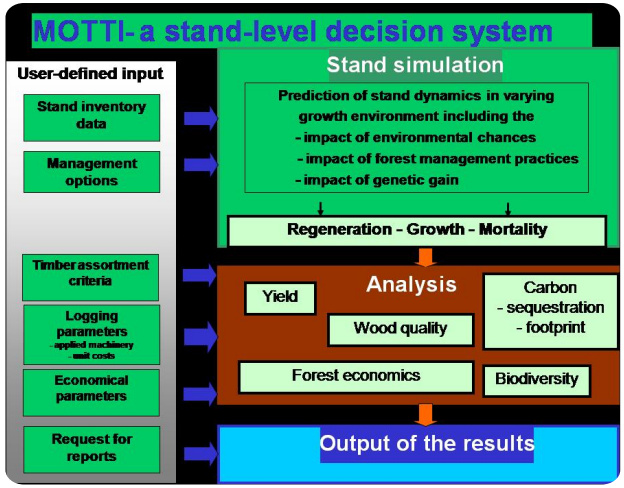
MOTTI software



MOTTI is a stand-level analysis tool and decision support software by Luke. It contains the key results of the growth and yield research carried out by Luke, which can be used to predict the growth of forests managed using different techniques. The software also enables making comparisons between different silvicultural methods. MOTTI can also be used to investigate the effects of forest management or non-management, selection of tree species, regeneration chains or individual silvicultural measures, for example, on forest growth, harvesting volumes, profitability of forestry or the amount of carbon sequestered by forests.

MOTTI is widely used among professional foresters, forest owners, teachers, researchers, authorities and companies in Finland. It has been updated regularly with the newest growth models. It has also been tailored for special purposes, e.g. for teaching and for calculating economic effects of forest protection. It has been published in several languages (Finnish, Swedish, English, Russian) and it has also been piloted in other countries and tree species.

The core of MOTTI is a stand-level simulator, which includes growth and yield models for e.g. natural regeneration, growth and mortality. It is designed to simulate stand development under alternative management regimes and growth conditions in Finland.
MOTTI predicts the development of the user-defined initial stand until the end of the rotation. The user can define various management schedules including management practices, such as precommercial and commercial thinnings, fertilization, and ditch network maintenance in peatland forests. The user can adjust parameters such as timing and intensity of thinning and proportions of tree species, and define the timing of final cut. Timber assortments include logs, pulpwood and energy wood compartments. If the user do not define management practices, MOTTI simulates a default management program for the stand based on the current recommendations for forestry practice in Finland.
For the economic analysis (net present value and bare land value), the user can enter stumpage prices by tree species and timber assortments, costs (e.g. costs of first commercial thinnings, fertilisation and ditch network maintenance) and interest rate. The results will be presented in the form tables, graphs and

files exportable to Excel.

DETAILS

ORIGIN OF WOOD

Forest

TYPE OF WOOD

Stemwood

KIND OF WOOD CONCERNED

Stemwood; Above and below ground woody biomass (ex. shrubs, wood for fibres, wood for energy)

IMPACT ON ENVIRONMENT & BIODIVERSITY

Positive, versions of software for carbon sequestrion and economical impacts of protected forests are available

INCOME EFFECT

Not possible to assess.

EXPLOITATION POTENTIAL

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HUB

Northern Hub

ECONOMIC IMPACT

MOBILIZATION POTENTIAL

Not possible to assess.

SUSTAINABILITY POTENTIAL - VALUE

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EASE OF IMPLEMENTATION

Easy

EASE OF IMPLEMENTATION - EVALUATION

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KEY PREREQUISITES

Application loadable on Luke web pages (Windows 7):

http://www.metla.fi/metinfo/motti/asennus.htm (Finnish version)

http://www.metla.fi/metinfo/motti/index-en.htm (English version)

New versions will be published in 2019 (Windows 10).

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED

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JOB EFFECT

Positive, helps in planning of forest operations

COSTS OF IMPLEMENTATION (EURO - €)

Positive, helps in planning of forest operations	--

SPECIFIC KNOWLEDGE NEEDED

Normal IT skills

MORE DETAILS

CHALLENGE ADDRESSED

5.- Enhance economic and environmental performance of forest supply chains

DOMAIN

Forest management, ecosystem, resilience

TYPE OF SOLUTION

Design software

KEYWORDS

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DIGITAL SOLUTION

Yes

INNOVATION

No

COUNTRY OF ORIGIN

Finland

SCALE OF APPLICATION

Cross-border/multi-lateral (several countries)

START AND END YEAR

2005 -

CONTACT DATA

OWNER OR AUTHOR

Natural Resources Institute Finland (Luke)

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

REPORTER

REFERENCES AND RESOURCES

MAIN WEBSITE

https://www.luke.fi/en/natural-resources/forest/silviculture/motti-software-enables-the-comparison-of-different-techniques/

RESOURCES

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PROJECT WEBSITE

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PROJECT REFERENCE

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LOGO OF BEST PRACTICE

LOGO OF MAIN ORGANIZATION



PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood

POST DATE

17 Sep 2019





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

Link to Rosewood 4.0



A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

