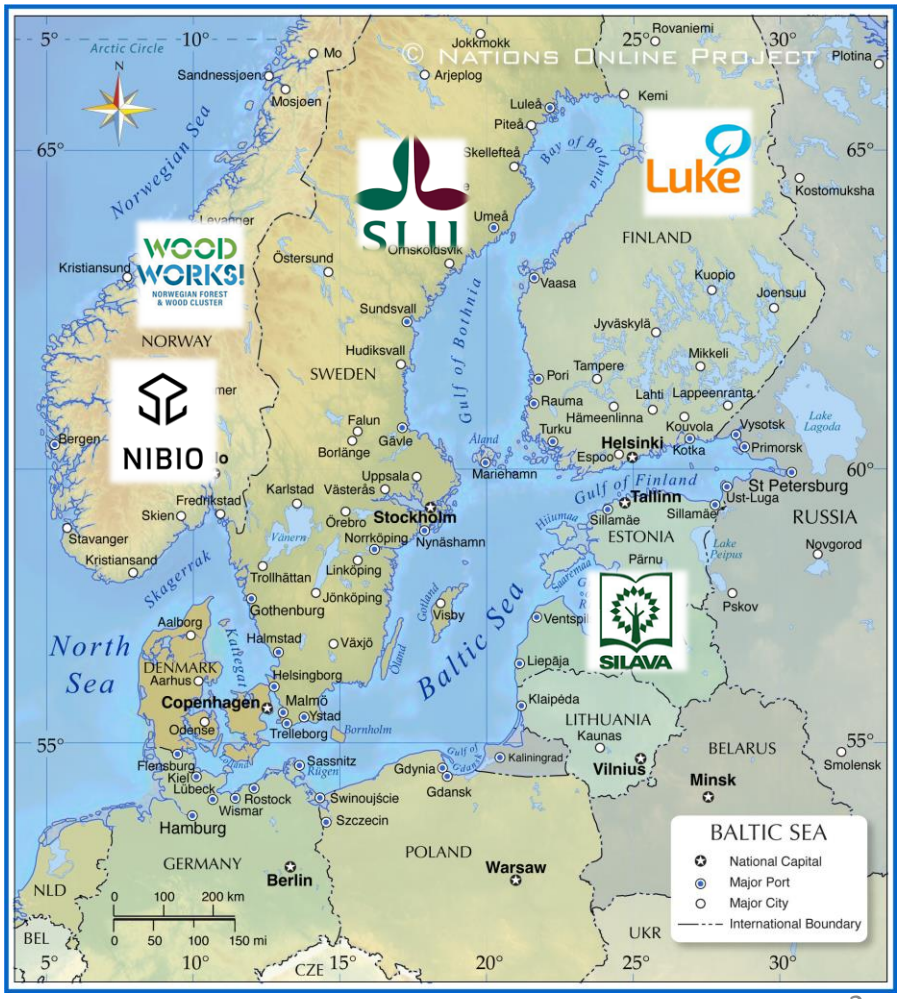
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773324

Project partners

- Luke, SLU, NIBIO, SILAVA, Woodworks!

- Total project budget 1 075 832 €

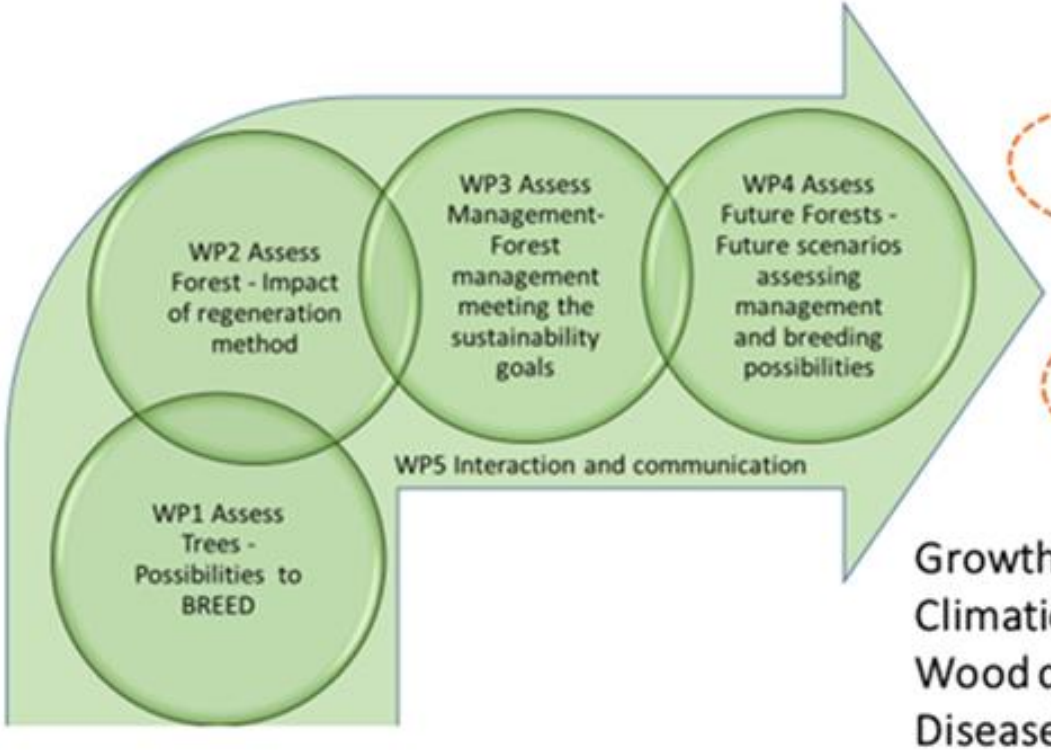
- 01.02.2022 - 31.01.2025



ForestValue

Project idea

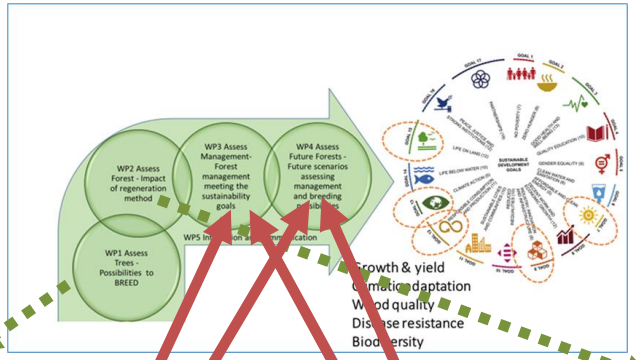
Trade-offs at different scales



Growth & yield
Climatic adaptation
Wood quality
Disease resistance
Biodiversity

WP1 Assess trees WP2 Assess forest

WPL
Rosario Garcia Gil SLU



WPL
Aris Jansons SILAVA

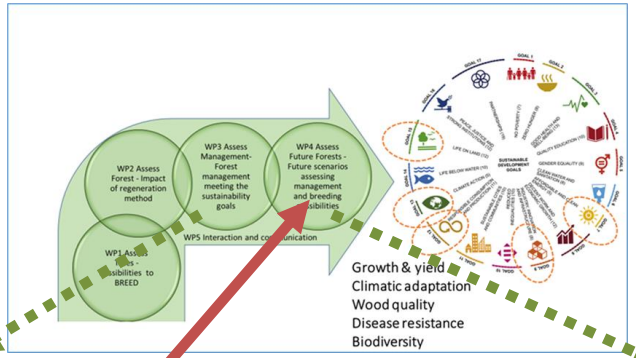
Assess possibility to breed:
- Trade-offs between growth, wood quality and adaptability to climate change; genomic and quantitative approaches, and
- estimate the potential genetic gain in different traits

Assess the impact of regeneration method:
- seedlings advanced gen breeding material;
- even-aged forestry with natural regeneration;
- continuous cover forestry

on the overall genomic variation and on the variation in important traits.

WP3 Assess mgmt WP4 Assess future forests

WPL
Jari Hynynen
Luke



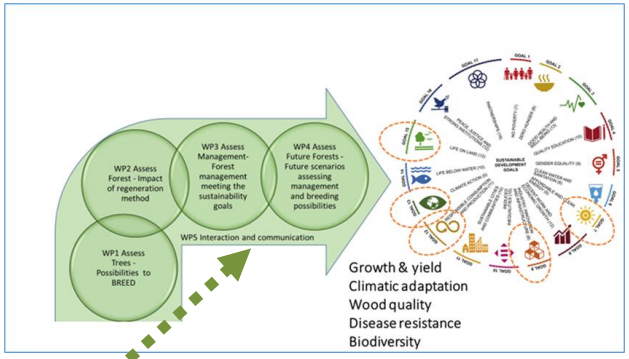
WPL
Clara Anton-Fernandez NIBIO

- Assess benefits and disadvantages of forest management alternatives on meeting the SDGs in different types of forests
- Quantify how forest management and environmental changes have changed wood properties (historical data)

- Simulate 100-years forest development using the national forest inventories and the respective forest growth simulators, creating alternative trajectories into future for forests according to current and newly developed management regimes

WP5 Interaction and communication
WP6 Project coordination

WPL
Arne Steffenrem
Nibio



Coord.
Katri Kärkkäi-
nen Luke

- Assess the future use of wood and joint building of future forest scenarios
- Build together meaningful scenarios for future forests mgmt
- Discuss together the knowledge needs stakeholders have

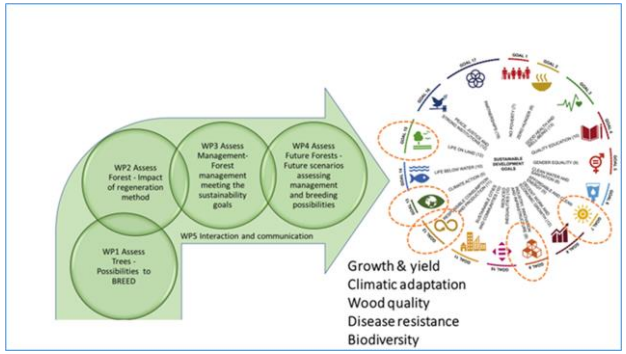
Internal organisation
- Steering group
Interaction with Forest Value Org.

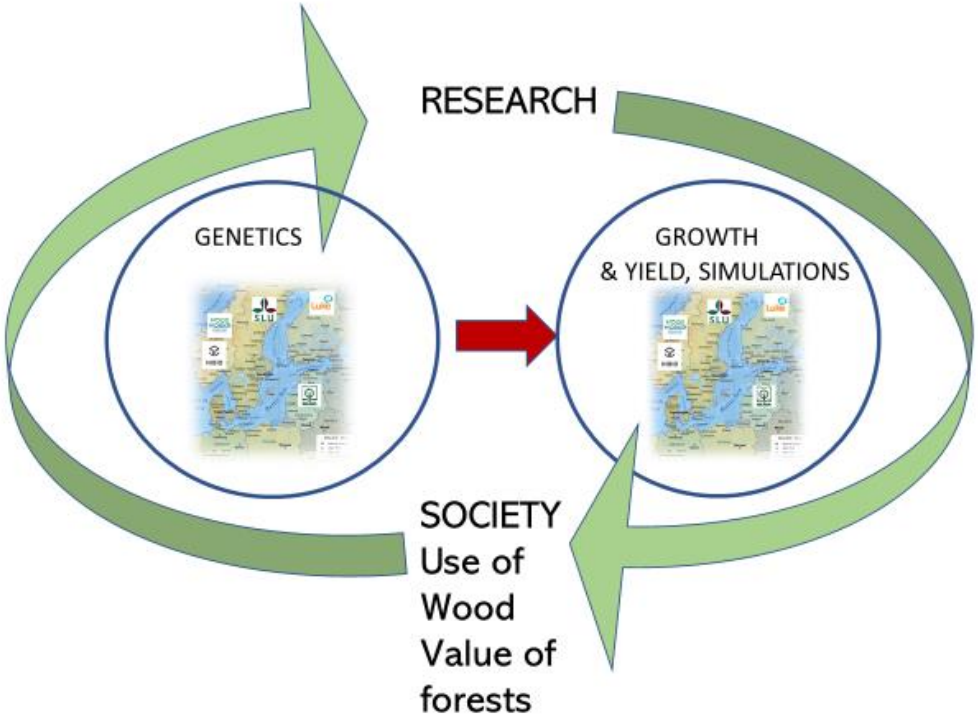
Impacts

"There is some highly relevant fundamental research included in the proposal that has much wider relevance, e.g. the impact of regeneration methods on trait variation and selection that is an aspect of forest management that is badly in need for more detailed studies.
The scenario analyses in relation to the objectives are likely to have a significant impact on forest policy and practice, in relation to the use and deployment of selected forest genetic material, on regeneration processes and on the quality and supply of round wood from European forests."

Joint Evaluation Statement – ID #087 Assess4Est

The value of scientific cooperation





Thank you!

https://www.luke.fi/en/projects/assess4est

ForestValue

Website: https://forestvalue.org/
Twitter: https://twitter.com/ForestValue2017
LinkedIn: https://www.linkedin.com/groups/12110816/