

TRANSPORT & MOBILITY LEUVEN

TREMOVE Contact Group Meeting

27-28 May 2004

The Inland Waterway Module in TREMOVE

Focus on baseline modelling
(Bart Van Herbruggen)

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Output from demand module

Ton-kilometres

- Short Distance
 - Bulk
 - General Cargo
 - Unitised
- Long Distance
 - Bulk
 - General Cargo
 - Unitised

For AT, BE, CH, CZ, DE, FR, HU, IT, PL, NL

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Vessel types

Weight class / vessel type	Tanker Vessel	Pusher Craft	Dry Cargo Vessel
< 250 tonnes			
250 – 400 tonnes			
400 - 650 tonnes	It is infeasible to define vessel stocks per country. Therefore a different approach is used applying allocation keys		
650 – 1000 tonnes			
1000 – 1500 tonnes			
1500 - 3000 tonnes			
>3000 tonnes			

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Inland Waterways : Methodology

Tkm Short Distance - Tkm Long Distance

Demand Module

Allocation Keys (% tkm)

Bulk General Cargo Unitised

Tanker < 250T ... Tanker > 3000T ... Pusher < 250T ... Pusher > 3000T

Load Factors

Vehicle -kilometres by ship type, commodity and distance class

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Allocation keys : initial data

Netherlands dB (CBS) - 1995 & 2000

- Short Distance : NL domestic trips :
 - Tkm by commodity and ship type → Allocation key (NL)
 - Load factor by commodity and ship type
- Long Distance : International trips through NL :
 - Tkm by commodity and ship type → Allocation key (All)
 - Load factor by commodity and ship type
 - dB represents 70% of all international trips in EU

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Other countries : Short Distance

Short distance allocation keys : only data for NL

For other countries :

- Adapted NL allocation keys by correcting for differences in inland waterway network characteristics
- Network data available from SCENES (1995 & 2020)
- Load factors equal to NL

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Forecast

- ◆ TREND in vessel fleet taken from NL AVV forecast for 2000 - 2015
- ◆ Additional info on changes in network 1995-2020 taken into account (~SCENES)

➔ Produced future allocation keys with complex iterative procedure :

- Apply growth rates to each ship type
- Sum over allocation keys should be 100%

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Inland Waterways : Example

Allocation Key - Belgium Short Distance Bulk

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Inland Waterways : Example

Allocation Key - Belgium Bulk Long Distance

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Results (all relevant countries)

Vehicle-km by ship type (millions)

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Results (all relevant countries)

Vehicle-km by ship type (%)

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Inland Waterways : Issues

National data to derive and/or validate short distance allocation keys

Further disaggregation of > 3000 pusher-barge combinations (limited data)

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