

INLAND WATERWAYS

Internalisation of external costs, 17 December 2018

INLAND NAVIGATION EUROPE

Contributing to long-term strategies for sustainable transportation by moving more goods and people by water in EU regions and cities with accessible and navigable rivers and canals.

WHO Network of waterway managers, ministries and organisations promoting waterway transport

WHAT

- EU advocacy for policies which make waterway transport easier to use
- Promotion
- Networking

WHY

- Use better existing asset of waterways
- Improve mobility and quality of life with more freight and people on water



URBAN CONGESTION



CONGESTION COST in EU



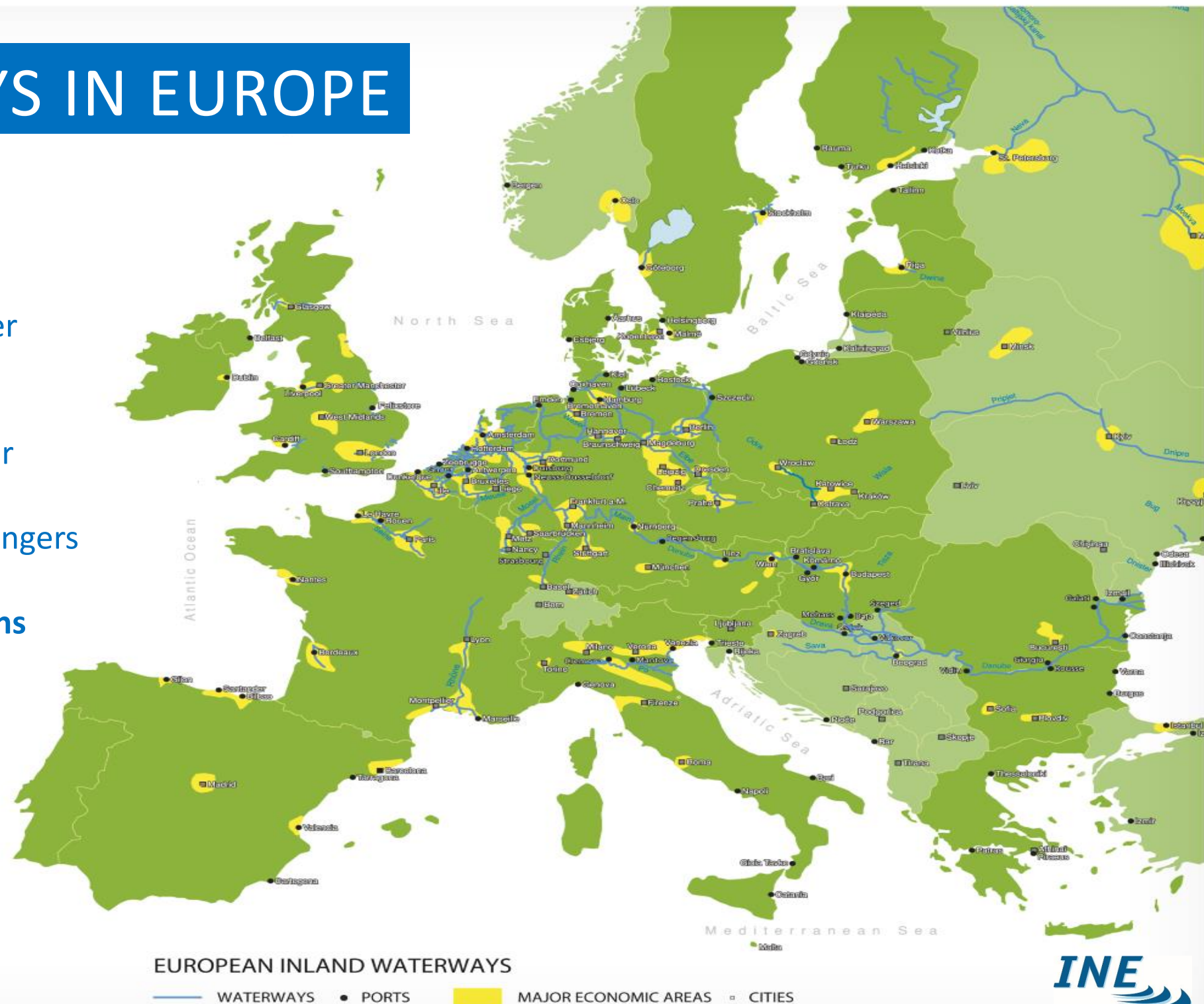
WATERWAYS IN EUROPE

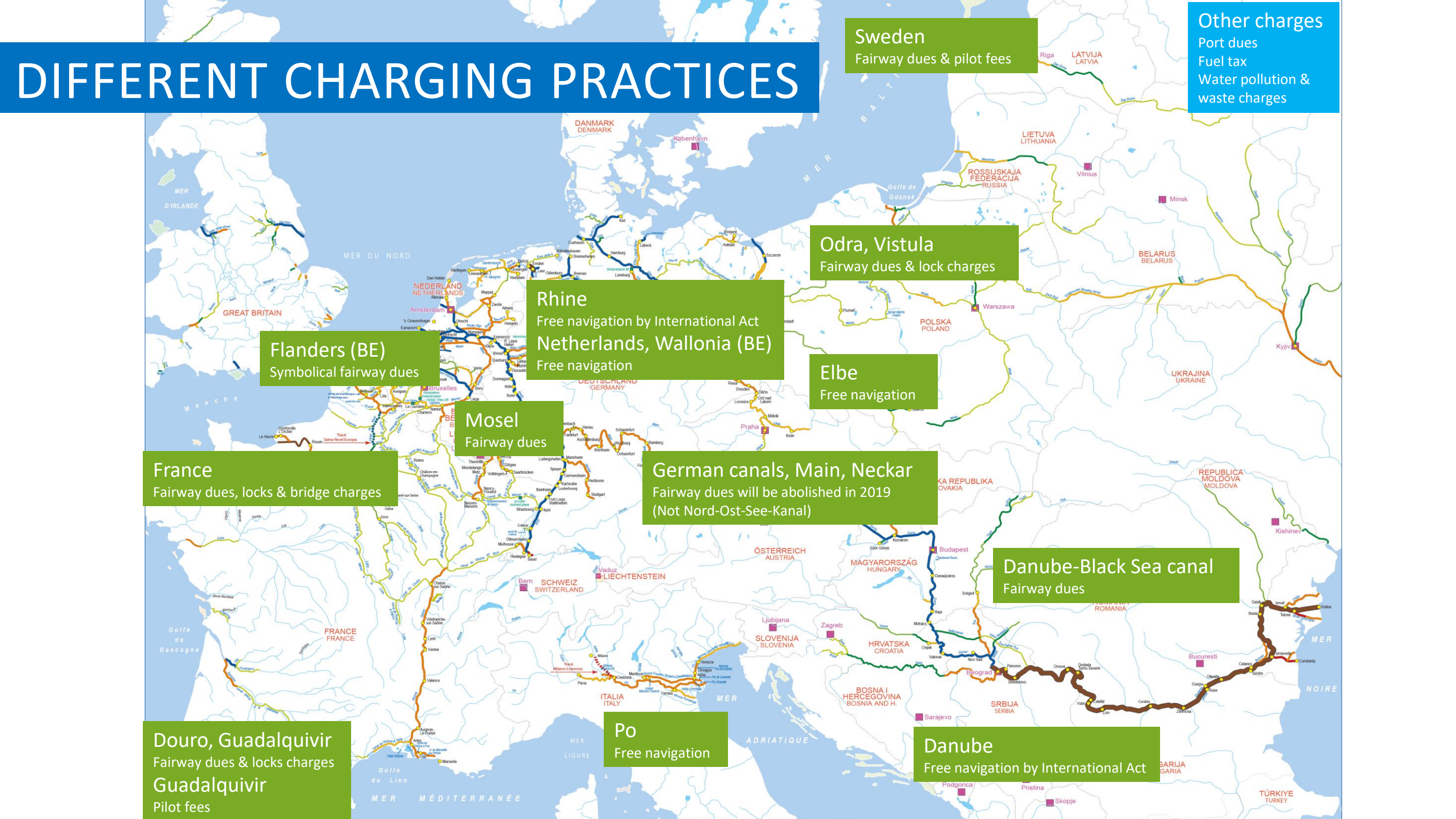
EU Waterways

- 40,000 km
- 19 out of 28 EU Member States have navigable waterways
- 550 mln tonnes per year
- 150 mln t/km per year
- 2 digit growth for passengers

Links up many cities & towns

- Freight
- Passengers





DIFFERENT CHARGING PRACTICES

Sweden
Fairway dues & pilot fees

Other charges
Port dues
Fuel tax
Water pollution & waste charges

Odra, Vistula
Fairway dues & lock charges

Rhine
Free navigation by International Act
Netherlands, Wallonia (BE)
Free navigation

Elbe
Free navigation

Flanders (BE)
Symbolical fairway dues

Mosel
Fairway dues

France
Fairway dues, locks & bridge charges

German canals, Main, Neckar
Fairway dues will be abolished in 2019
(Not Nord-Ost-See-Kanal)

Danube-Black Sea canal
Fairway dues

Douro, Guadalquivir
Fairway dues & locks charges
Guadalquivir
Pilot fees

Po
Free navigation

Danube
Free navigation by International Act

ESTIMATING EXTERNAL COSTS

- Inland waterway transport sector contributes with data to the GLEC (Global Logistics Emissions Council) framework
- Quality of current datasets \neq reliable
 - Use of model for calculation of external costs \rightarrow large bandwidths
 - No solid basis \rightarrow First, knowledge base needs to be improved with real-life data

Most significant issues to be addressed:

- lack of reliable & detailed data on **fuel consumption** of inland vessels (and consequently the related emissions to air)
- lack of reliable data on **average tonnage per travelled kilometre** carried by inland vessels, properly taking into account load factor and travel conditions
- lack of **geographic detail** to determine the level of NO_x and PM_{2.5} emissions by waterway transport on people living around waterways and ports



OVERCOME DATA GAPS

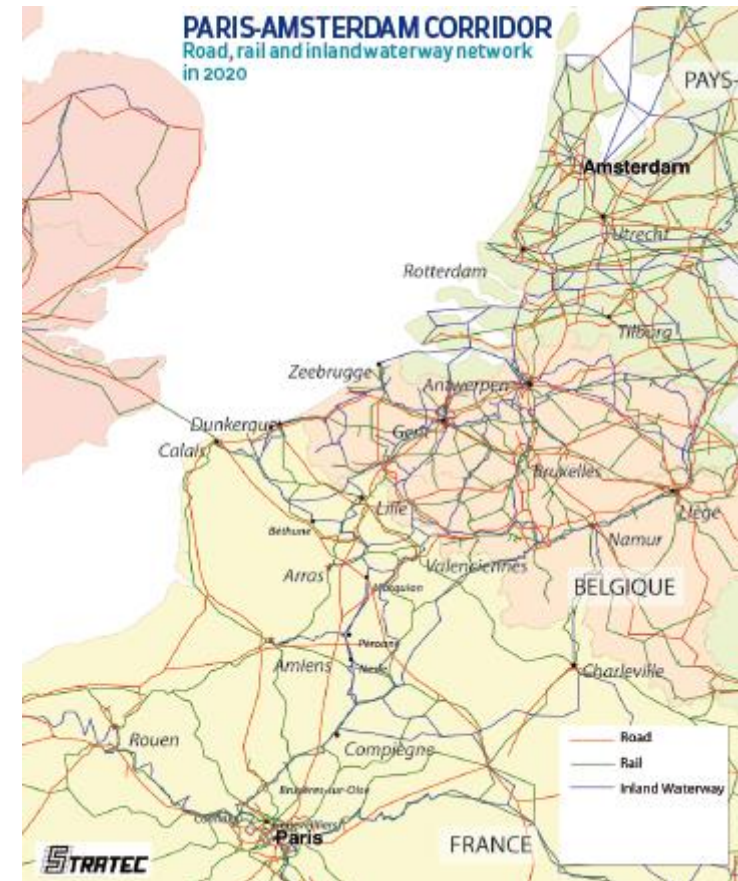
- Collect and disseminate information on fuel consumption and sailing speeds of vessels on waterway sections
- Collect and disseminate information on average loading factors and empty sailings of vessels
- Take into account the geographic location of air pollutants to determine the impact of NO_x and PM emissions to air by IWT, through the use of a combination of sources
- Collect better information about the engines installed in inland waterway vessels
- Make further differentiation in larger vessel size classes
- Collect data on real world emissions and derived emission factors (in g/kWh) through on-board measurements under actual sailing conditions.



SCENARIO STUDY

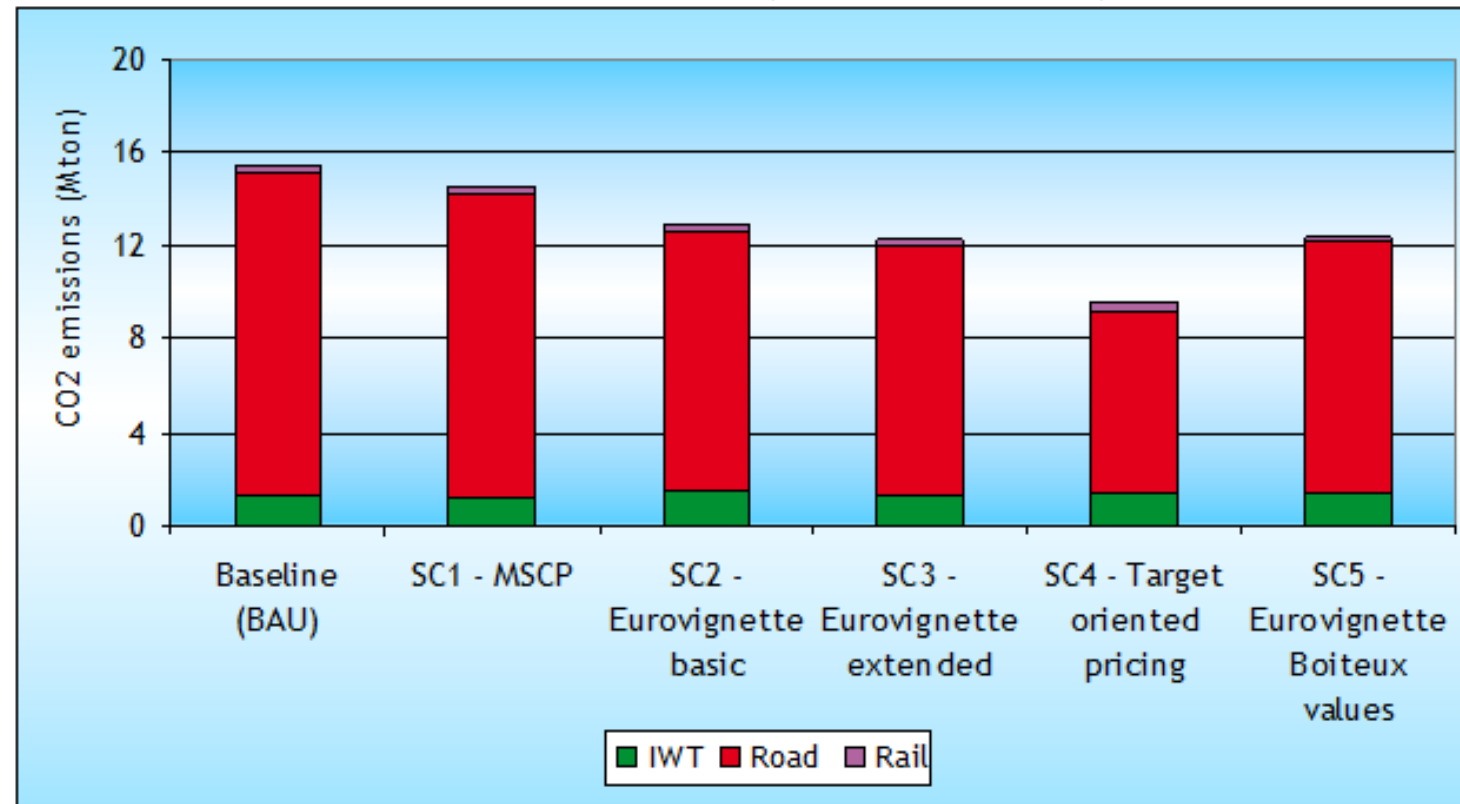
Internalisation of external costs: Paris-Amsterdam corridor (CEF study 2013)

- Aim: encouraging transport users to choose the option that puts the lightest burden on society in congested international freight corridor
- Joint study by 6 partners from 3 countries
- Assessment of external and infrastructure costs
- 5 internalisation scenarios within traffic model



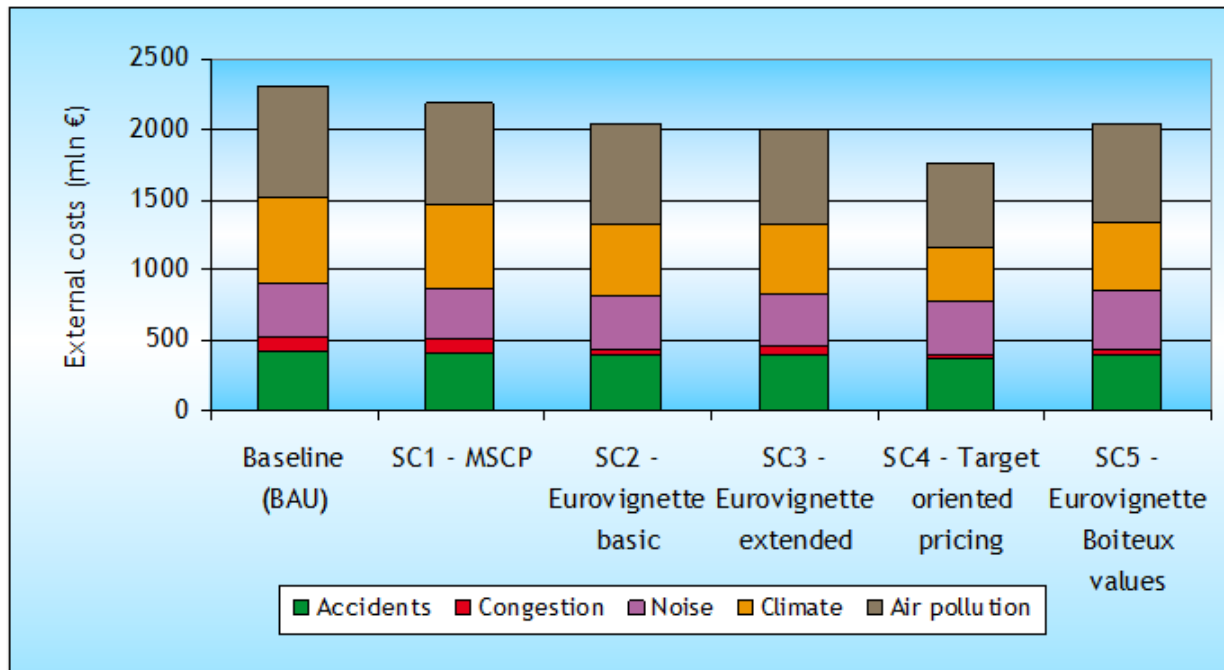
SCENARIO STUDY

CO2 emissions (million tonnes)

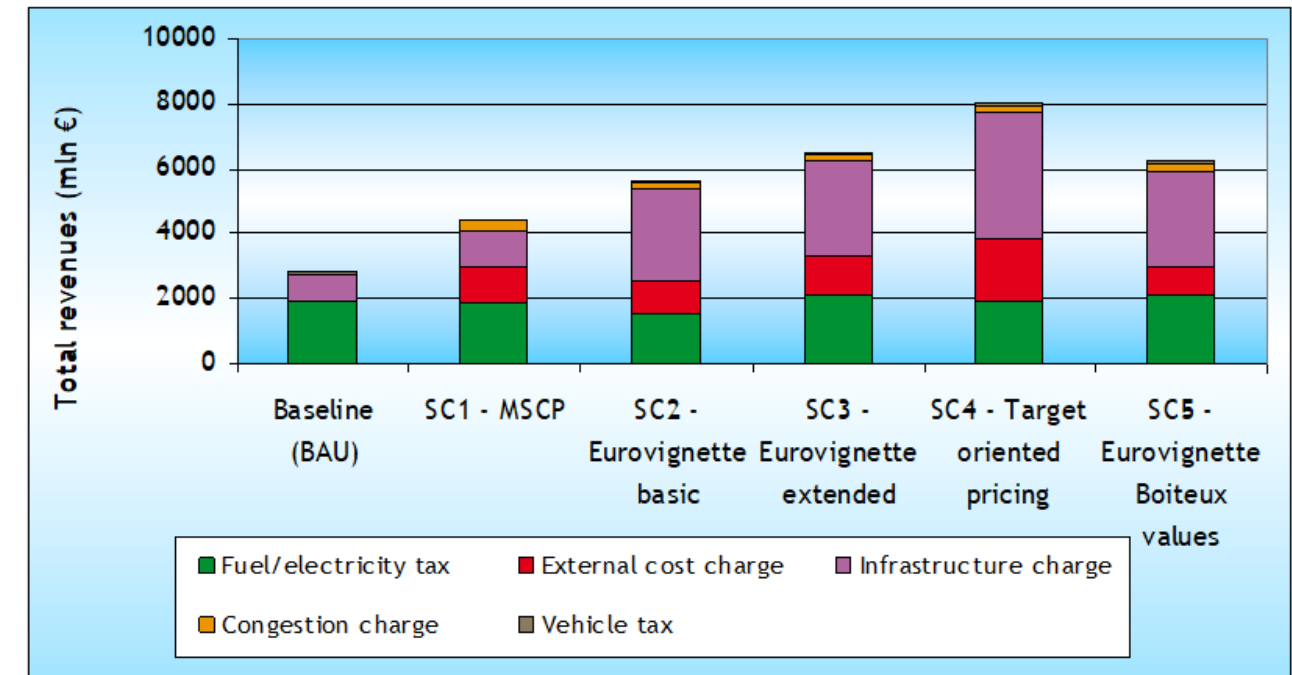


SCENARIO STUDY

External costs (mln €)



Total revenues (mln €)



MULTI-PURPOSE WATERWAYS

Infrastructure management and investments address simultaneously multiple purposes

- Water supply
- Flood protection
- Nature protection
- Leisure and tourism
- Energy production
- Transport of goods and people

= integrated management



WAYS FORWARD

Important steps

- DATA
 - Close knowledge gaps
- EXTERNAL COSTS
 - Achieve sustainable transport and GHG targets
 - Reduce congestion
 - Increase quality of life
- INVESTMENT and OPERATION COSTS
 - Multi-purpose character of waterways

