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Medium and long term perspectives of Inland Waterway Transport in the European Union

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Introduction – the context

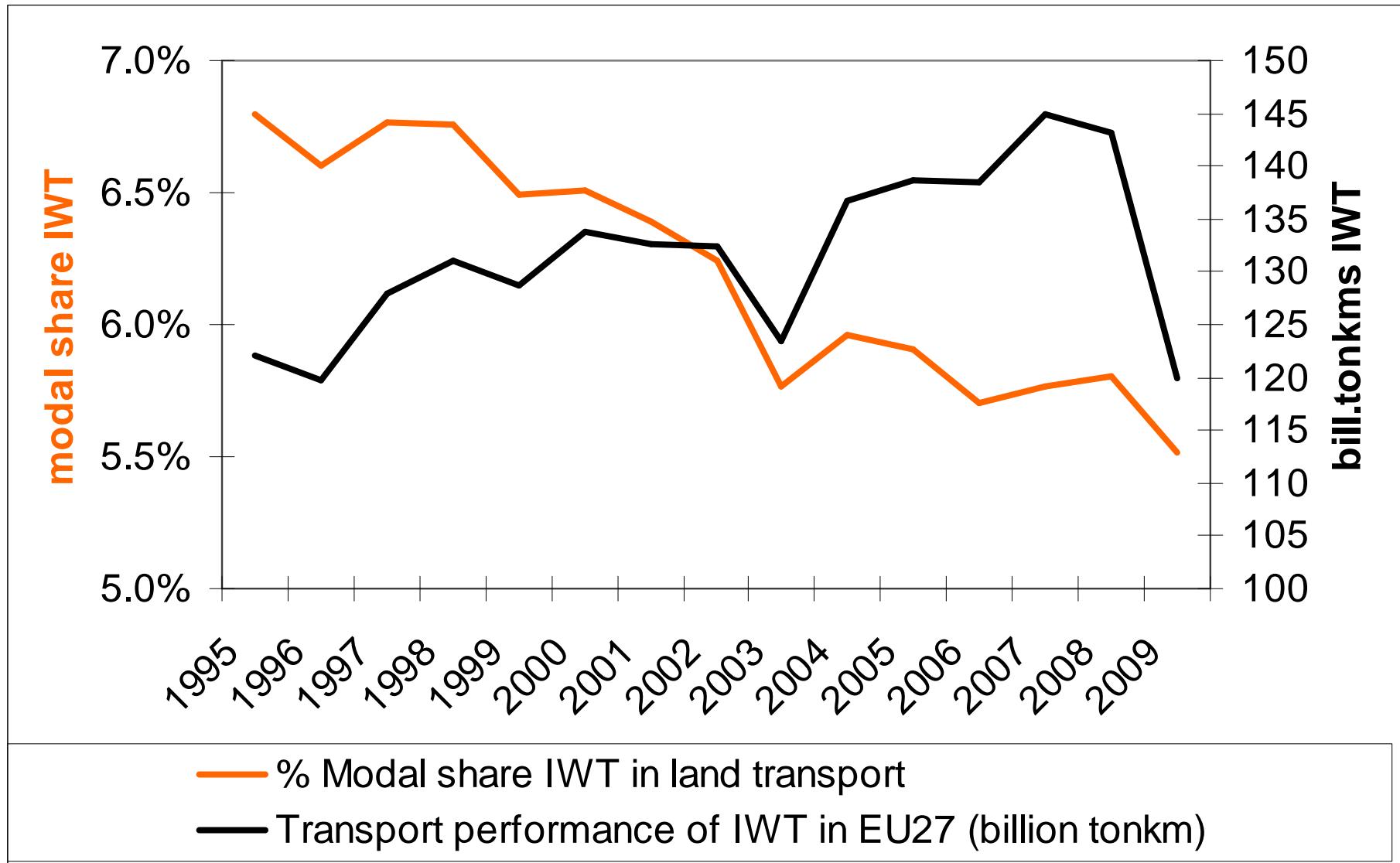


- Transport is fundamental to our economy and society.
- Oil will become scarcer and more uncertain supplies
- Congestion on the roads is a major concern.
- White Paper 2011 objectives:
 - ◆ Reduce CO₂ emission
 - ◆ Modal split increase for rail and waterborne against road

Introduction – big momentum for IWT

- Solutions needed:
 - ◆ Reduce oil consumption and CO2 emission
 - ◆ Absorb expected growth of freight transport
- IWT can contribute through intrinsic merits:
 - ◆ Low carbon footprint, low energy consumption
 - ◆ Very low directs movement costs
 - ◆ Spare capacity on the network, negligible congestion
 - ◆ High transport capacity and reliability
 - ◆ Safe and secure services for clients
- IWT plays an important role
 - ◆ Pole position in bulk shipments and container transport in areas with high quality inland waterways

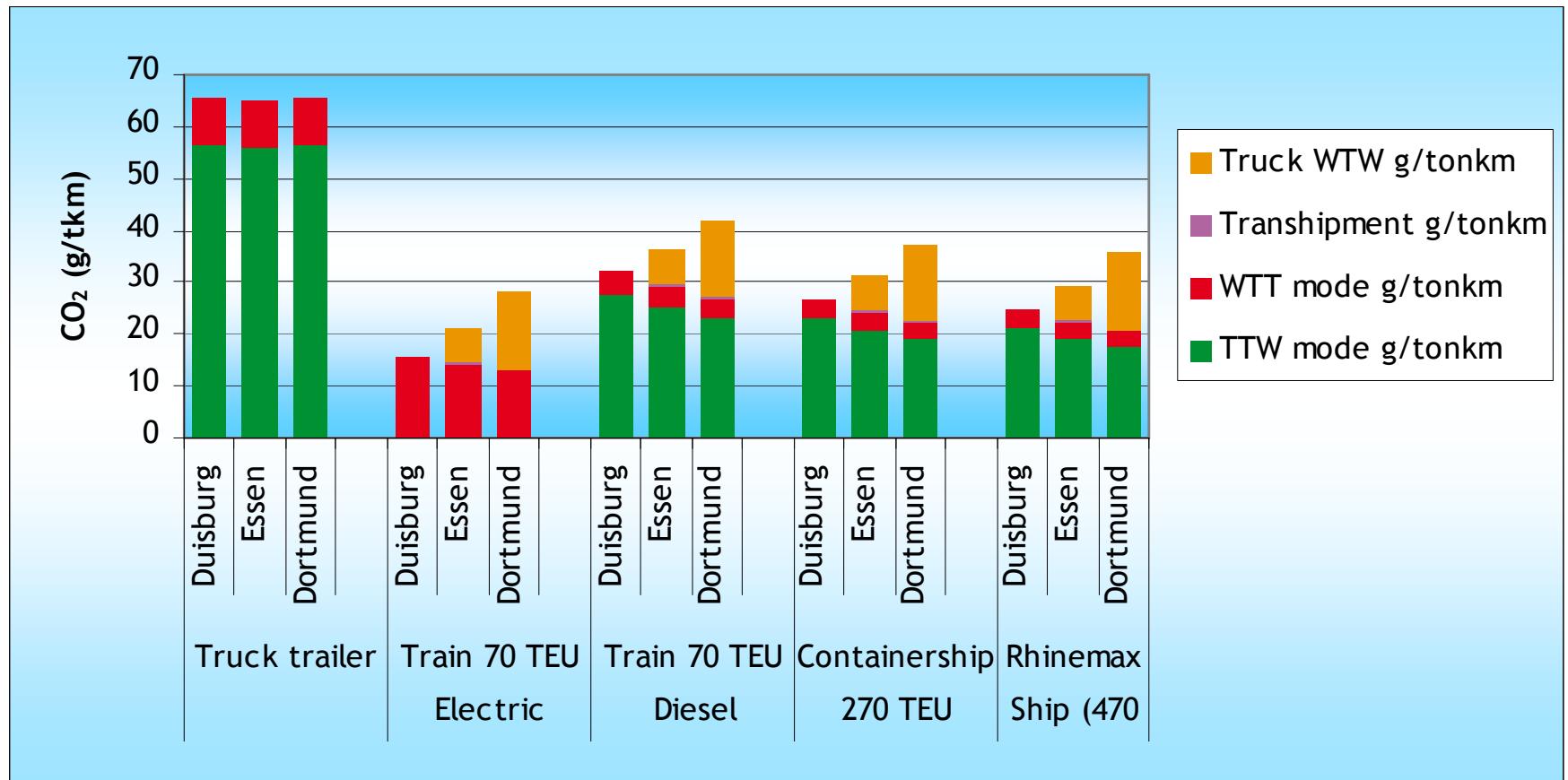
Current position – Modal share of IWT and tonkms of IWT



Current position of IWT – key figures

- **Modal of IWT for EU 27 is declining:**
 - ◆ 6.8% in EU27 in 1995 and 122 billion tonkms
 - ◆ 5.8% in EU 27 in 2007 and 145 billion tonkms
 - ◆ 5.5% in EU 27 in 2009 and 120 billion tonkms
- **Size of IWT supply market (EU27, 2007)**
 - ◆ 12,800 vessels
 - ◆ 9,325 companies
 - ◆ 43,300 workers
- **Total turnover of IWT sector: 6 Billion euro**
- **Direct added value to GDP: 3 billion euro (2007)**
- **Substantial indirect added value of IWT to welfare:**
 - ◆ A critical service supplier for important industries in Europe
 - ◆ Savings on external costs

CO₂ emission (2009): Rotterdam – Ruhr area

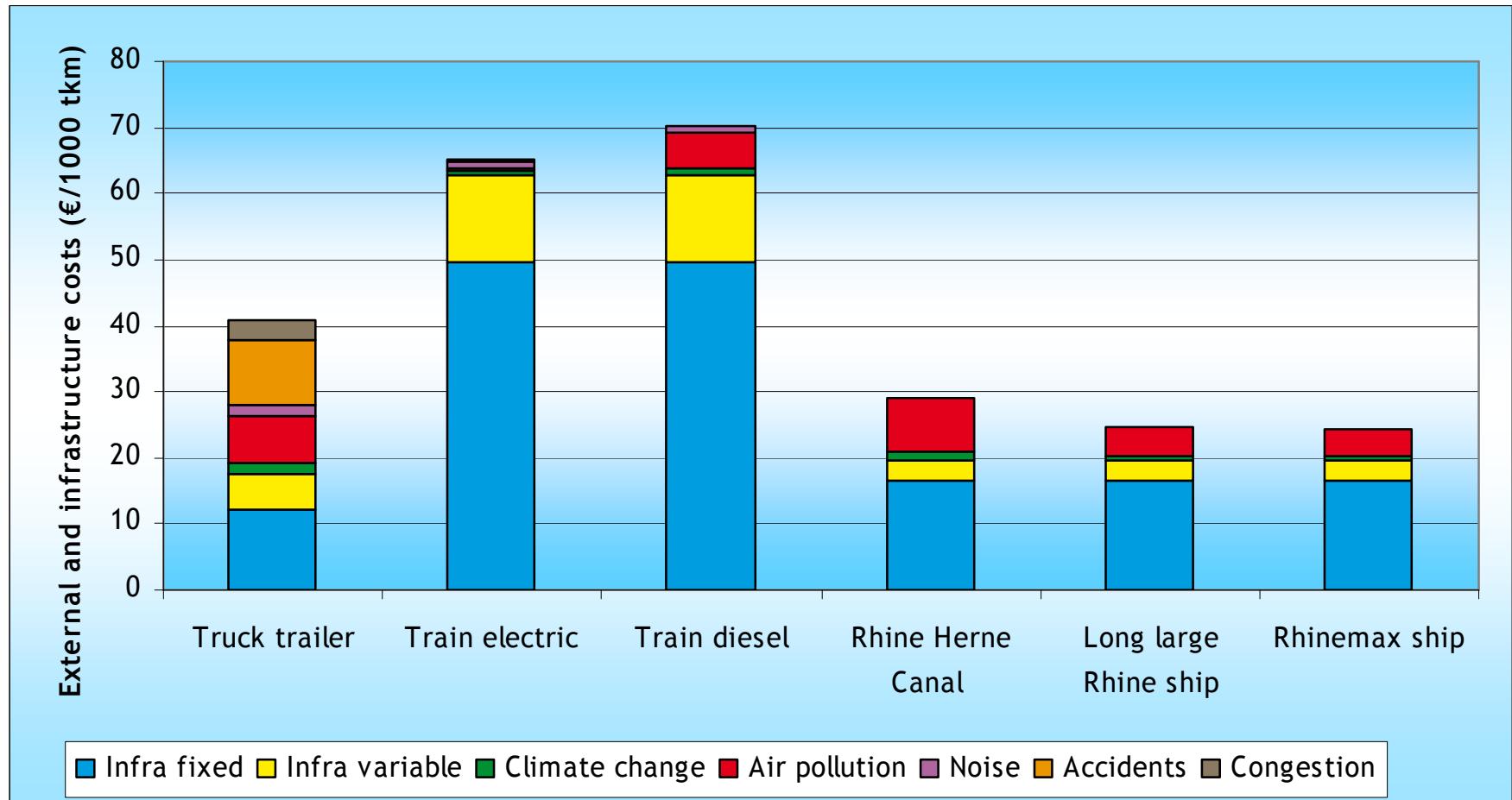


IWT: savings of 43 to 63% compared to road

Current position of IWT – pollutants

- IWT is lagging behind on performance on emissions of pollutants: PM_{2.5} and NO_x
- Trend 2020: increasing gap between emission performance of engines in barges and truck engines
- Main causes:
 - ◆ Long life-time of engines in vessels
 - ◆ Less strict emission standards for IWT

Current situation – external and infrastructure costs container transport (2009)



IWT: 24 to 29 euro per 1000 tkm

Road: 41 euro per 1000 tkm

=> external cost savings on accidents, congestion, climate change and noise

Current position of IWT – competition road

- Critical: transhipment costs and pre-/end haulage
- Case studies in The Netherlands:

<i>Origin - Destination</i>	<i>Breakeven distance Road<>IWT:</i>
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Wet – Wet location:	20 - 40 km
Wet – Dry location:	80 - 120 km
Dry – Dry location:	180 - 200 km

- Other factors:
 - ◆ Size of volume, consolidation often needed (more complex)
 - ◆ Transit-time
 - ◆ Waterway route: detouring, max load capacity, reliability, speed
 - ◆ Opening times, waiting times and return cargo
 - ◆ Organisation: need for one-stop-shop solutions, incl. management of floating stock.

Current position of IWT – Supply side

- W.Europe: dry cargo market dominated by small companies, individualism
- Danube: a small number of large formerly state-owned companies
- Economic crisis resulting in small financial room for investments
- Overcapacity fleet:
 - ◆ Large vessels on the Rhine corridor (dry bulk)
 - ◆ Tanker vessels (early adopters to transition to double hull)
- Human resources:
 - ◆ Shortage of staff, in particular boatmasters
 - ◆ Working and living conditions

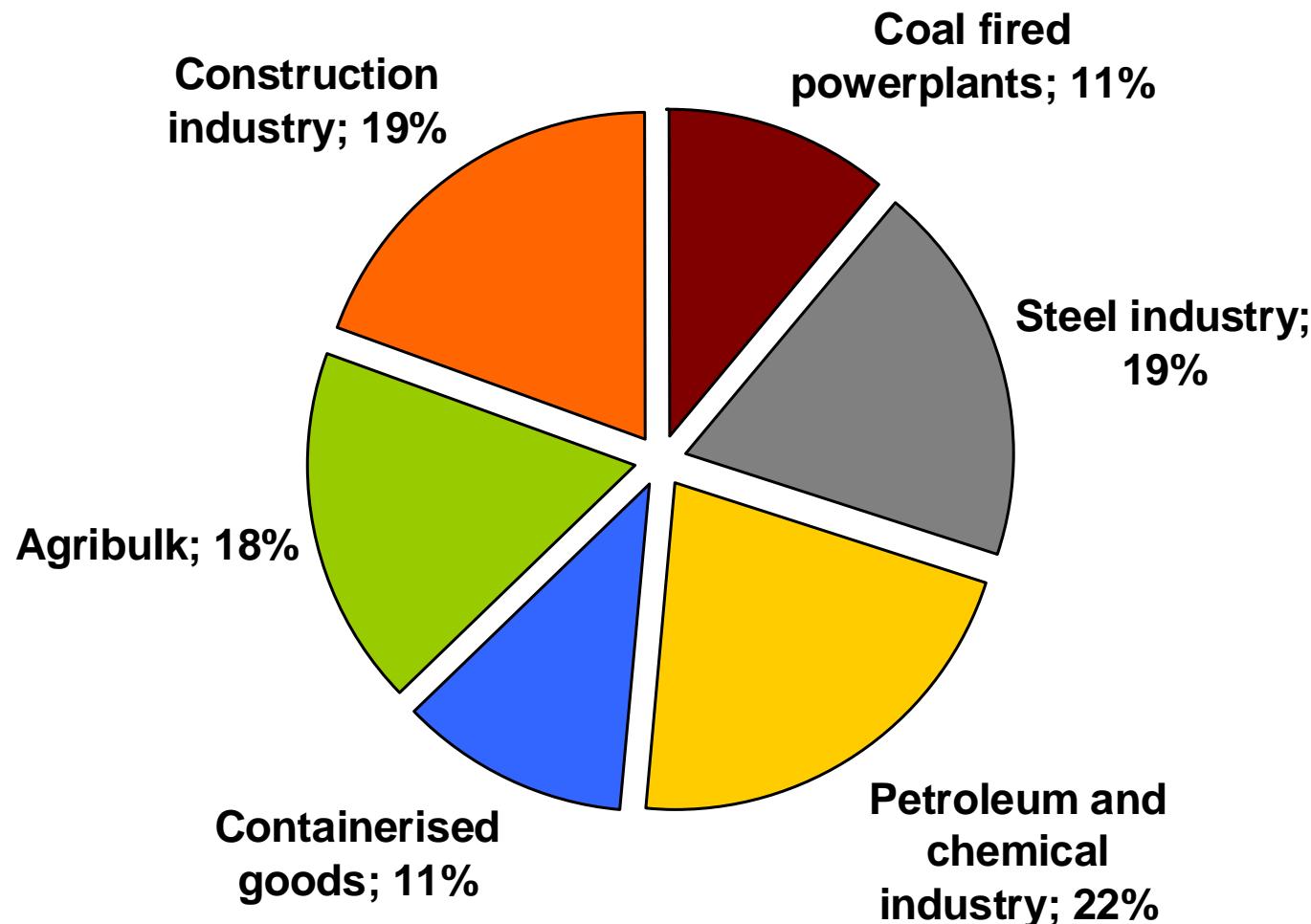
Outlook on key industries for IWT

- Coal fired powerplants
- Steel industry
- Petroleum and chemical industry
- Containerised goods
- Agribulk
- Construction industry
- [Sea River transport]

Business as Usual scenarios without specific IWT policy intervention

Outlook key industries in EU27 for IWT

Share of total (tkm) in 2007



Outlook key industries – Coal fired powerplants

- Size 2007 in EU27: 16,286 million tonkm, 11% in total
- Energy policies and closing of mines in Europe are important drivers
- Issue: environmental impact of coal transshipment and storage
- Positive outlook, expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	16	19	22	22	27
Index (2007)	100	117	138	137	166

Outlook key industries – Steel industry

- Size 2007 in EU27: 27,446 million tonkm, 19% in total
- Strongly affected by economic crisis
- Pressure on the competitiveness of the industry in Western Europe
- Shifts to countries in Eastern Europe and other continents likely
- More imports via seaports of semi-finished steel products
- Import of raw materials from Ukraine and Russia likely to grow
- Expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	27	27	33	31	43
Index (2007)	100	99	120	114	156

Outlook key industries – Petroleum and chemical industry

- Size 2007 in EU27: 31,502 million tonkm, 22% in total
- Drivers: oil price, fuel efficiency, alternative fuels, size of chemical industry
- Outlook for the tanker transport sector is fairly stable.
- Issues:
 - ◆ Overcapacity fleet, transition towards double hull vessels before 2019
 - ◆ New types of commodities such as biofuels, LNG
 - ◆ Environmental rules and regulations
- Expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	32	32	36	33	49
Index (2007)	100	101	115	104	156

Outlook key industries – Containerised goods

- Size 2007 in EU27: 16,477 million tonkm, 11% in total
- Worldtrade and consumption (population) are main drivers
- Quick recovery after crisis in 2009, large growth potential
- Increase of cargo carried in containers in stead of break-bulk
- Important incentives from seaports
- Geographic extension of liner services: Seine-Schelde, Danube
- Container barges for continental cargo ?
- Expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	16	23	29	43	73
Index (2007)	100	142	175	262	442

Outlook key industries – Agribulk

- Size 2007 in EU27: 26,105 million tonkm, 18% in total
- Dependence on worldmarket prices and weather, size of live-stock and population in Europe
- Fertilizer production is expected to decline
- Opportunities for IWT, services for new bio-fuel plants
- Issues:
 - ◆ Increasing food safety concerns
 - ◆ Shortage of smaller vessels
- Expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	26	27	29	32	38
Index (2007)	100	104	113	123	146

Outlook key industries – Construction sector

- Size 2007 in EU27: 28,529 million tonkm, 19% in total
- Heavily affected by economic crisis and takes long to recover
- Other drivers: demography and policies on sourcing gravel along waterways
- Increase of use of recycled materials
- Opportunities to transport semi-finished construction goods

Issues:

- Spatial planning
- Shortage of smaller vessels and human resources
- Expectation on the development:

in bill. tkm	2007	2020 min	2020 max	2040 min	2040 max
Total	29	28	30	31	35
Index (2007)	100	100	105	109	122

Outlook industries – Intermodal sea river transport

- Current size (2010): 0.37 mln tkms
- Small niche market, focusing on transport between Germany, Scandinavia and UK
- Black Sea area is emerging market, can provide critical mass for sea-river services on the Danube

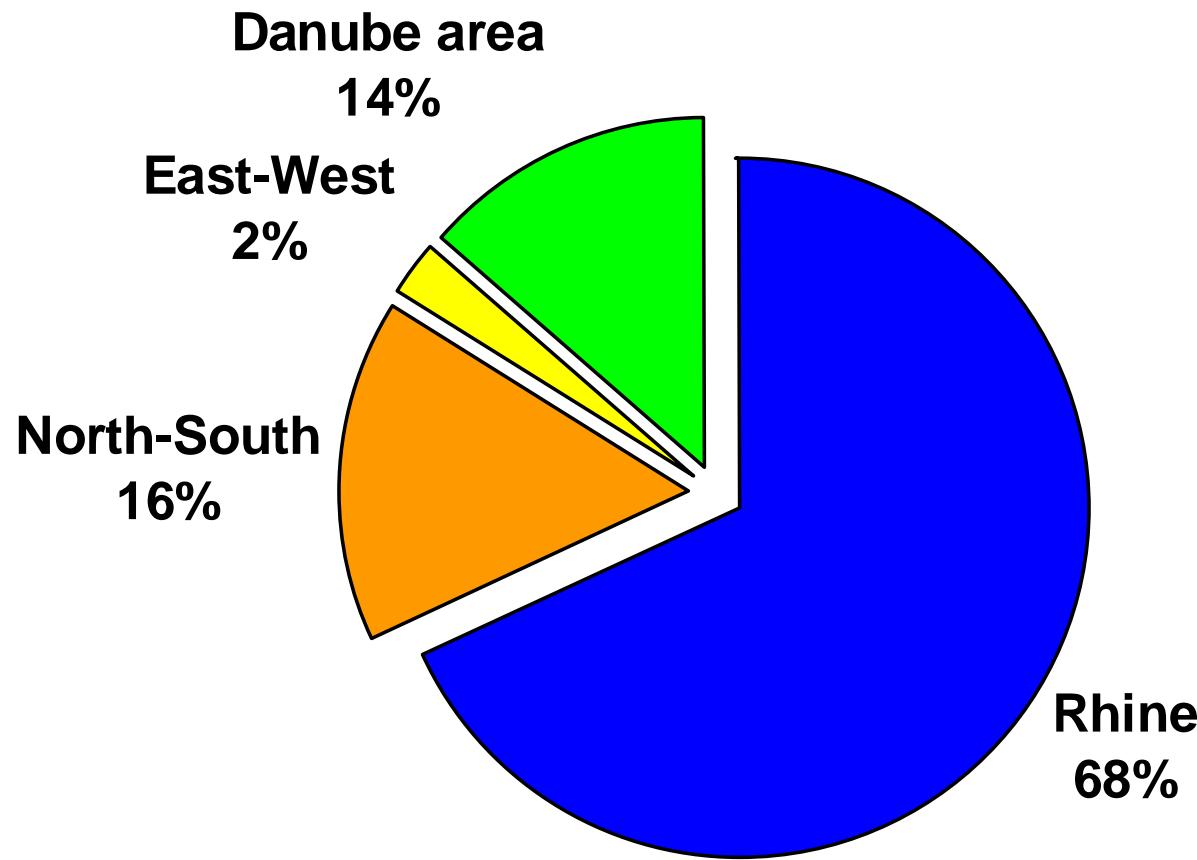
in bill. tkm	2010	2020 min	2020 max	2040 min	2040 max
Rhine, tons carried	0.46	0.48	0.72	0.63	0.94
Rhine tonkms *1000	373	386	575	505	752

Outlook key industries – Comparison growth rates

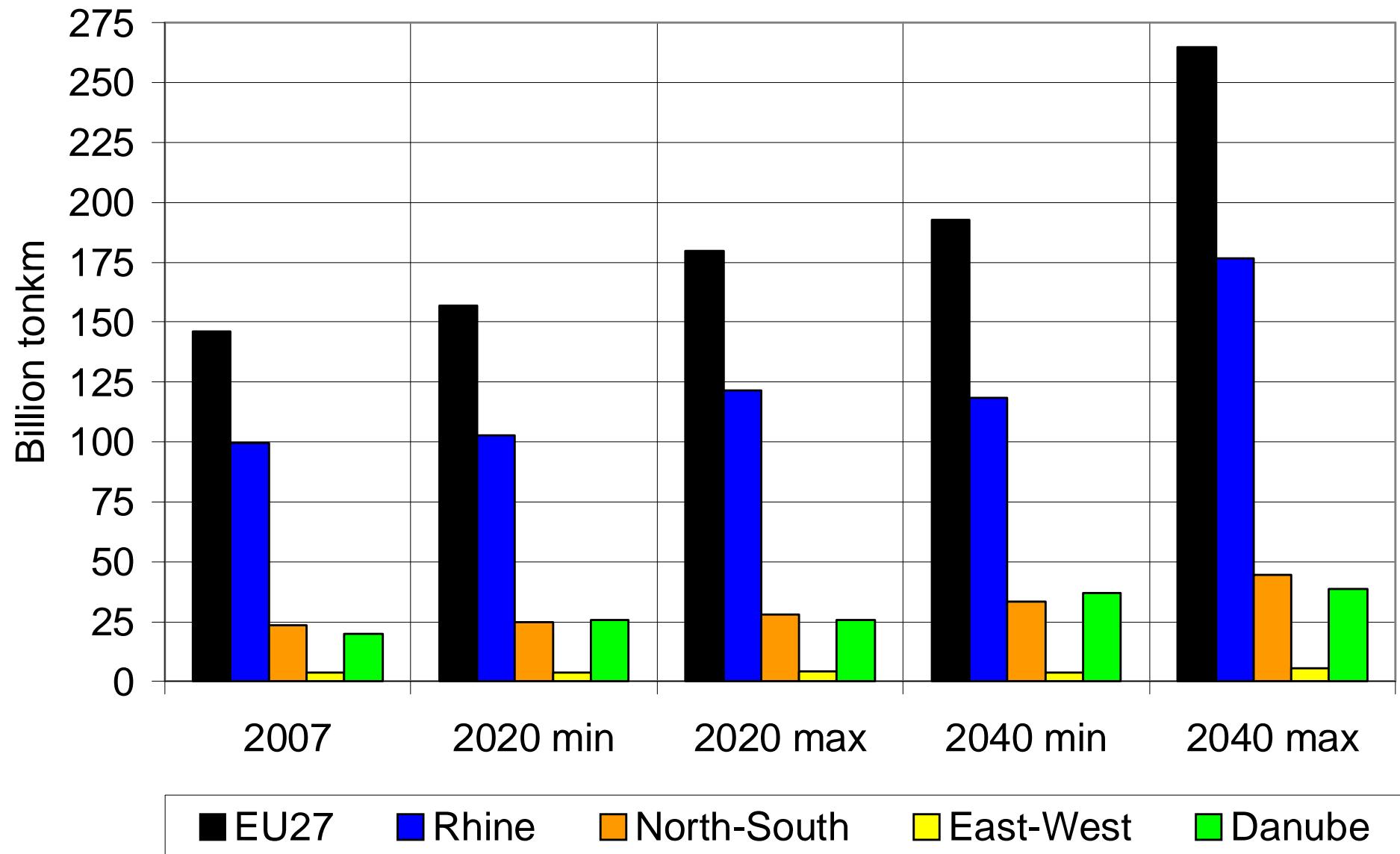
Key business industry	2007	2020 (min)	2040 (min)	2020 (max)	2040 (max)
Containerised goods	100	142	262	175	442
Coal fired powerplants	100	117	137	138	166
Steel industry	100	99	114	120	156
Petroleum and chemical	100	101	104	115	156
Agribulk	100	104	123	113	146
Construction industry	100	100	109	105	122
TOTAL	100	107	132	123	181

Outlook corridors

Share of total (tkm) in 2007



Outlook corridors – absolute values



Main issues and gaps – industry viewpoint

General issues

- Missing links, fairway conditions, reliability
- Network quality of ports and terminals
- Shortage of human resources
- Professionalism, co-operation, door-to-door solutions
- Sustainability; Carbon Footprint

Main issues and gaps – Policy side

- ◆ Modal share of IWT not structurally increasing
- ◆ Opportunities for reducing GHG emissions and external costs from transport operations currently not exploited.

Challenges:

- => Counter the declining modal split development and turn it into an increasing modal share;
- => To make IWT cleaner, safer and more efficient.

Conclusion

- ◆ Without further policy invention IWT will not play its full part and ambitious policy objectives are not met.
- ◆ Although IWT is intrinsically strong, there are typical characteristics that hamper full exploitation:
 - ◆ Limited reliable network of waterways in Europe
 - ◆ Limited investment capacities
 - ◆ Slow innovation due to long life time of vessels and engines
- ◆ These issues can be overcome through dedicated policy measures.

Conclusions – Policy areas

1) Reducing of emissions and external costs and transport efficiency:

- ◆ Engine and hull improvement, alternative fuels
- ◆ “Smart sailing” and safety culture (human factor)
- ◆ Infrastructure improvements allowing economies of scale
- ◆ Enhanced cooperation and planning
- ◆ Favourable framework for innovation

Conclusions – Policy areas

2) Modal share improvement / efficient door-to-door solutions / supply chain management:

- ◆ **A) Improving infrastructure:**

- ◆ Elimination of bottlenecks and construction of missing links
- ◆ Reliable fairway conditions according to international standards
- ◆ Calamity Abatement / Mobility Continuity Plans
- ◆ Inland Ports (network density, links to other modes, avoid NIMBY)
- ◆ ICT Backbone (RIS)

Conclusions – Policy areas

2) Modal share improvement / efficient door-to-door solutions / supply chain management:

- ◆ **B) Market organisation and professionalism:**
 - ◆ Enhanced cooperation within the supply side, between modes, with shippers
 - ◆ Human resources
 - ◆ Use of ICT
 - ◆ Minimising administrative costs and harmonisation across Europe
 - ◆ Market information: observation and forecasting
 - ◆ Provide information and data on available IWT services and funding opportunities
- ◆ **C) How to support to opening of new markets for IWT, e.g.:**
 - ◆ Continental container cargo
 - ◆ Pallet transport
 - ◆ Waste transport in urban areas
 - ◆ Biomass, alternative fuels and renewable raw materials
 - ◆ Roll-on/Roll-off, high & heavy cargo

Thank you for your attention!

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