HCT lorries (High Capacity Transport)

Heavy-duty vehicles can increase the efficiency of timber transport and reduce emissions to the environment.

Transportation costs are the most costly part of wood mobilization especially in sparsely populated areas with long distances. The distance between forest and factory can be over 500 kilometers. To reduce costs of long-distance transportation of wood, bigger lorries were innovated and are now tested in Finland in a research project. The environmental effects and traffic safety are also explored.

Full utilization of HCT vehicles requires maintenance of road networks including forest roads, main roads, and bridges.

The 33-metric vehicle combination is able to carry even 70 tons of wood. The vehicle consumes less fuel than the smaller one and therefore contributes to reducing the environmental effects of transportation. The vehicles will also contribute to traffic safety since fewer vehicles will be needed to wood transportation in the future.

The research project is participated by experienced research institutes: Aalto University, Oulu University, Metsäteho, and Tampere Technical University. In the research project, the impacts on the road as well as the features of the lorries are investigated: braking distances, passing capacity, oscillations of the vehicle, and curve driving. The consumption of fuel, emissions, and durability of tires are also focused on.

Cost efficiency is gained in long-distance transportation of wood. The HCT vehicles reduce transportation costs and carbon emissions.

The first combination to transport wood started shipping with a pilot permit in December 2020.

DETAILS

ORIGIN OF WOOD
Forest

TYPE OF WOOD
Stemwood

KIND OF WOOD CONCERNED
Stemwood

IMPACT ON ENVIRONMENT & BIODIVERSITY
Reduces carbon emissions, consumes less fuel than smaller vehicles

INCOME EFFECT
Positive

EXPLOITATION POTENTIAL
--

HUB
Northern Hub

ECONOMIC IMPACT
Less transportation costs, positive effect to climate change

SPECIFIC KNOWLEDGE NEEDED
Skills to handle bigger vehicles

MOBILIZATION POTENTIAL
High

SUSTAINABILITY POTENTIAL - VALUE
--

EASE OF IMPLEMENTATION
Easy

EASE OF IMPLEMENTATION - EVALUATION
--

KEY PREREQUISITES
Involvement of relevant stakeholder, incl. traffic bureau and other authorities

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED
--

JOB EFFECT
Positive

COSTS OF IMPLEMENTATION (EURO - €)
--

MORE DETAILS

CHALLENGE ADDRESSED

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

DOMAIN

Harvesting, infrastructure, logistics

TYPE OF SOLUTION

--

KEYWORDS

--

DIGITAL SOLUTION

No

INNOVATION

No

COUNTRY OF ORIGIN

Finland

SCALE OF APPLICATION

Regional/sub-national

START AND END YEAR

2015 - 2019

CONTACT DATA

OWNER OR AUTHOR

Metsähallitus

juha.pyhajarvi@metsa.fi

REPORTER

REFERENCES AND RESOURCES

MAIN WEBSITE

http://www.e-julkaisu.fi/metsahallitus/autoesite/

PROJECT WEBSITE

--

PROJECT REFERENCE

--

RESOURCES

--

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

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY