

## WATERWAY TRANSPORT HAS THE BEST SOCIO-ECONOMIC IMPACT



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### Cost Benefit Analysis at Lake Saimaa

Different transport alternatives for pulp from Joensuu, Finland to Dusseldorf, Germany were studied and compared in order to understand which of the transport alternatives is preferable from a socio-economic point of view.

This socio-economic analysis covered the costs related to the different transport scenarios that society values and can put a price on. All

alternatives were calculated one-way direction from Joensuu to Düsseldorf and on a condition of fully loaded vessel, truck or train for a yearly volume of 200 000 mt.

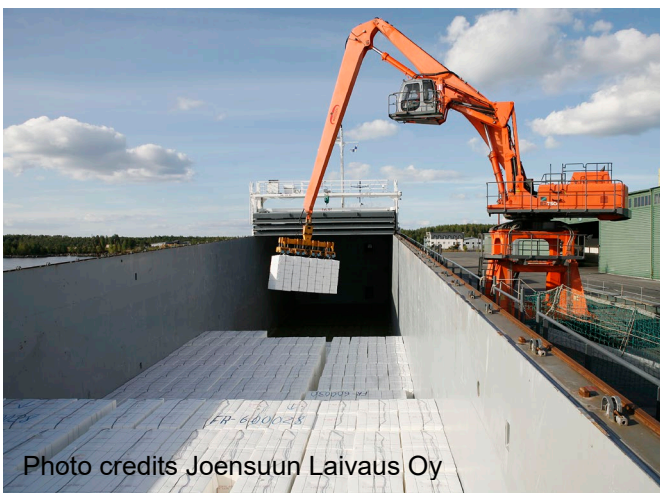


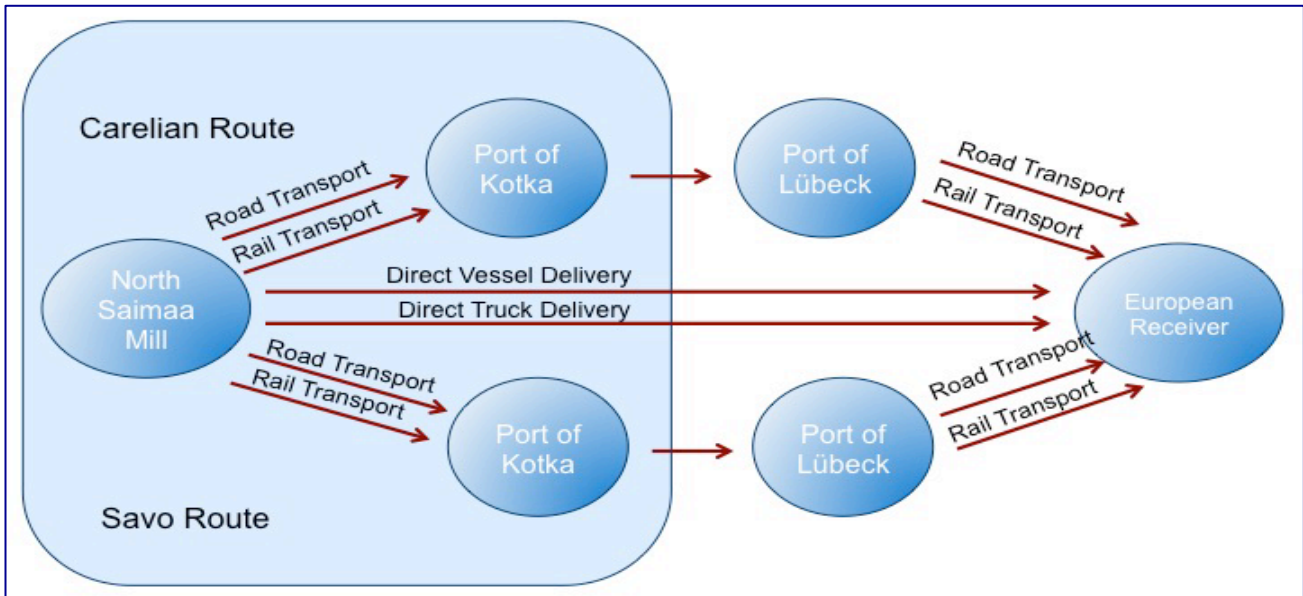
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### Choose Waterways

The results from the socio-economic calculation show that direct vessel transport from Joensuu to Dusseldorf is the most advantageous. This applies both to the total costs as well as the costs that affects society in terms of wear and tear, accident costs and emissions. The fact that the total socio-economic costs are lowest for this option indicates that it is beneficial for the society to try to influence carriers to choose this transport mode.

**Outcome:** Direct vessel transport has the **lowest summarized socio-economic costs** and therefore can be considered the best of the alternatives studied.

	A1 Direct Vessel	A2a Truck + RoRo	A2b Truck + Ferry	A3 Truck + GC Ship	A4 Train + GC Ship	A5 Truck + GC Ship	A6 Train + GC Ship
Total cost [MEUR]	351,7	718,2	1 456,3	766,6	438,9	778,6	453,3



### The following alternative routes were studied

- **A1** Direct vessel – General cargo ship 2 500 dwt and 3 200 dwt
- **A2a** Truck (Carelian route) - RoRo ship 9 500 dwt-Truck
- **A2b** Truck (Carelian route) - Ferry -Truck
- **A3** Truck (Carelian route) - General cargo ship 4 500 dwt -Truck
- **A4** Train (Carelian route) - General cargo ship 4 500 dwt -Train
- **A5** Truck (Savo route) - General cargo ship 4 500 dwt -Truck
- **A6** Train (Savo route) - General cargo ship 4 500 dwt –Train



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The Finnish Waterway Association ([www.vesitiet.org](http://www.vesitiet.org)) and Finnish Transport Agency ([www.liikennevirasto.fi](http://www.liikennevirasto.fi)) assigned M4Traffic Ab, Sweden ([www.m4traffic.se](http://www.m4traffic.se)) to conduct the Cost Benefit Analysis (CBA) at the Saimaa Lake. This work was accomplished under international EMMA project. EMMA - “Enhancing freight Mobility and logistics in the BSR by strengthening inland waterway and river sea transport and promoting new international shipping services”. EMMA, 3-year project (1.3.2016-28.2.2019), co-financed by the Baltic Sea Region Programme using available funding from the EU’s European Regional Development Fund (ERDF).

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