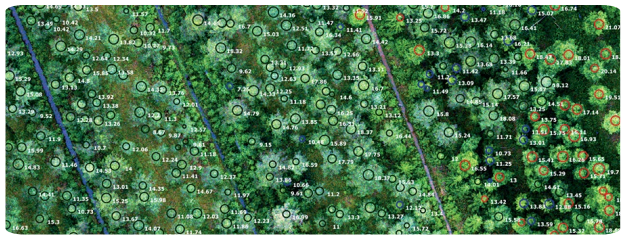
Drones in Forestry Planning



Metsä Group photographed in 2018 with drone about 3 500 hectares of forest in southern and western Finland and utilized the data as basis for forest plans for forest owners. According to experience, the method has been developed and now the drone forest plans are being sold as an alternative to traditional forest plans. The forest plan based on information described by Drone or copter with camera challenges the traditional forest planning. The method is used in particular to get more accurate tree information.

The drone plan will be of interest to the forest owners who want to be in the front and develop new developments with forest industry. For example, in a virtual forest, the data measured in the drone will create a precise tree map, where the trees are in the right places and the tree species are correct. In virtual reality, it will better reflect the fluctuations of the wood inside the forest compartment than the traditional forest plan information. The drone design and virtual forests form an interesting pair in the future by producing new experiences for forest owners.

The measurements will provide both the amount of trees in cubic meters and the value of the wood in euros more accurately than before. With drone surveys we also get information about the amount of dead wood – it helps to preserve the important structure of forest for diversity.
The method is capable of identifying tree three species: pine, spruce and birch. The remaining deciduous tree species are logged into the category of other deciduous trees. Based on the measurement data, treatment recommendations are calculated. This drone-made plan differs from the traditional, where human being makes the treatment recommendations.
The forest plan produced by drone is particularly suitable for updating the forest plan that is about to expire. It is also suitable for forest owners, who are particularly interested in the amount and value of the timber.
The forest plan of the drone also benefits from a faster delivery of traditional forest plan. Delivery time is few months, which is only half of the delivery times of traditional forest plan.

DETAILS

ORIGIN OF WOOD

Forest

TYPE OF WOOD

Stemwood

KIND OF WOOD CONCERNED

Stemwood, energy wood

IMPACT ON ENVIRONMENT & BIODIVERSITY

Positive

INCOME EFFECT

Positive

EXPLOITATION POTENTIAL

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HUB

Northern Hub

ECONOMIC IMPACT

Positive

SPECIFIC KNOWLEDGE NEEDED

IT skills, knowledge of forest planning processes

MOBILIZATION POTENTIAL

Medium

SUSTAINABILITY POTENTIAL - VALUE

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EASE OF IMPLEMENTATION

Easy, requires IT skills

EASE OF IMPLEMENTATION - EVALUATION

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KEY PREREQUISITES

IT skills needed, co-operation needed between IT companies and forest companies

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED

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JOB EFFECT

Positive

COSTS OF IMPLEMENTATION (EURO - €)

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MORE DETAILS

CHALLENGE ADDRESSED

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

DOMAIN

Forest management, ecosystem, resilience

TYPE OF SOLUTION

Advice and services for forest owners

KEYWORDS

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DIGITAL SOLUTION

No

INNOVATION

Yes

COUNTRY OF ORIGIN

Finland

SCALE OF APPLICATION

National

START AND END YEAR

2017 -

CONTACT DATA

OWNER OR AUTHOR

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REPORTER

REFERENCES AND RESOURCES

MAIN WEBSITE

https://www.metsaforest.com/fi/Yritys/Tiedotteet/Pages/Tiedote.aspx

PROJECT WEBSITE

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PROJECT REFERENCE

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RESOURCES

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LOGO OF BEST PRACTICE

LOGO OF MAIN ORGANIZATION

Metsä

PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood

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