

TREMOVE Contact Group Meeting

27-28 May 2004

The Maritime Module in TREMOVE

Focus on baseline modelling

(Griet De Ceuster)

A Specific Maritime Module

- ◆ No maritime transport in the demand module
 - ➔ No substitution between maritime and other modes
 - ➔ Maritime vessel-kms are modelled, not tkm/pkms
- ◆ TREMOVE reproduces maritime emission calculation methodology by ENTEC

ENTEAC, *Quantification of emissions from ships associated with ship movements between ports in the European Community*. Final report to the European Commission, July 2002.

Geographic Coverage

- ◆ Irish Sea
- ◆ English Channel
- ◆ North Sea
- ◆ Baltic Sea
- ◆ Mediterranean
- ◆ North East Atlantic Ocean
- ◆ Rest of EMEP

Ship Types in TREMOVE

27 ship types (> 500 ton)

*A11	Liquefied Gas	*A36	Passenger/Ro-Ro Cargo
*A12	Chemical	*A37	Passenger
*A13	Oil	*A38	Other Dry Cargo
*A14	Other Liquids	*B11	Fish Catching
*A21	Bulk Dry	*B12	Other Fishing
*A22	Bulk Dry / Oil	*B21	Offshore Supply
*A23	Self Discharging Bulk Dry	*B22	Other Offshore
*A24	Other Bulk Dry	*B31	Research
*A31	General Cargo	*B32	Towing / Pushing
*A32	Passenger/General Cargo	*B33	Dredging
*A33	Container	*B34	Other Activities
*A34	Refrigerated Cargo	*W11	Other Activities
*A35	Ro-Ro Cargo	*W12	Other Activities
		*W13	Other Activities

5 engine types

slow speed diesel
medium speed diesel
high speed diesel
gas turbine
steam turbine

3 fuel types

marine gas oil
marine diesel oil
marine residual oil

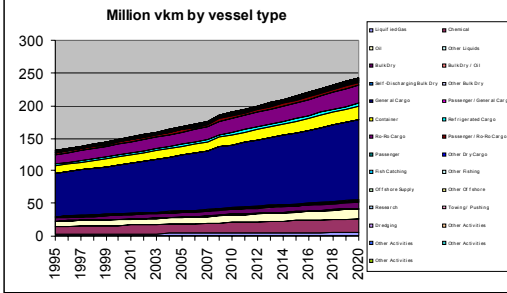
Baseyear Maritime Vessel Activity

- ◆ ENTEC project :
 - 2000 Lloyds data on ship movements (4 months)
 - Extrapolated to 12 months
 - Implemented in GIS environment
- ◆ TREMOVE project :
 - Aggregated to vkm by ship type per sea region
 - Aggregated to port callings per ship type per country

Forecast Maritime Vessel Activity

- ◆ yearly growth rate from SCENES (≠ ENTEC)
- ◆ Constant fleet composition assumed (= ENTEC)

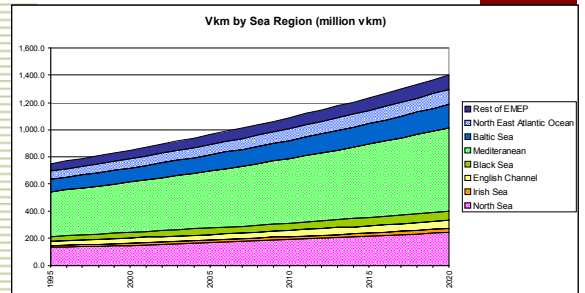
Results : Vkm by ship type (e.g. North Sea)



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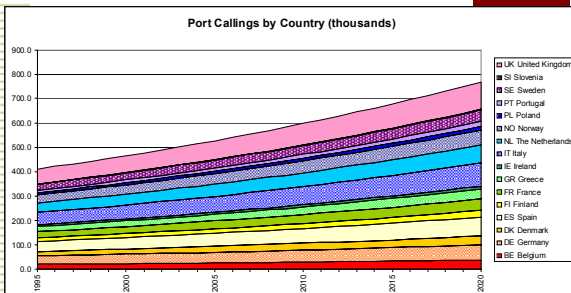
Results : Vkm by sea region



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Results : Port Callings by Country



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Further work on maritime

- ♦ Adding ferry activity
 - Data received from ENTEC
- ♦ Stakeholder comments and suggestions

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