

Description of best practice

Best practice		
Title	Drones in Forestry Planning	
Picture		
Domain	Forest Management	
Source of	Stemwood	
wood		
Location	Finland	
Implementers	Metsä Group	
Actual status	Running since 2018	
Approach	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.	
Main results	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.	



	traditional forest plan. Delivery time is few months, which is only half of the delivery times of traditional forest plan.
Lessons learned	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.
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Code	BP_FI_20



Best practice assessment

Region	Finland
Time scale	Running
Mobilization Potential	Medium
Kind of wood concerned	Stemwood, energy wood
Sustainability Potential	High
Impact on environment	Positive
& biodiversity	
Ease of implementation	Easy, requires IT skills
Economic impact	Positive
Job effect	Positive
Income effect	Positive
Specific knowledge needed	IT skills, knowledge of forest planning processes
Costs of implementation	Low
Technical readiness level	Applicable
Key information for	IT skills needed, co-operation needed between IT
adoption	companies and forest companies