

31 January 2017  
Warsaw, Poland

# Institutionalised governance of Rivers for transport

*The example of the Rhine River*

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# Outline

- I. Overview of two centuries of Rhine governance**
- II. The example of the CCNR and the Rhine**
- III. Elements of international river governance**
- IV. Final observations**

# I Overview of two centuries of Rhine governance

# HISTORICAL LANDMARKS



Vienna Congress

1815

1831

1868

Palais du Rhin



1919

1939-45

1963

2003-2016



Creation of the  
CCNR

Shipping Act of  
Mainz

Revised shipping Act of Mannheim

Seat of the CCNR in  
Strasbourg

Revision of the Act  
of Mannheim

Cooperation  
CCNR CE

SAIL NAVIGATION and TOWING

STEAM POWERED

DIESEL POWER NAVIGATION

LNG

## CCNR 1815 – 1920

- « canalization » of the Rhine (middle and lower Rhine)
- Liberalization of the market (free access)
- Freeing of tolls and leverages
- Beginning of framework conditions

## MILESTONES

- **1831: 1st Rhine shipping convention (Mainz)**
- **1868: Revised Rhine shipping convention (Mannheim)**
- **1920: Versailles treaty; adhesion of non-riparian states (BE, UK, IT); installation in Strasbourg, France**

## CCNR 1920 – 2015

- canalization of the Upper-Rhine (hydropower)
- Enlargement legal framework
- Economies of scale at the level of the fleet
- European integration
- Stakeholder cooperation

## MILESTONES

- 1950 – 1960: Rhine shipping conferences
- 1960: push convoy shipping
- 1988/1996/2000: transport law  
(CLNI, CDNI, CMNI)
- 1998: introduction of the 135 m vessel
- 2003: Administrative Agreement CCNR-EC;
- recognition of stakeholder organisations

# SUMMARY

- ❖ Long time lines (several decennia)
- ❖ Continuous progress and adaptation
- ❖ Focus on tangible results
- ❖ Adequate visibility and feed back
  - *Market observatory*

# II

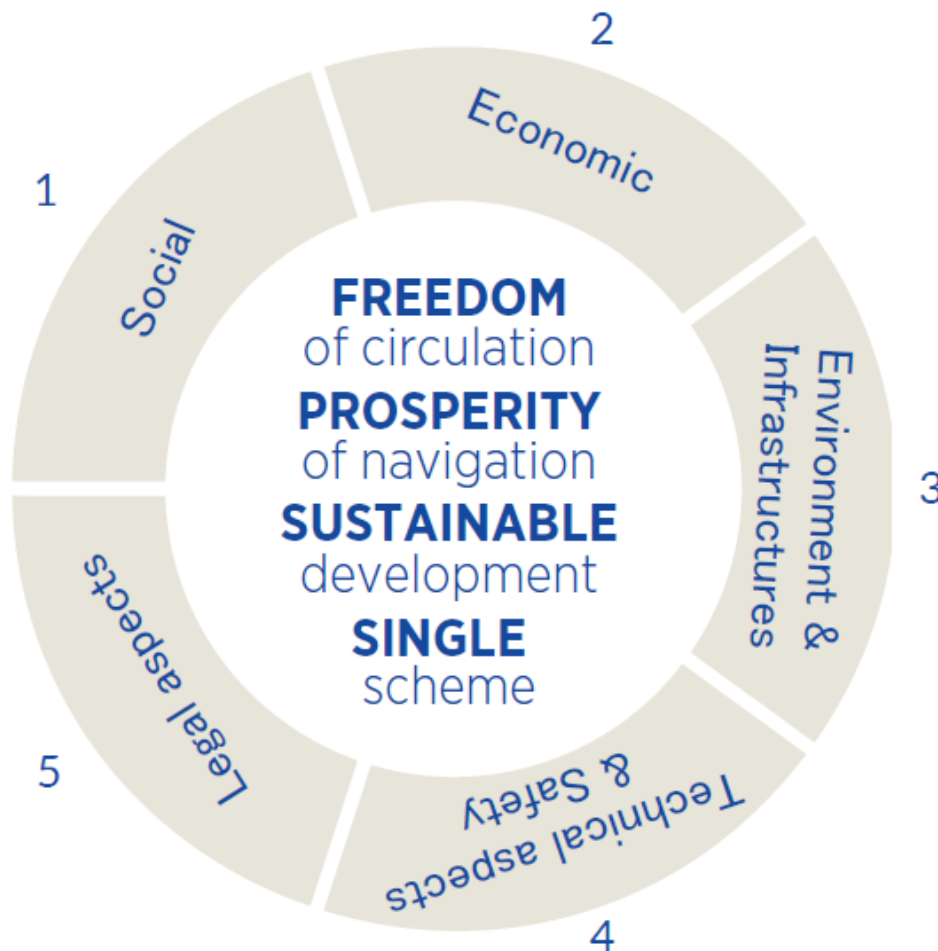
## The example of the CCNR and the Rhine



# The Rhine and IWT in the European transport network

## IWT Traffic intensity in Europe





... requiring evolutionary strategies, targets and working methods ...

*1868: « general safety »  
and « prosperity »*

*2017: « sustainable  
development »*

... and alliances ...



# Functions of the CCNR

## 1) LEGAL



- Institutional cooperation
- Transport law
- Jurisdiction (chamber of appeal)
- Free market conditions

## 2) INFRASTRUCTURE



- Fairway characteristics
- maintenance of GNS
- Police requirements
- Implementation of RIS

## 3) DEVELOPMENT



- Improvement of framework conditions (logistics)
- Coordination of infrastructure development (network, ports)

## 4) REGULATORY

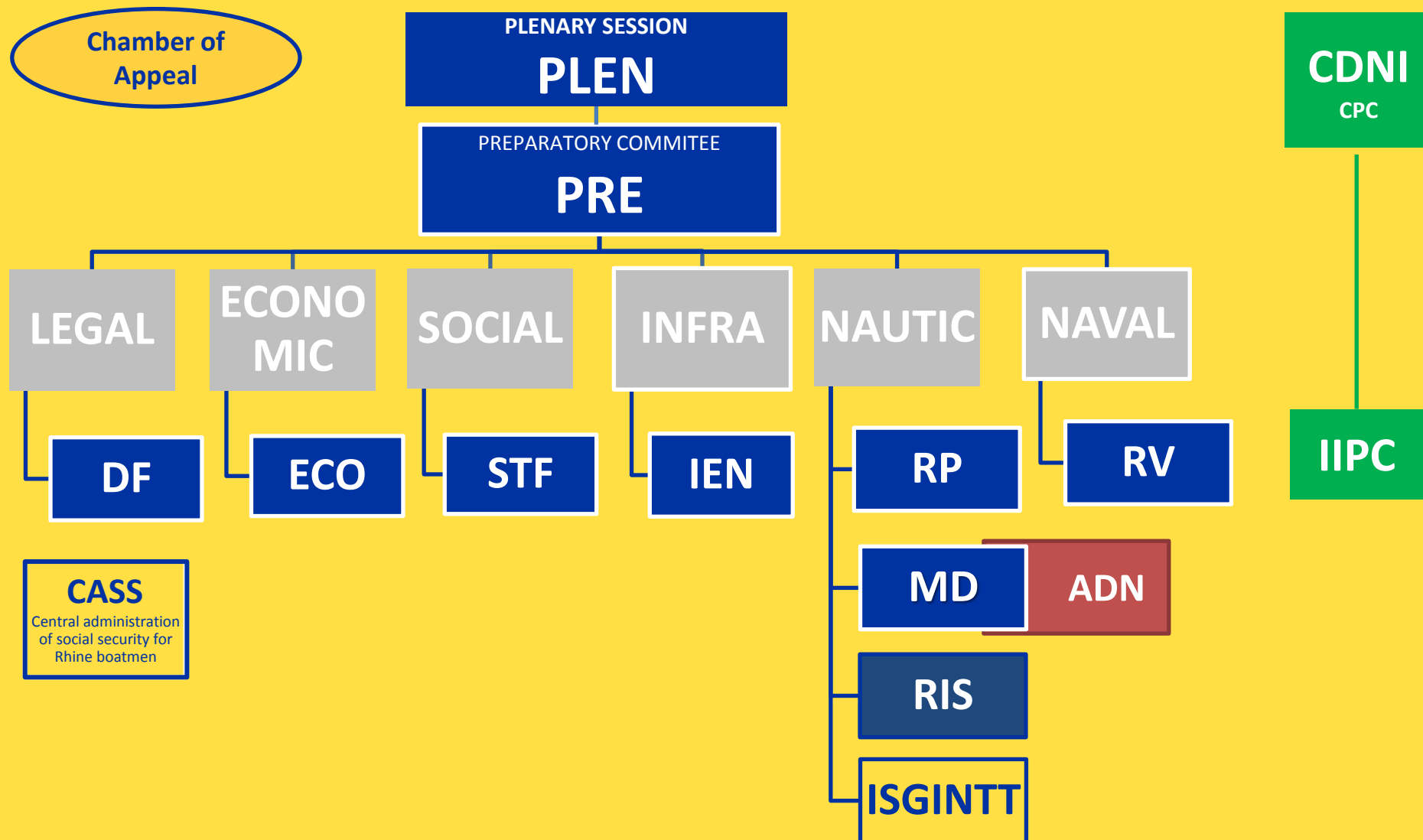


- Global framework conditions :
  - Technical
  - Social
  - Environmental





## CCNR ORGANISATION CHART





## CCNR INTERNATIONAL PARTNERS

### 11 Observer States



### 8 Observer Organisations



### 19 Recognised Organisations



# RHINE: a mature waterway

## > high performance of IWT

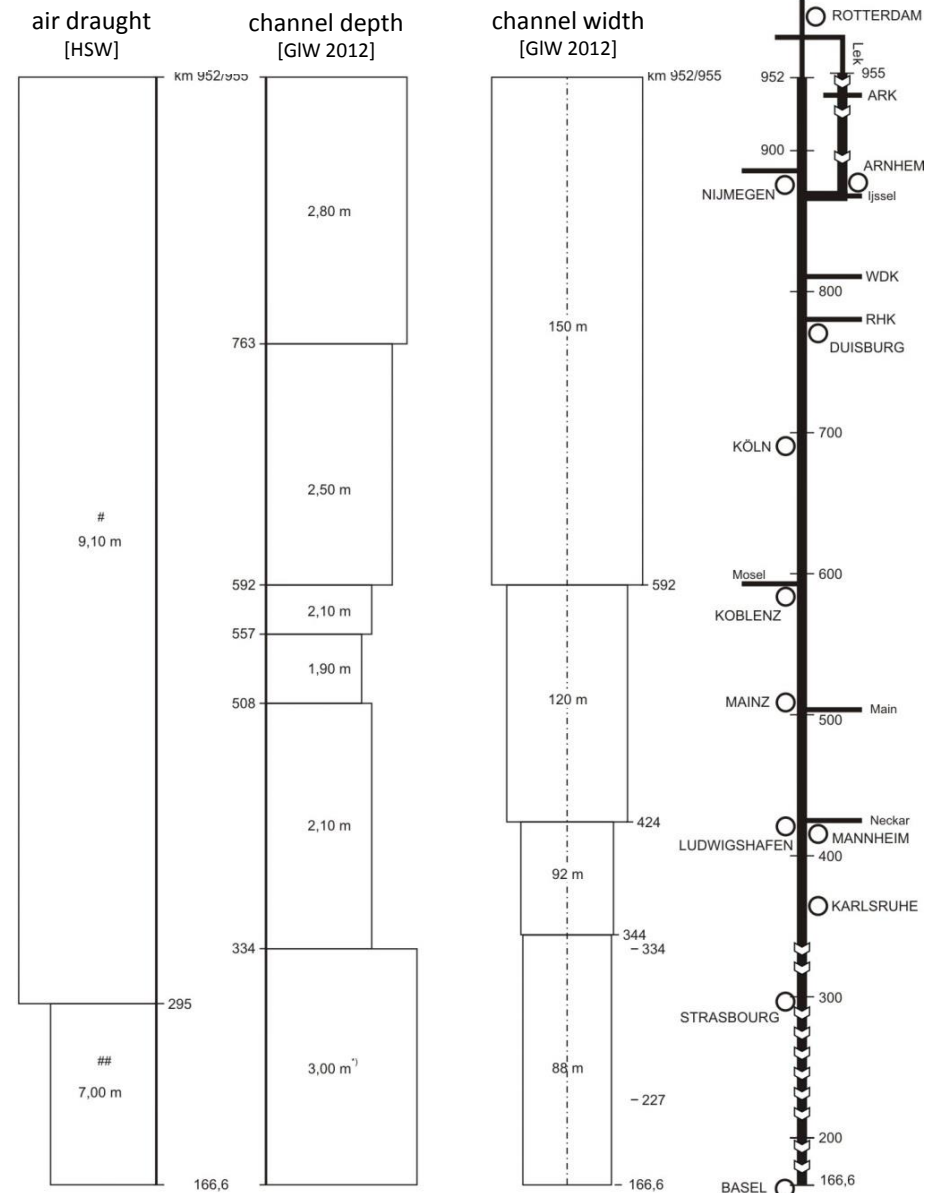
Both infrastructure and fleet  
enable to meet transport  
demand:

- ❖ Capacity
- ❖ Specialization
- ❖ Reliability



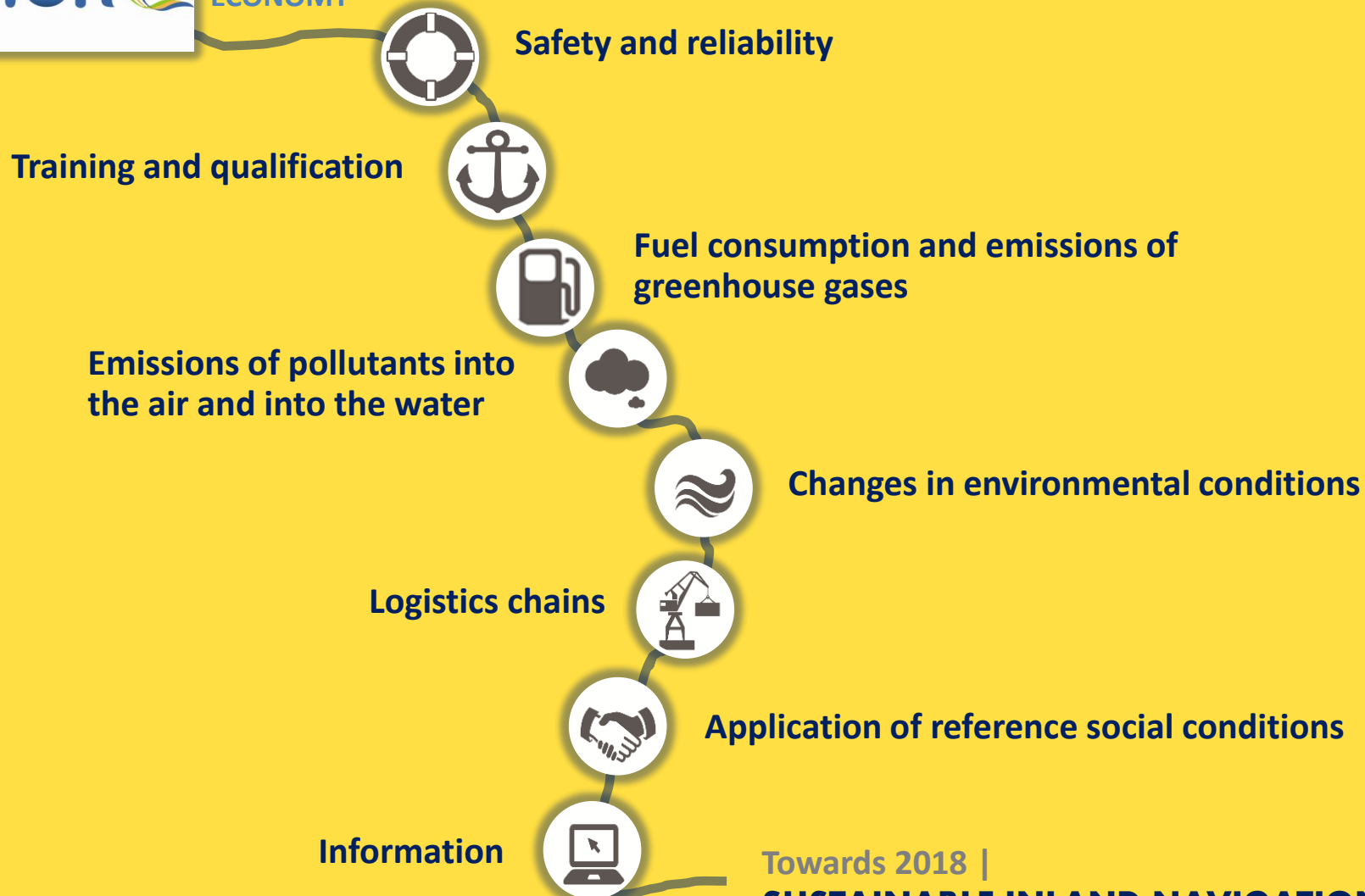
**In Western Europe**  
~ 10 000 vessels  
~ 15 Million tons on the  
market

## Waterway Profile of the Rhine





ENVIRONMENT  
SOCIETY  
ECONOMY



Towards 2018 |  
**SUSTAINABLE INLAND NAVIGATION**

# Examples of good practice of the CCNR

*19<sup>th</sup> CENTURY*

1) Air draft standard under bridges (9,10 m / 7,0 m)

2) Minimum depth Lower Rhine (19<sup>th</sup> century)

3) Administrative regime on the canalised Upper Rhine

## Issues

- Significant financial consequences
- Strong stakeholder involvement, competition with rail
- Under strong political pressure (steel industry, mining), all riparian states engage in deepening the fairway to enable steamship to sail on the river (draft)
- CCNR as platform for coordination and implementation
- Guaranties regarding free access (no levies) to the Upper Rhine locks
- Guaranties regarding the operation of the infrastructure



# Examples of good practice of the CCNR

*20/21th CENTURY*

4) max. size of Rhine vessels

5) GREENING initiative

6) RIS implementation

7) Common declaration  
CCNR – ICPR

## Issues

- Step wise increase, following the technological development (steam engines, diesel engines, push barges/convoys; 135 m vessel)
- Gradual gain of productivity
- First emission standards for inland navigation
- Reinforcement of the ecological profile of IWT
- Rhine navigation as front runner for RIS applications
- Compromise solutions ensuring large acceptance by the industry
- Ecological development of the river bed

# III

## Elements of international river governance

## SCOPE of river governance in the 21<sup>st</sup> century in Europe

### 1) ECOLOGY:

- Water quality
- Flooding
- Conservation and restoration of nature
- *Monitoring*

### 2) TRANSPORT :

- Interconnected network
- Navigability (“GNS”)
- Development
- *Monitoring*

## APPROACHES of coordinated governance

- **INTEGRATED (holistic) :**
  - *MCR (Mekong river)*
  - *SICOS (Congo river)*
  - *ISRBC (Sava river)*
- **DISTINCT (dualistic):**
  - Rhine and Danube river basins:
    - *CCNR* ↔ *ICPR*
    - *DC* ↔ *ICPDR*

# Prerequisites of cooperation in view of TRANSPORT

## 1) Objectives



## 2) Market



## 3) Infrastructure and fairway



## Aspects

- **Economic**
  - Trade and commerce
- **Strategic**
  - Hinterland connections for seaports
- **Geographical**
  - Inter-regional development
- **Framework conditions set on EU-level**
- **Promotion and support; implementation**
- **Coordination of infrastructure development ; “missing links”**
- **Maintenance of good navigation status**
- **Financing / cost sharing**

# Prerequisites of cooperation in view of TRANSPORT

4) Community of interest  
of participating states

5) Institutional networking



## Aspects

- Positive interdependencies
- Inter-institutional cooperation
  - International organisations (EU/EC, UNECE, river commissions, ...)
  - Parliaments (EP, national)
- Participative execution
  - Stakeholder organisations EBU/ESO/ERSTU/FEPI/ETF/EDINNA/IVR ...

## 5 MEMBERS STATES = 5 DIFFERENT FOCUS

### BELGIUM

#### Focus :

- a) hinterland connections for the sea ports
- b) shipping activities

Main port: Antwerp

### NETHERLANDS

#### Focus :

- a) hinterland connections for the sea ports
- b) shipping activities

Main port : Rotterdam

### GERMANY

#### Focus :

- a) supply of raw materials (ore, coal) for the industry as well as export of products (for ex: chemicals, steel, oil); consumer goods (containers)
- b) Logistics

#### Main Rhine ports:

Duisburg (steel) ;  
Duesseldorf (container hub) Cologne,  
Ludwigshafen

### SWITZERLAND

Focus : import of oil products, agricultural products, consumer goods; export of chemicals

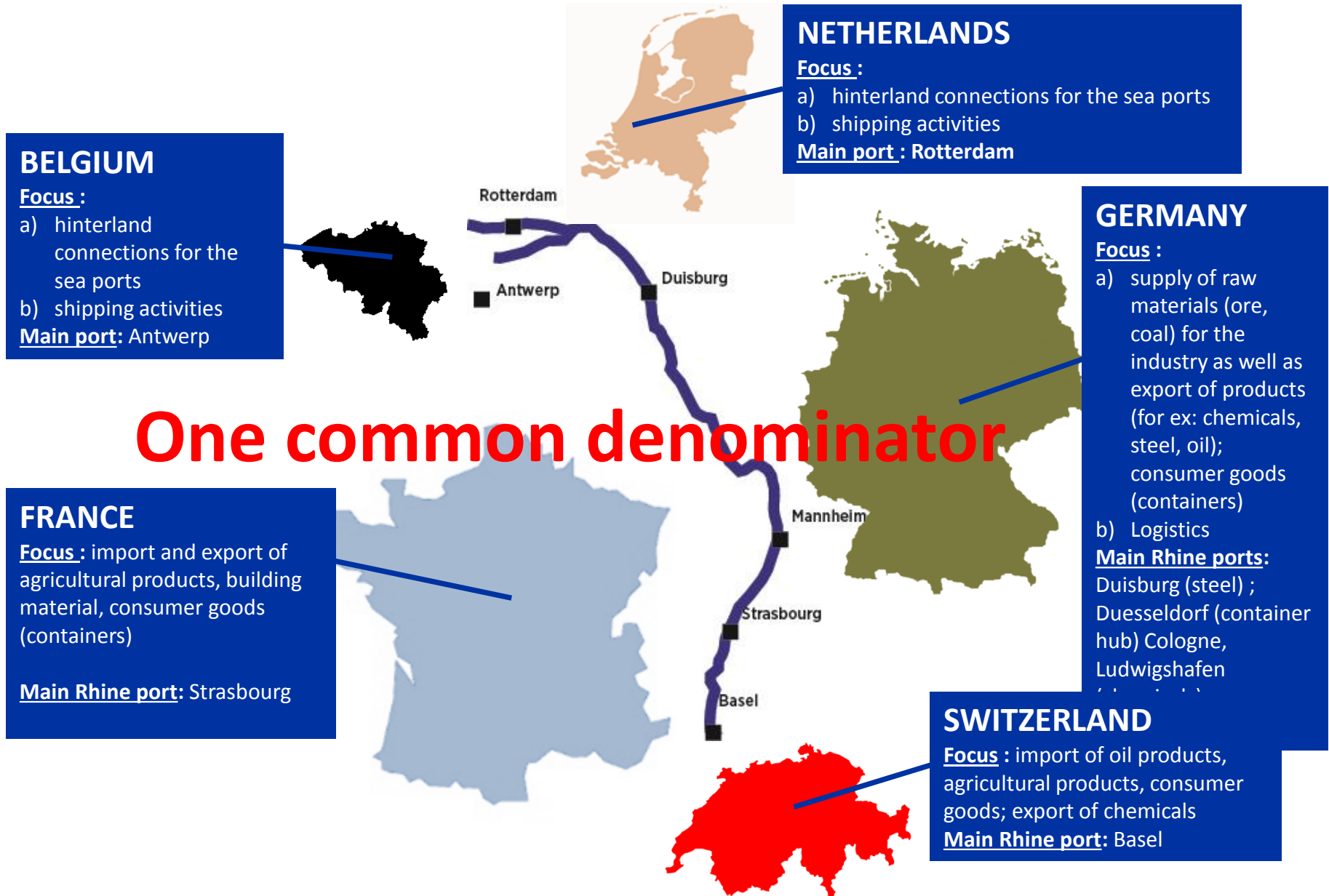
Main Rhine port: Basel

### FRANCE

Focus : import and export of agricultural products, building material, consumer goods (containers)

Main Rhine port: Strasbourg

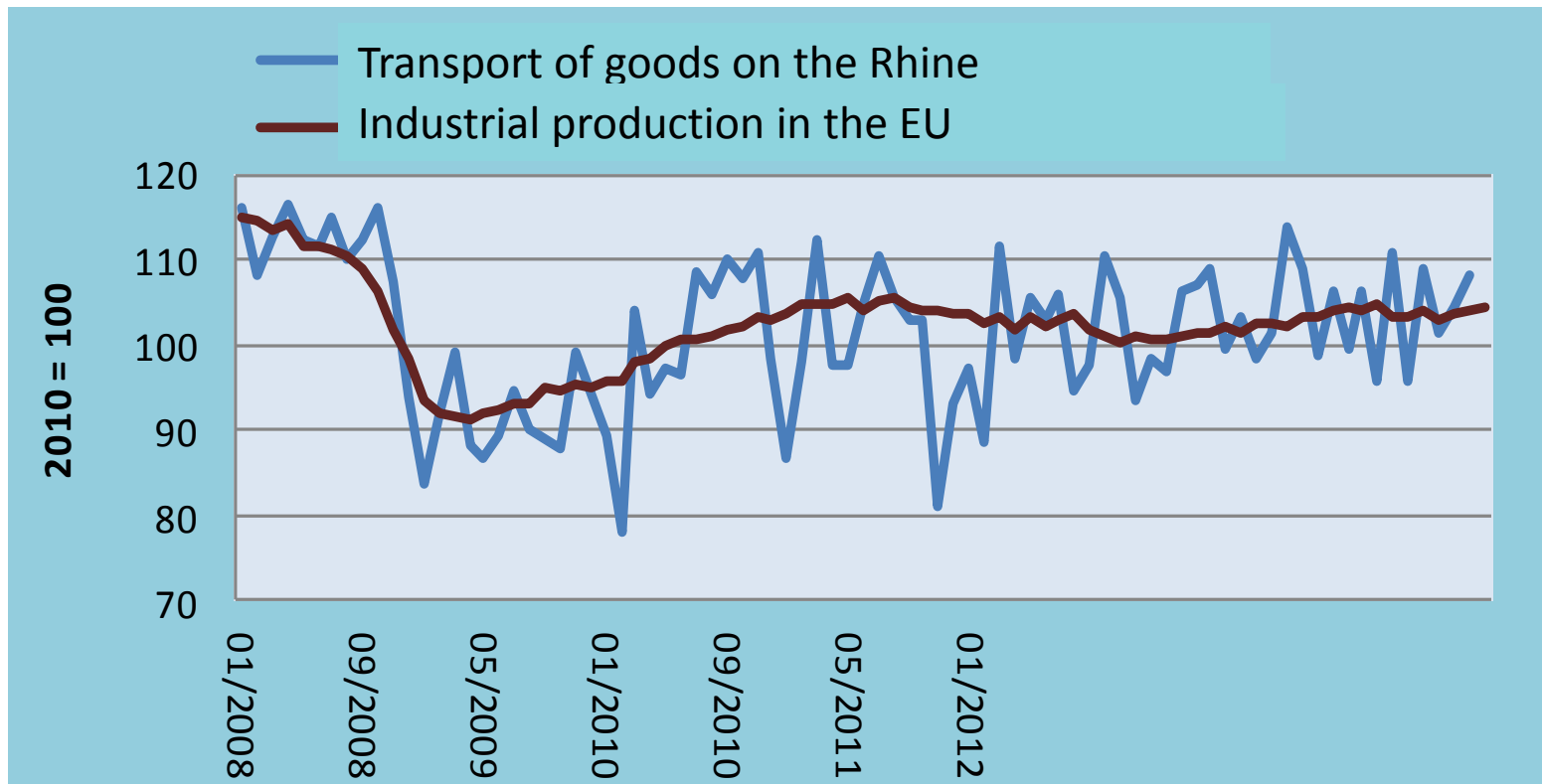
# One common denominator



IV

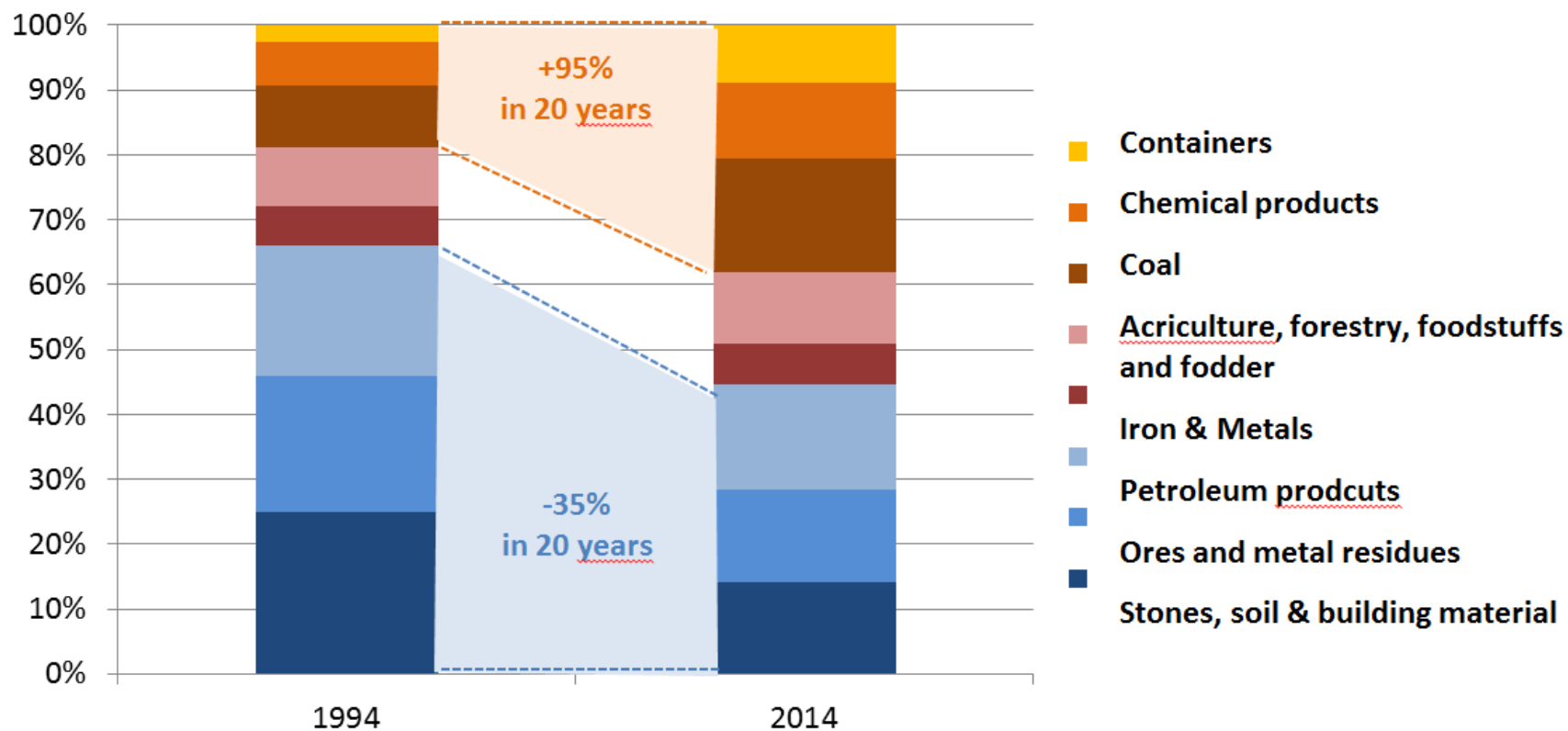
**Final observations**

# Transport of goods on the Rhine and industrial production





## Composition of goods carried on the Rhine



Source: [destatis](#)

## Threats

- **Climate change and water flow**
  - **Reliability**

## Challenges

- **Integration in the logistic chains and co-modality IWT-rail**
  - **Opportunity: EU-corridor policy**
- **Accelerate adoption of new technologies and of implementation of IT, including RIS**
- **In spite of barriers, renewal of existing fleet and greening (LNG, hydrogen, ... )**
- **New markets:**
  - **Supply and distribution in urban areas**

dziękuję za uwagę

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# ECOLOGY / PROTECTION GOVERNANCE

## INTERNATIONAL COMMISSION FOR THE PROTECTION OF THE RHINE

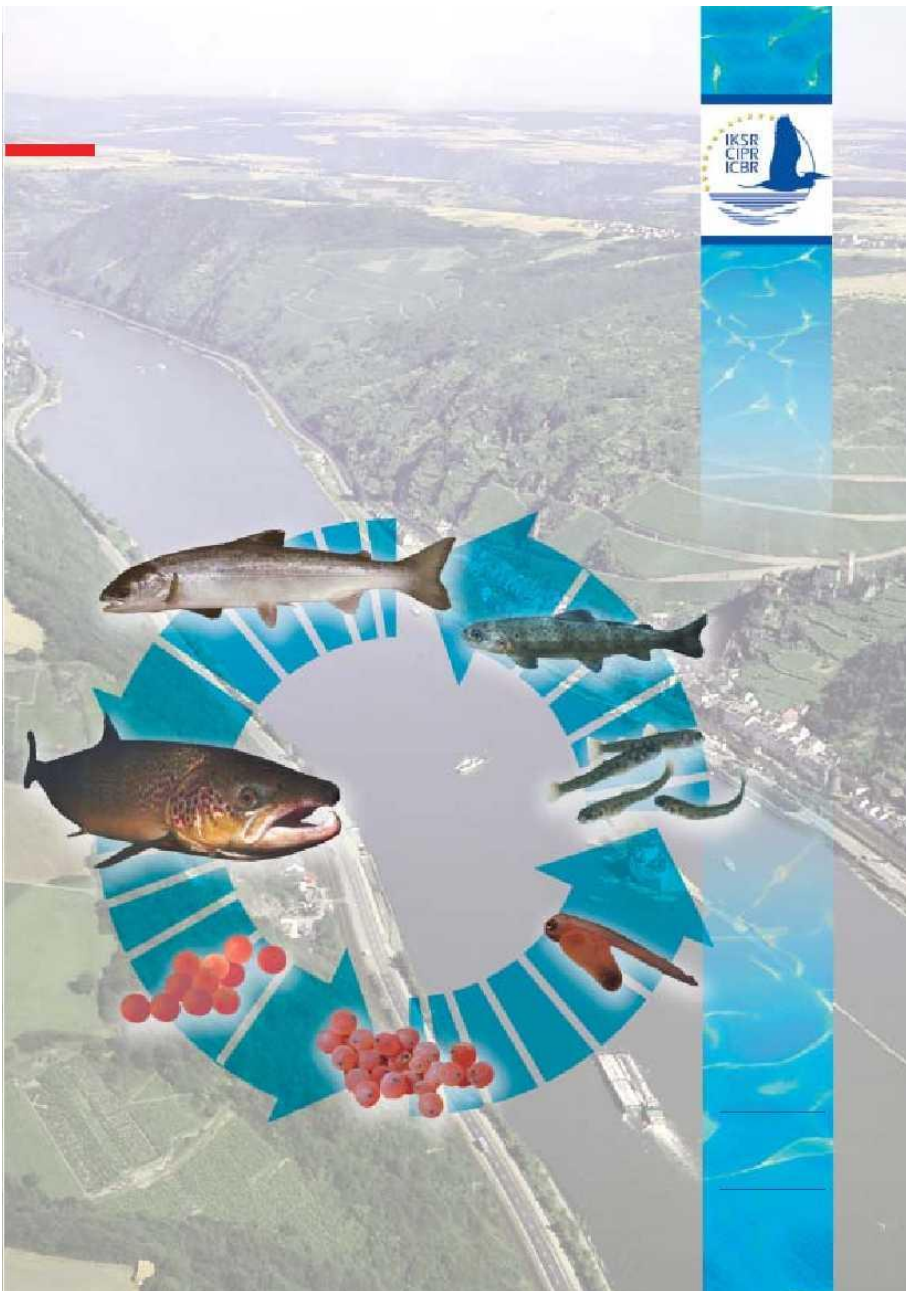
(Koblenz, Germany, Founded 1950)

[www.IKSR.org](http://www.IKSR.org)

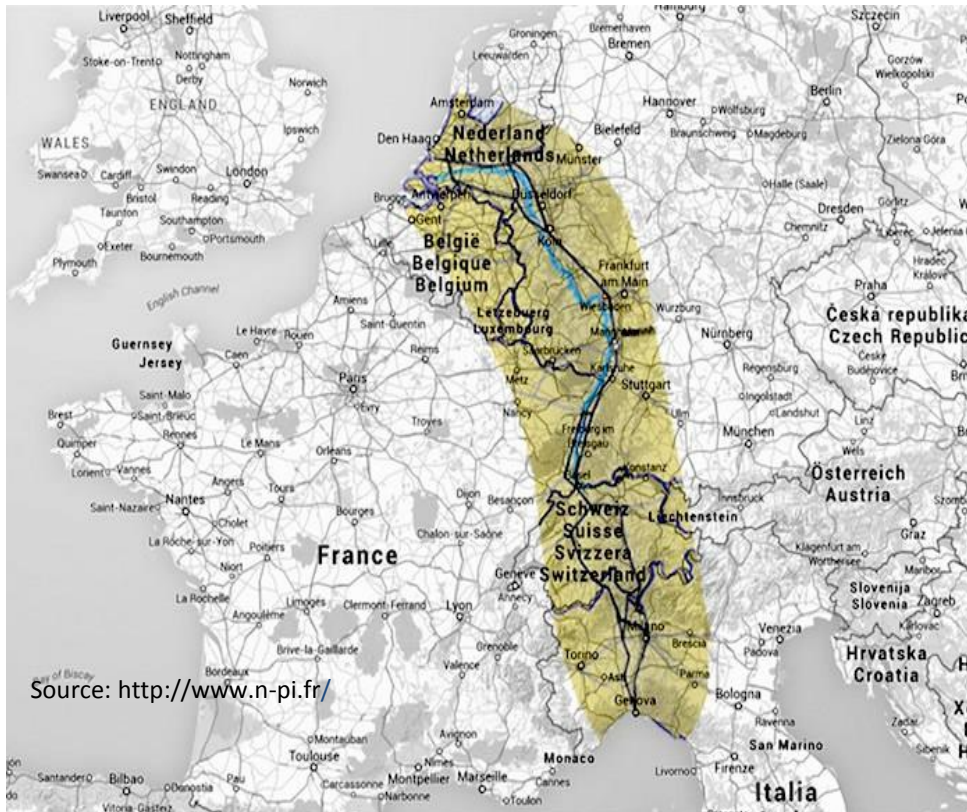
## ICPR

### MISSION COMPRISES:

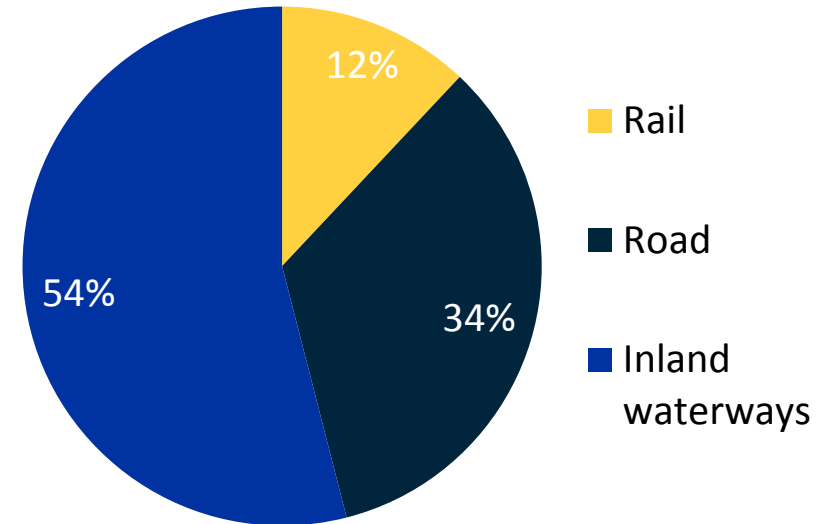
- 1) Water quality and aquatic environment
- 2) Hydro morphology
- 3) Meteorology and risk management of flooding and extended low water levels
- 4) Coordination of implementation of EU-directives (WFD, Habitat, ... )



# Rhine Alpine: multi-modal corridor



Cross-border traffic  
within the Rhine-Alpine Corridor



Source:

Rhine Alpine Work Plan of the European Coordinator (May 2015), p. 9

# IWT in Rhine-Alpine Corridor

Rhine, Moselle, Neckar

Navigable Rhine: 884 km through major economic centres (Rotterdam, Ruhr area, Ludwigshafen, Basel...)

~350 Mio tonnes/year  
= 2/3 of all goods carried by European waterways

