MARKET INSIGHT

INLAND NAVIGATION IN EUROPE

PUBLISHED IN APRIL 2024

European Commission

CCNR
CENTRAL COMMISSION FOR THE NAVIGATION OF THE RHINE

Market Insight

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Published in

April 2024

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01

FREIGHT AND PASSENGER TRANSPORT ON INLAND WATERWAYS

- **Transport demand saw a downward trend in the first half of 2023. In the two countries with the highest transport performance, Germany and the Netherlands, there was a decline in transport performance by 8.5% and 7.7% respectively.**

- **With regard to the different types of cargo, the strongest decrease in percentage terms was observed for container transport, followed by dry cargo transport. This is a consequence of the decline in world trade and industry production.**

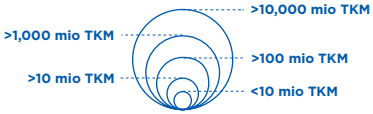
- **Cargo transport on the entire Rhine reached 145.36 million tonnes in the first half year of 2023 (-6.4%). Also, as far as the Rhine is concerned, container transport and dry bulk transport were the hardest hit by the recession and the slowdown in world trade. The Russian war of aggression against Ukraine continued to impact considerably freight transport on inland waterways in the first semester of 2023.**

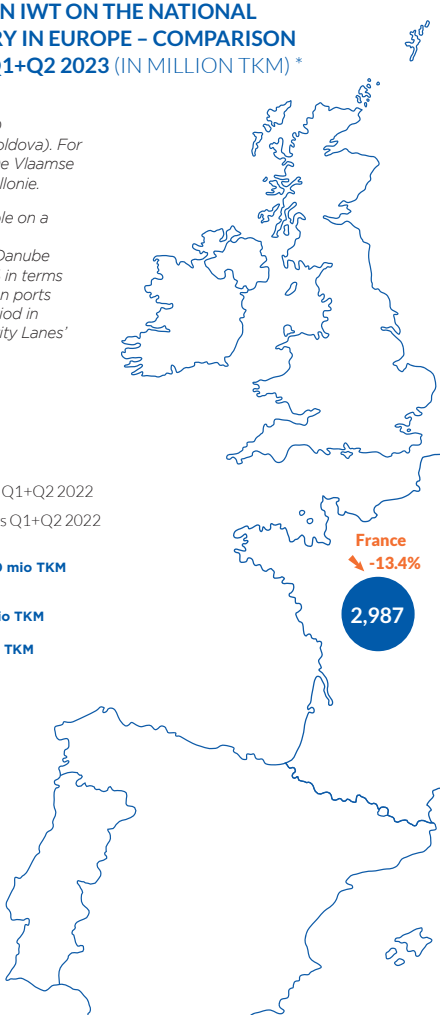
FREIGHT TRANSPORT PERFORMANCE IN EUROPE

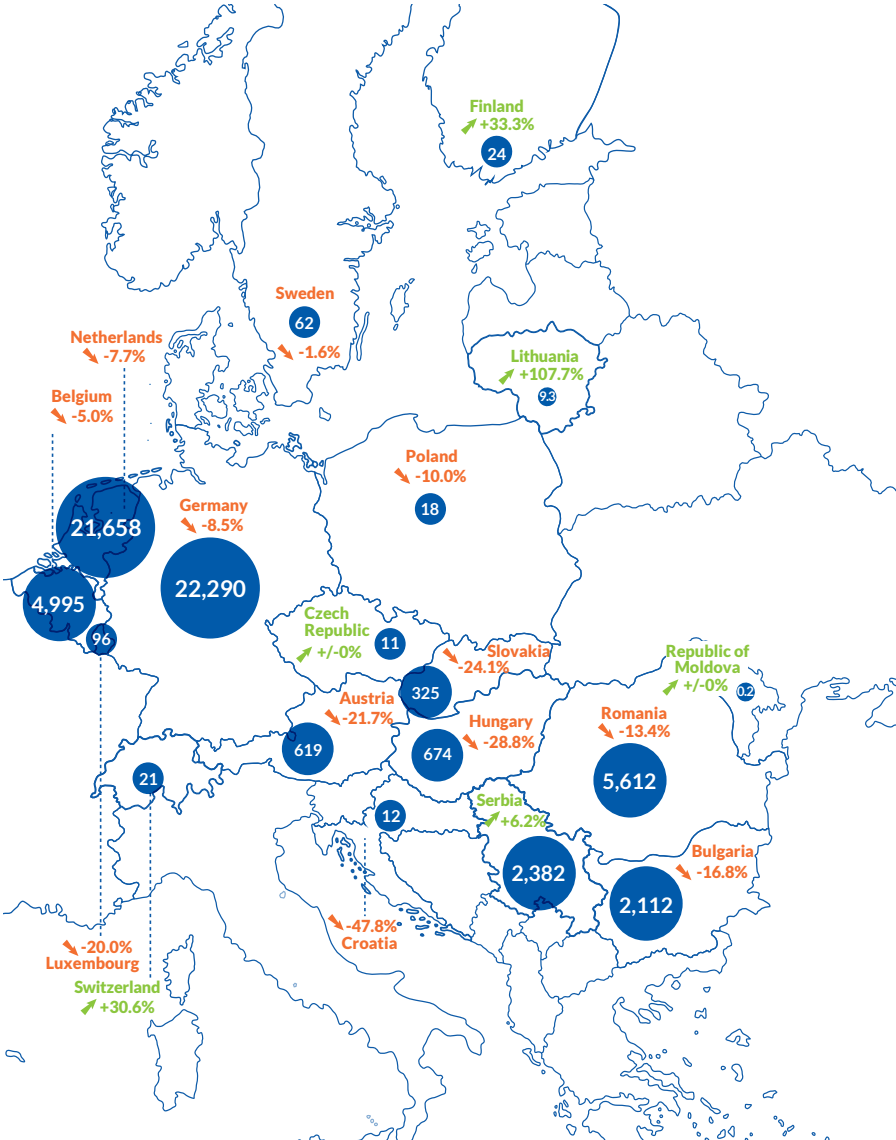
TRANSPORT PERFORMANCE IN IWT ON THE NATIONAL TERRITORY OF EACH COUNTRY IN EUROPE – COMPARISON BETWEEN Q1+Q2 2022 AND Q1+Q2 2023 (IN MILLION TKM) *

Sources: Eurostat [iww_go_qnave], OECD (Switzerland, Lithuania and Republic of Moldova). For Belgium, estimation based on data from De Vlaamse Waterweg and SPW Service public de Wallonie.

** For the UK and Italy, data are not available on a quarterly basis.*
For Ukraine, data were not available. The Danube Commission reported an increase of 297% in terms of waterside cargo transported in Ukrainian ports in Q1+Q2 2023 compared to the same period in 2022. This increase is linked to the 'Solidarity Lanes' initiative.

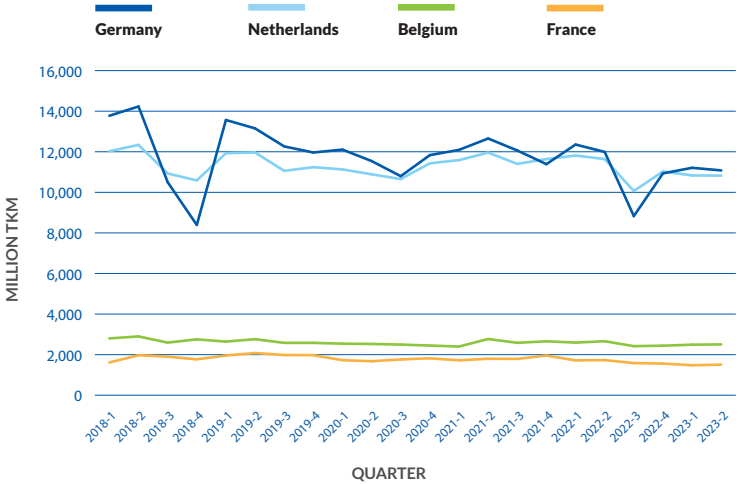





Finland
+33.3%
24
Sweden
62
-1.6%
Netherlands
-7.7%
Belgium
-5.0%
Lithuania
+107.7%
93
Poland
-10.0%
18
21,658
Germany
-8.5%
22,290
4,995
96
Czech Republic
+/-0%
11
Slovakia
-24.1%
325
Austria
-21.7%
619
Hungary
-28.8%
674
Republic of Moldova
+/-0%
12
Romania
-13.4%
5,612
21
12
Serbia
+6.2%
2,382
Bulgaria
-16.8%
2,112
-47.8%
Croatia
-20.0%
Luxembourg
Switzerland
+30.6%

TRANSPORT PERFORMANCE IN MAIN EUROPEAN IWT COUNTRIES

FIGURE 1A: **INLAND WATERWAY TRANSPORT PERFORMANCE IN MAIN WESTERN EUROPEAN IWT COUNTRIES** (IN MILLION TKM, QUARTERLY DATA OF TRANSPORT PERFORMANCE ON THE NATIONAL TERRITORY OF EACH COUNTRY)

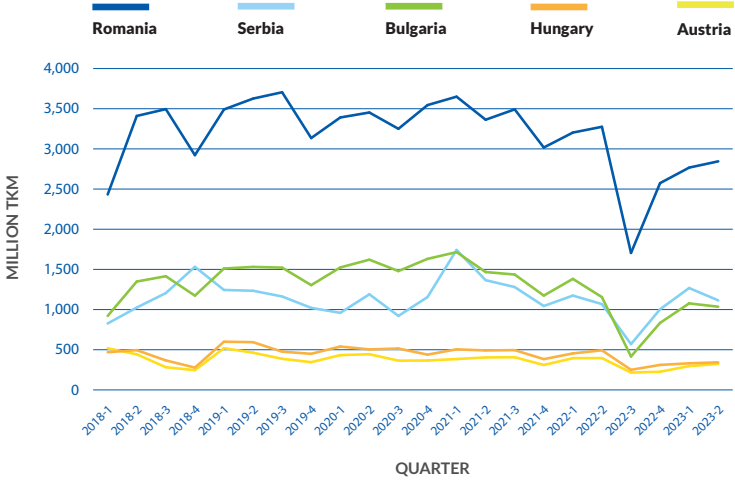


Source: Eurostat [iww_go_qnave] and own calculation for Belgium, based on data from De Vlaamse Waterweg and SPW Service public de Wallonie

Due to a structural break in the data from the Belgian statistical office between Q4 2017 and Q1 2018, data for Belgium from this quarter onwards were recalculated. This was done by applying the rates of change present in the data from the Flemish and the Wallonian waterway administrations.[1]

[1] *For each quarter, these trend rates were weighted with the respective share of Flanders and Wallonia within the sum of transport volumes of both regions: transport volume in q(t) in Belgium = transport volume in Belgium in q(t-1) x [(transport in Flanders q(t)/q(t-1)) x share Flanders in q(t) + (transport in Wallonia q(t)/q(t-1)) x share Wallonia in q(t)]. Based on this estimated transport volume, an estimation for transport performance was carried out: Transport performance in Belgium in q(t) = Transport performance in Belgium in Q4 2017 x [Estimated transport volume in Belgium for q(t) / Transport volume in Belgium in Q4 2017].*

FIGURE 1B: **INLAND WATERWAY TRANSPORT PERFORMANCE IN MAIN CENTRAL AND EASTERN EUROPEAN IWT COUNTRIES** (IN MILLION TKM, QUARTERLY DATA OF TRANSPORT PERFORMANCE ON THE NATIONAL TERRITORY OF EACH COUNTRY)



Source: Eurostat [iww_go_qnave]

DRY BULK, LIQUID BULK AND CONTAINER TRANSPORT IN MAIN IWT COUNTRIES AND REGIONS *

Sources: Eurostat [IWW_GO_QCNAVE], Destatis, Centraal Bureau voor de Statistiek, De Vlaamse Waterweg, SPW Service public de Wallonie, Voies navigables de France, Romanian Institute of Statistics

Notes: for Belgium-Wallonia, quarterly container statistics in tonnes are not available. The product group "machines/other goods" was assumed to consist mainly of container transport. The data include total IWT on the territory of the country/region. In earlier reports, only the volumes transported on the Traditional Rhine, namely the Rhine from Basel to the German-Dutch border, were reported. From now onwards, it will become possible to report on transport volumes on the entire Rhine from Basel to the North Sea (including link to Antwerp via the Rhine-Scheldt link). When calculating the total volume of goods transported on the entire Rhine, all steps were taken to avoid double counting. To learn more about the methodology used to calculate traffic on the entire Rhine please refer to the methodology section on p.44-45.

FIGURE 2: **DRY CARGO TRANSPORT** (IN MILLION TONNES)

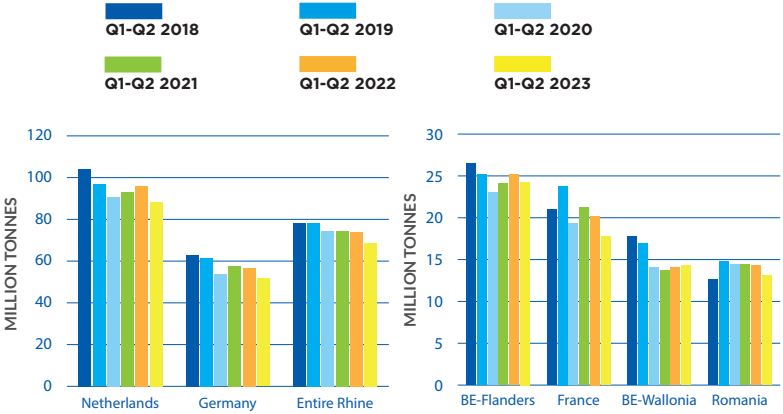


FIGURE 3: **LIQUID CARGO TRANSPORT** (IN MILLION TONNES)

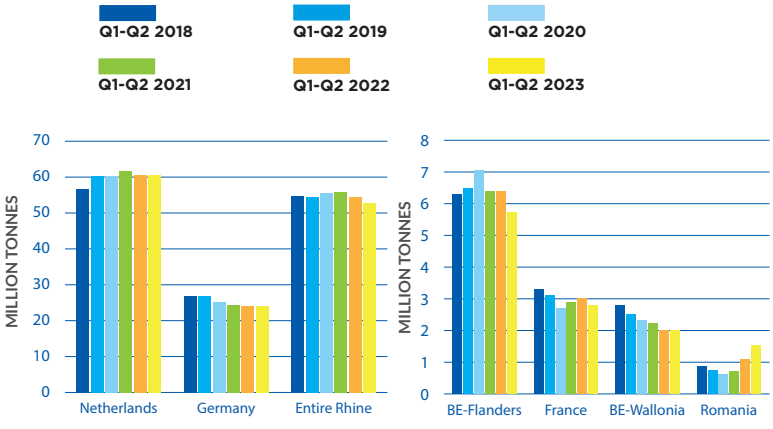
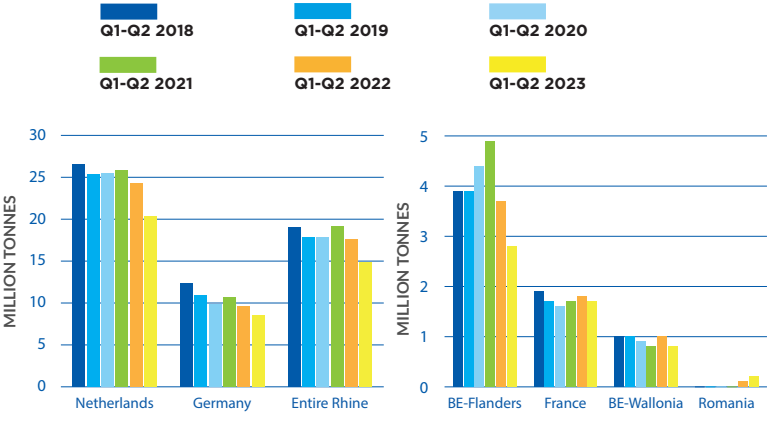
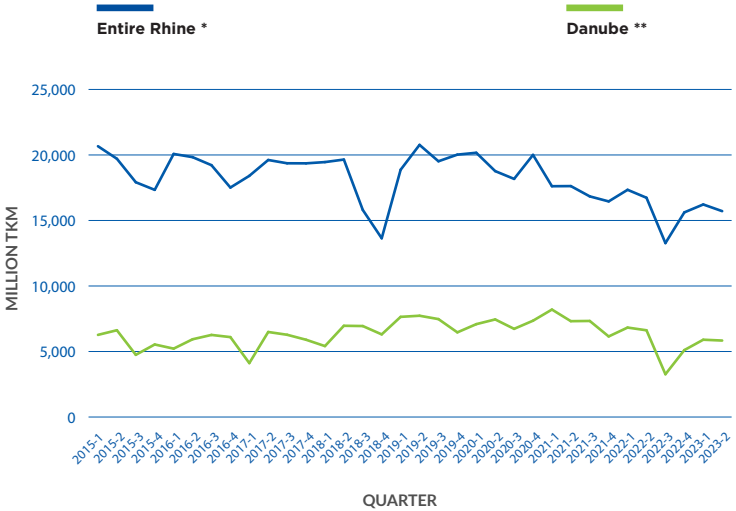


FIGURE 4: **CONTAINER TRANSPORT** (IN MILLION TONNES)



RHINE AND DANUBE NAVIGATION

FIGURE 5: **TRANSPORT PERFORMANCE ON THE ENTIRE RHINE AND THE DANUBE PER QUARTER** (IN MILLION TKM)



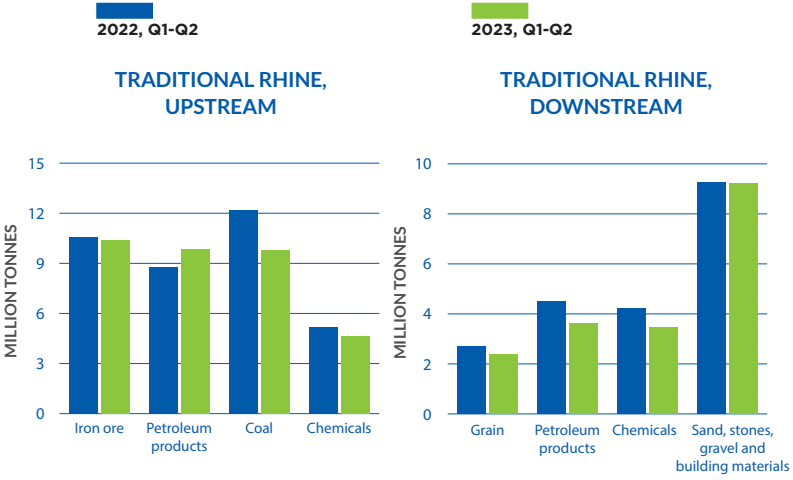
Sources: Eurostat [iww_go_qnave], Destatis (Rhine and affluents)
** Entire Rhine = Rhine from Rheinfelden (CH) to the North-Sea (including link to Antwerp via the Rhine-Scheldt link)*
*** Danube = TKM in all Danube countries but without Ukraine*

TABLE 1: FREIGHT TRANSPORT ON THE ENTIRE RHINE IN THE FIRST HALF OF 2022 AND 2023, BY MAIN FREIGHT SEGMENTS *

Original Name	1st half 2021 in million t.	1st half 2022 in million t.	1st half 2023 in million t.	Variation 2023/2022 in %
Total transport	159.43	155.32	145.36	-6.4
Petroleum products	33.24	30.71	31.66	+3.1
Sand, stones, gravel and building materials	28.47	26.21	23.41	-2.1
Chemical products	25.36	26.15	22.87	-12.6
Containers	19.13	17.53	14.77	-15.8
Solid fuels (coal)	11.47	14.35	11.82	-17.7
Iron ore	11.56	11.04	11.31	+2.4
Agricultural products, foodstuffs and fodder	14.60	14.81	13.28	-10.4
Metals and metal products	7.79	8.28	7.46	-10.0

Source: Destatis, Rijkswaterstaat, CCNR analysis
** The sum of the freight segments selected does not correspond to total transport.*
Entire Rhine = Rhine from Rheinfelden (CH) to the North-Sea (including link to Antwerp via the Rhine-Scheldt link)

FIGURES 6 AND 7: **TRADITIONAL RHINE * TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR Q1-Q2 OF 2022 AND 2023)



Source: CCNR analysis based on Destatis – statistics for the entire Rhine according to upstream or downstream direction not available
** Traditional Rhine = Rhine from Rheinfelden (CH) to the German-Dutch border*

- In the first half of 2023, economic conditions evolved slowly. High inflation had a negative impact on household purchasing power. As a result of this high inflation, the European Central Bank raised its key interest rates sharply and the consumer and construction sectors suffered, as financing costs rose. The general economic slowdown also had a negative impact on the industrial sector. In addition, a considerable number of inland (dry cargo) vessels were exported to eastern Europe to handle the alternative route for grain transport from Ukraine, leading to serious shortages of fleet capacity on certain trades in western Europe, which probably contributed to the reduction of transport performance in those areas.

- The effects on the entire Rhine traffic were reflected by a 6.4% decline in freight transport in the first semester of 2023. Cargo transport on the entire Rhine reached 145.36 million tonnes in the first half year of 2023. As many industrial sectors are dependent on inland waterway transport, most inland waterway freight segments have seen a decline in their transport volume. Container transport and dry bulk transport were the hardest hit by the recession and the slowdown in world trade.

- While taking into consideration the traditional Rhine only during the first semester of 2023, it can be observed that cargo transport amounted to 77.4 million tonnes, compared to 84.7 million tonnes in the first semester 2022. This represents a decrease of 8.6%.

- Despite the overall reduction in transport volume, the trends vary greatly depending on the type of goods involved. In the case of chemical products on the entire Rhine, a fall of 12.6% was observed. The chemical industry is currently suffering from an economic slowdown due to the rise in the price of chemical raw materials (for example natural gas prices) which can explain the rise in the cost of manufacturing chemical products and the fall in demand. This conclusion also holds when looking specifically at the traditional Rhine, for which downstream and upstream data are also available. Downstream transport of chemicals decreased by around 17% on the traditional Rhine in the first half year of 2023 while upstream transport of chemicals, which has a share of 57% of all chemicals on the traditional Rhine, decreased by around 10%.

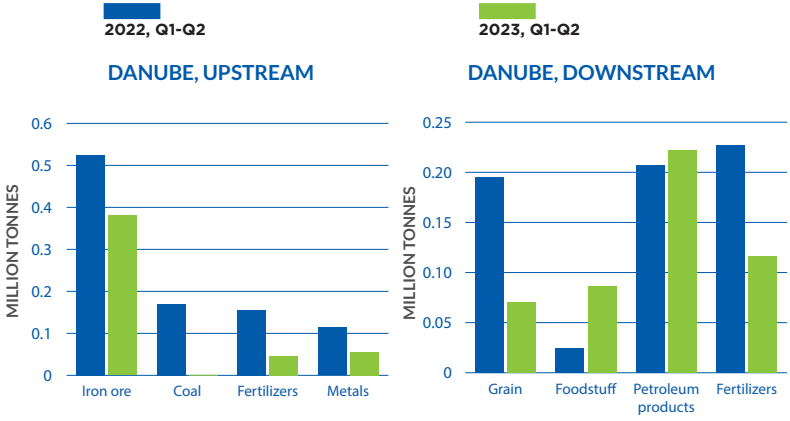
- It is also worth noting that the 2.1% decrease in demand for sand, stones, gravel and construction materials is linked to interruptions and delays in the supply chain and the shortage of personnel in the construction sector. The nitrogen crisis in the Netherlands is also having a negative impact in several ways. For instance, construction stagnates when permits are lacking which leads to less demand for building materials and their transport. Another major factor likely to have an impact on transport demand for sand, stones, gravel and building materials is the rise in interest rates by the European Central Bank. This has led to a sharp fall in the number of applications for construction loans. The resulting slowdown in construction activity is also weighing on transport demand for this type of goods. For this segment, it is also worth noting the specific figures for the traditional Rhine as around 76% of all sand, stones, gravel and building materials transported on the traditional Rhine are transported in the downstream direction. This reflects the abundance of these materials in the Upper Rhine region and their exportation towards the Lower Rhine region. In the first half year 2023, the downstream transport of sand, stones, gravel and building materials was approximately at the same level as it was during the same period the previous year. Exports were therefore resilient in view of the deterioration of economic framework conditions.

- On the entire Rhine, while coal transport was still enjoying an upward trend in 2022, these effects fell sharply in 2023. As a result, coal transport declined in 2023. In the first half of 2023, the level of coal transport was close to that recorded in the first half of 2021.

- For the largest freight segment, petroleum products, transport demand on the entire Rhine in the first half of 2023 increased by 3.1%. The fall in oil prices in 2023 is likely to have had an impact, with the result that economic conditions were better for this segment than for most others.

- The downward trend in container traffic (-15.8% in the first half of 2023 compared with 2022) is explained by the disruption to global supply chains and the decline in international trade.

FIGURES 8 AND 9: **MIDDLE DANUBE TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR THE MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR Q1-Q2 2022 AND 2023) *



Source: Danube Commission market observation report
** Detailed data according to goods segment and quarters are only available for the Middle Danube at Mohacs.*

- The Russian war of aggression against Ukraine considerably impacted freight transport on the Danube in the first semester of 2023.

- In the reporting period, the Danube shipping market was impacted by the decline in steel consumption, particularly in the construction and automotive industries, and the corresponding decline in deliveries of iron ore and coking coal (upstream transport).[2] In addition, restrictions on exports of grain by individual countries in the Danube region (Hungary, Serbia) weighed heavily on downstream transport of grain. This decrease in goods transport is observed for transport between the Upper and Middle Danube region on the one hand, and the lower Danube region on the other hand.

[2] *Source: Danube Commission market observation report*

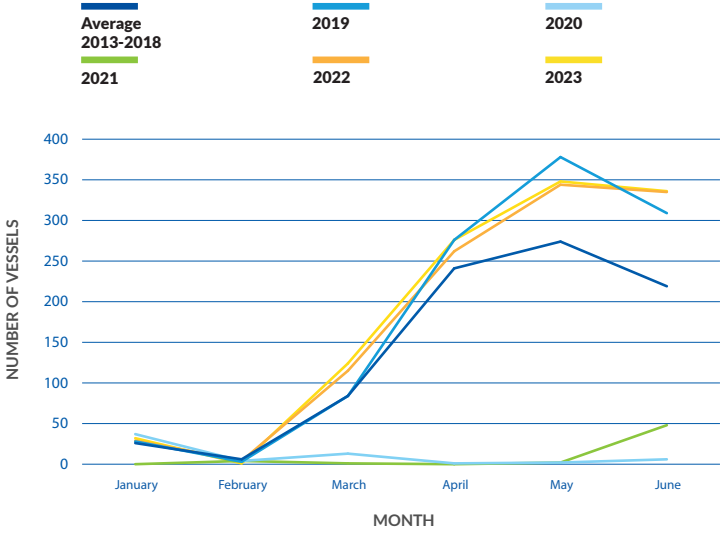
- In the lower Danube region, however, transport demand was higher due to the EU-Ukraine Solidarity Lanes initiative to facilitate Ukraine's agricultural export and bilateral trade with the EU. In the first half of 2023, freight traffic on the Danube-Black Sea Canal amounted to 10,528,000 tonnes, which represents an increase of 18% compared to the corresponding figure for 2022.

PASSENGER TRANSPORT IN EUROPE

- Passenger transport was highly impacted by the Covid-19 crisis in 2020 and only began to recover in the second semester of 2021 for both the Rhine and the Danube. The Danube, as well as the Rhine and its Moselle, Main, Neckar and Saar affluents, are important operating areas for river cruises in Europe, alongside the Seine, Rhône and Douro.

- A statistical measurement point for cruise vessels on the Rhine is the lock of Iffezheim on the Upper Rhine.

FIGURE 10: **NUMBER OF RIVER CRUISE VESSELS PASSING THE LOCK OF IFFEZHEIM ON THE UPPER RHINE IN THE FIRST HALF YEAR PER MONTH**



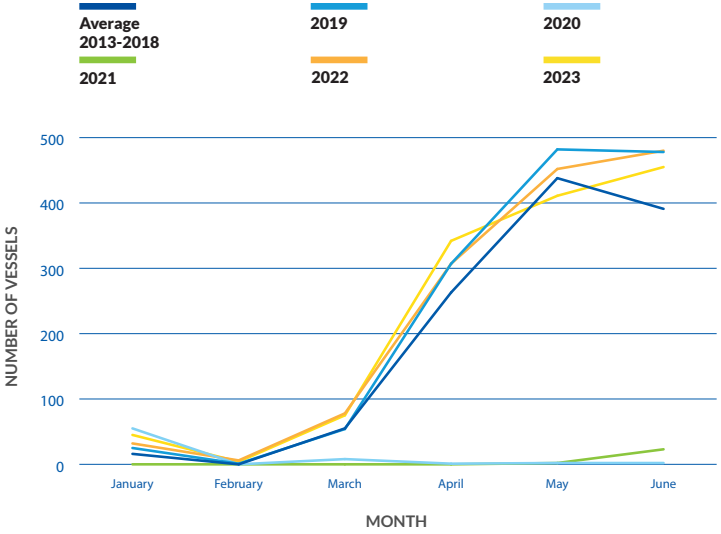
Source: German Waterway and Shipping Administration

- With 1,117 cruise vessels passing through the lock of Iffezheim in the first half year of 2023, pre-pandemic levels were reached. In comparison, during the same period in 2019 and 2021, there were respectively 1,078 and 55 cruise vessels which passed through this lock. The figures in 2023 were also slightly higher than in the previous year 2022 (1,089).

- However, no data on the number of passengers are available for this lock, which makes it difficult to evaluate the degree of capacity utilisation of river cruise vessels that pass through it.

- For the Danube, data are available for the lock of Jochenstein near Passau. Alongside Vienna and Budapest, Passau is an important place where cruise vessels both start and finish their journey.

FIGURE 11: **NUMBER OF RIVER CRUISE VESSELS PASSING THROUGH THE LOCK OF JOCHENSTEIN NEAR PASSAU ON THE UPPER DANUBE IN THE FIRST HALF YEAR PER MONTH**



Source: German Waterway and Shipping Administration

- Data for the first half year of 2023 confirmed the strong recovery which had been observed for 2022. Indeed, 1,332 river cruise vessels passed through the lock of Jochenstein between January and June 2023 (1,355 during the same period in 2022), which illustrates a rather stable demand for passenger transport on the Upper Danube, as illustrated in Figure 11.

- In both cases, it is important to note that the utilisation rate of the river cruise vessels passing the locks is also a key indicator when assessing the recovery of the river cruise sector. For the first half-year 2023, the data for the Danube point to slightly lower utilisation rates of cruise vessels compared to the same period in 2022 (38.2% in 2023 compared to 42.0% in 2022). Capacity utilisation was still below the pre-pandemic levels (first half year 2019: 56.1%).

02

OPERATING CONDITIONS

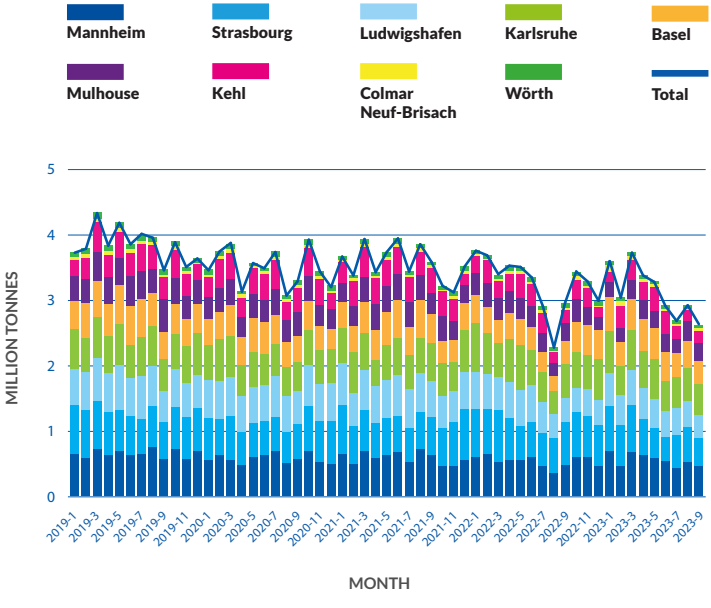
- **Freight rates in cargo transport showed a decline in the first half year 2023. A main reason is the normalisation of water levels. Dry bulk spot market prices in particular experienced a downward trend, reflecting the end of the coal boom in dry cargo transport and the end of the low-water period.**

- **Fuel prices in IWT also declined, following the decrease in oil prices. The reasons were mainly demand-driven, as the disruptions in trade and transport created a downward movement in oil and fuel demand. The outlook for fuel prices for the year 2024 points to a level of around 80 Euro per 100 litres.**

WATERSIDE GOODS HANDLING IN MAIN UPPER RHINE PORTS

- Monthly data for waterside goods handling in Upper Rhine ports show that cargo handling and related transport demand on the Rhine saw a downward trend in the first half year of 2023.
- This downward trend reflects the overall deterioration of economic conditions in 2023. The Russian war against Ukraine led to shortages in energy supply, strong price increases in the economy, logistical disturbances and a decline in industrial production, trade and overall transport demand. In the wake of this, cargo handling in inland ports and transport activity on inland waterways were reduced (see also Chapter 1).

FIGURE 1: **MONTHLY WATERSIDE GOODS HANDLING IN MAIN UPPER RHINE PORTS** (IN MILLION TONNES)

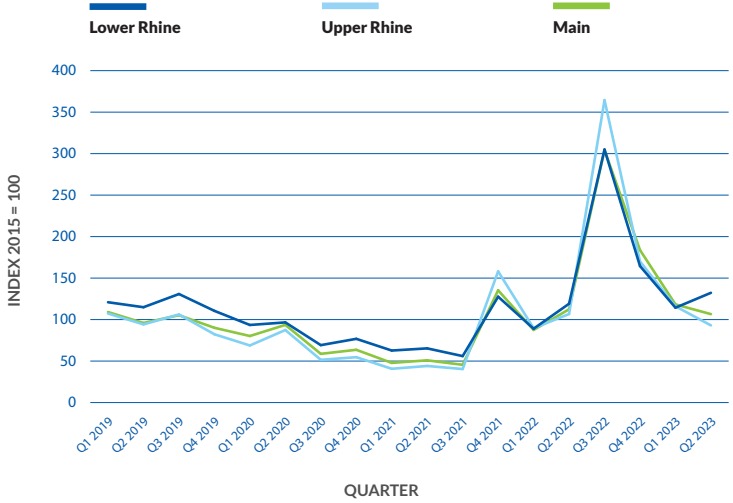


Source: CCNR analysis based on data provided by the ports

FREIGHT RATES IN THE RHINE REGION[3]

- In the Amsterdam-Rotterdam-Antwerp (ARA) Rhine traffic of liquid goods, spot market freight rates experienced a high degree of volatility between mid-2022 and mid-2023. The main reason was the low water period in summer 2022. In the first half of 2023, freight rates normalised in parallel with the normalisation of navigation conditions.

FIGURE 2: **SPOT MARKET FREIGHT RATE EVOLUTION FOR GASOIL FROM THE ARA REGION TO RHINE DESTINATIONS** (INDEX 2015 = 100) *

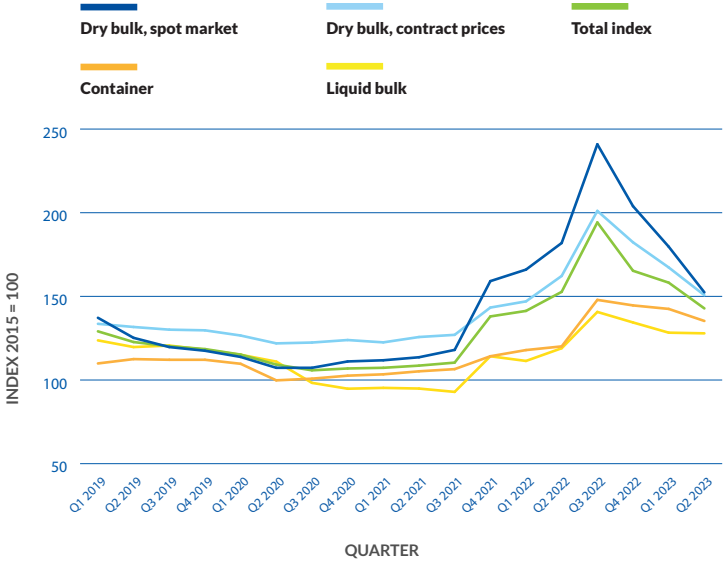


Source: CCNR calculation based on Insights Global
** Insights Global collects spot market freight rates (in Euro per tonne) for ARA-Rhine trade of liquid bulk. The CCNR transforms these values into an index with base year 2015.*
Lower Rhine: Duisburg, Cologne. Upper Rhine: Karlsruhe, Basel. Main: Frankfurt/Main

[3] *For the Danube region, freight rate data were not available.*

- Statistics Netherlands (CBS) collects freight rate data from a panel of Dutch IWT companies. These data are studied twice a quarter and include fuel and low water surcharges.

FIGURE 3: **FREIGHT RATE EVOLUTION PER QUARTER FOR DUTCH IWT COMPANIES ACCORDING TO MARKET SEGMENT** (INDEX 2015 = 100, QUARTERLY DATA)



Source: Centraal Bureau voor de Statistiek (Binnenvaartdiensten; prijsindex)

- The dry bulk spot market index rose steeply in summer 2022 but then decreased continuously in the following quarters. The normalisation of water levels, the end of the boom in coal transport and the general economic recession can all explain this development (see Chapter 1).

- Hence, by the second quarter of 2023, the gap between dry bulk spot market and dry bulk contract prices, that had opened in 2021 and in 2022, was closed.

- The decline in the container freight rate index in 2023 reflects the deterioration in containerised trade, maritime container transport and in inland waterway container transport (see Chapter 1, Figure 4).

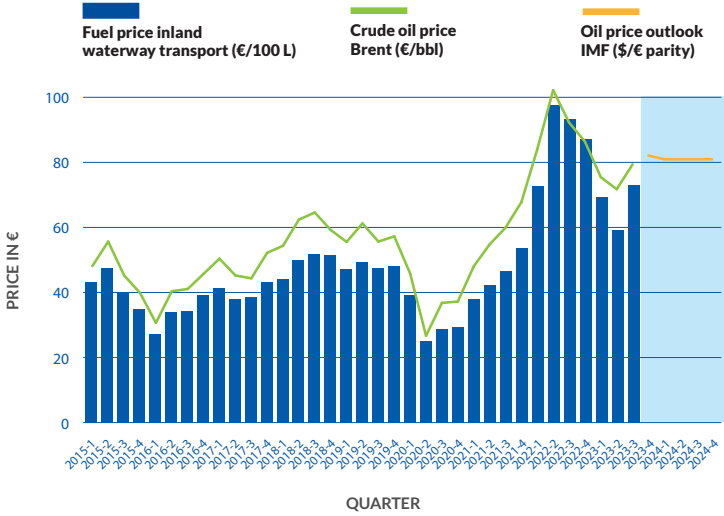
- In addition, lower coal volumes also result in more vessels available for container transport. This rise in fleet capacity leads to lower freight rates in container transport.

FUEL COST EVOLUTION

- In the second quarter of 2020 fuel prices were at their lowest level since 2009 due to Covid-19. During the recovery from Covid-19, as well as during the on-going Russian war of aggression against Ukraine, they rose to their highest level since the beginning of 2006 over the course of two years. Between mid-2021 and mid-2022, crude oil prices, together with fuel prices in inland navigation, roughly doubled. Between mid-2022 and mid-2023, oil prices and fuel prices in IWT subsided. The reasons were mainly demand-driven, as the disruptions in trade and transport created a downward movement in oil and fuel demand.

- In the following graph, the curves for the oil price and for the fuel or gasoil price are roughly at the same level, but it should be noted that the oil price is given in Euro per barrel (= 159 litres), while the fuel prices are given in Euro per 100 litres. Fuel prices are thus higher than crude oil prices in absolute terms.

FIGURE 4: **AVERAGE FUEL PRICES IN IWT AND BRENT CRUDE OIL PRICES INCLUDING FORECAST**



Sources: Insights Global (fuel price based on gasoil bunker prices observed on a daily basis in Northwest Europe), US Energy Information Administration (oil price), Federal Reserve Economic Data (historical exchange rate US-dollar/Euro)
1 barrel (bbl) = 159 litres

- The graph shows a very close correlation between fuel prices in inland navigation (gas oil prices) and oil prices, which serves as a basis for forecasting fuel prices (using oil price forecasts).

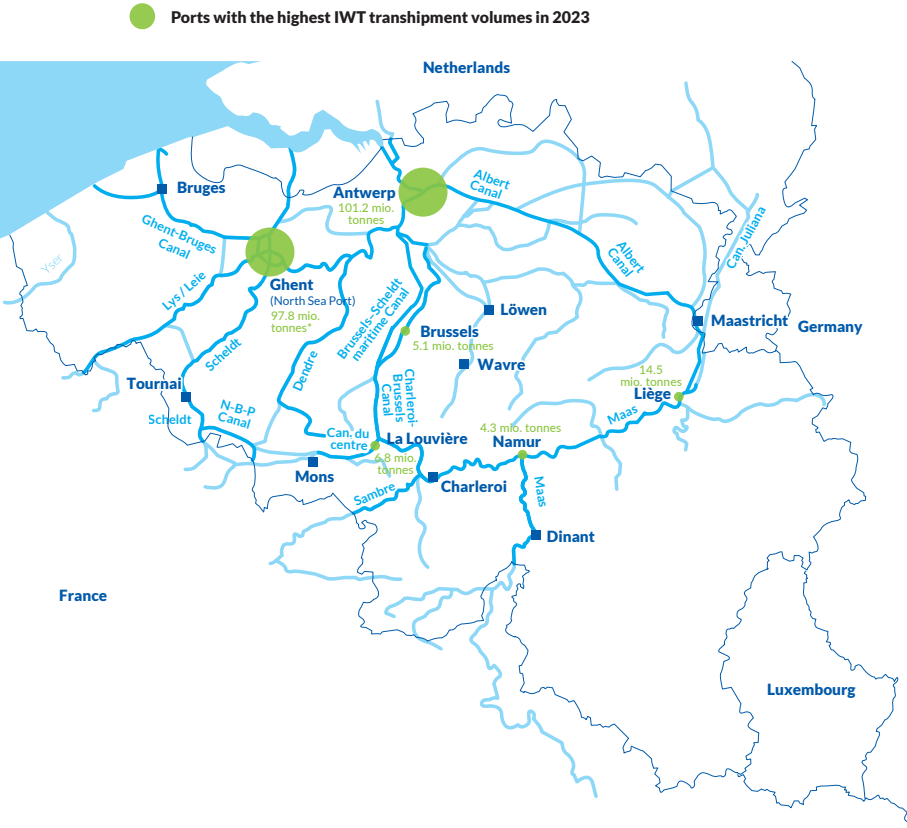
- The IMF oil price outlook indicates a stable oil price in 2024. This outlook would imply that fuel prices will settle on a level of around 80 Euro per 100 litres in 2024. The further geopolitical course will be decisive for the forecast horizon, especially with regard to the Russian war of aggression against Ukraine and the war in the Near East. Escalations and de-escalations of these conflicts would have an influence on the price development of crude oil and fuels.

03

FOCUS ON BELGIUM

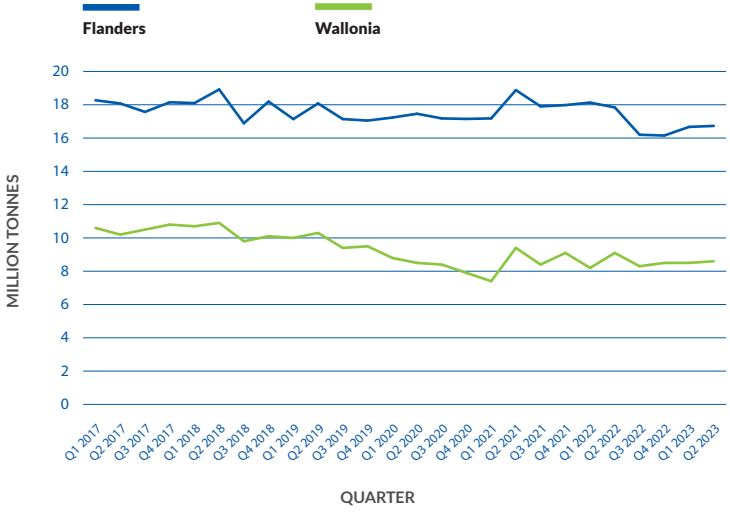
- **Chapter 3 highlights inland waterway transport in Belgium. Both in Flanders and Wallonia, the largest goods segment is sands, stones, gravel and building materials. This goods segment has a share of 37% of the entire transport volume in Flanders and a respective share of 44% in Wallonia.**
- **In Belgium, most of the container transport occurs in Flanders. Data from the Flemish waterway administration point to a positive trend until the year 2021, but thereafter to a negative trend.**
- **The explanation for this pattern is the development of maritime container transport. Indeed, for ports in the North Range, including Belgian seaports, maritime container transport decreased between 2021 and 2023. The reason for this decrease is the decline in world trade that stems from the geopolitical crisis.**

THE INLAND WATERWAY NETWORK IN BELGIUM



Source: CCNR Market Observation - Annual report 2020, page 42
** North Sea Port consists of the ports of Ghent, Terneuzen, Borsele and Flushing.*

FIGURE 1: **QUARTERLY TRANSPORT DEMAND ON INLAND WATERWAYS IN BELGIUM**



Source: de Vlaamse Waterweg and Service public de Wallonie, CCNR analysis

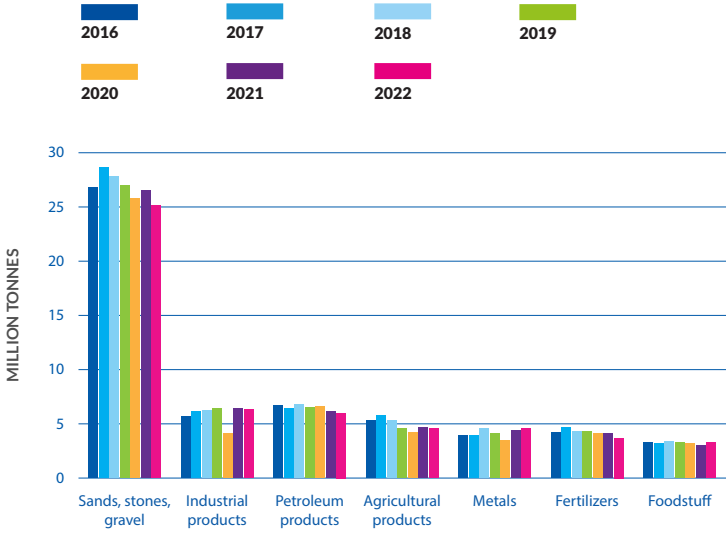
- According to data from the two main Belgian waterway administrations,[4] the northern part of Belgium (the region of Flanders) has a higher transport activity on inland waterways than the southern part of Belgium (the region of Wallonia). With a transport volume of 68 million tonnes in 2022, transport demand on inland waterways in Flanders was twice as high as in Wallonia, where 34 million tonnes were registered. The quarterly transport volumes in Flanders lay in the range between 16 and 18 million tonnes per quarter, compared to a range between eight and ten million tonnes per quarter in Wallonia.

[4] The data from the Statistical office, published by Eurostat, show a structural break in the first quarter of 2018, which is the reason why data from the waterway administration are used for analysing the Belgian transport demand over time.

- Both in Flanders and Wallonia, the largest goods segment is for sands, stones, gravel and building materials, with a share of 37% of the entire transport volume in Flanders and a respective share of 44% in Wallonia.

- In Flanders, the seven largest goods segments account for 79% of the total inland waterway transport in this region. The evolution over time points to a stability orientated trend for most product segments. The only exception might be the segment of sand, stones, gravel and building materials, for which a slightly negative trend has been observed over recent years.

FIGURE 2: **YEARLY FIGURES FOR THE SEVEN PRODUCT SEGMENTS WITH THE HIGHEST TRANSPORT DEMAND ON INLAND WATERWAYS IN FLANDERS**



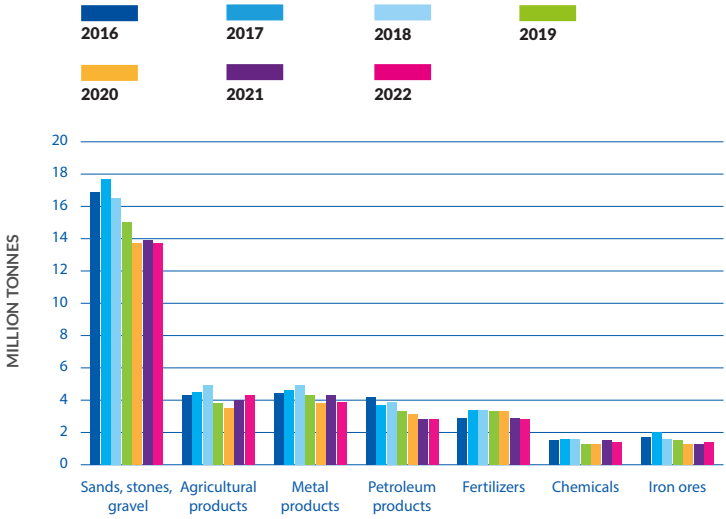
Source: de Vlaamse Waterweg, CCNR analysis

- In Belgium, most of the container transport takes place in Flanders. Data for container transport in Flanders (source: de Vlaamse Waterweg) point to a positive trend until the year 2021 but afterwards to a negative trend. The explanation for this pattern is the development of maritime container transport. Indeed, for ports in the North Range,[5] including Belgian seaports, maritime container transport decreased between 2021 and 2023. The reason for this decrease is the decline in world trade that stems from the geopolitical crisis.[6]

- In Wallonia, the seven largest product segments account for 89% of the entire transport on inland waterways in this province. The data show a reduction for the amounts of sands, stones, gravel and building materials between 2016 and 2022. Also, several other product segments reveal a slightly declining trend in Wallonia. Examples are petroleum products, fertilisers and iron ores.

[5] The term "North Range" designates the concentration of the main European ports lined up along the southern coast of the North Sea, serving as the maritime frontage of a vast territory centered on consumers in western Europe.
[6] See the article "Welthandel kommt kaum vom Fleck"("Global trade barely makes any headway"), in Deutsche Verkehrszeitung (DVZ), 18th October 2023

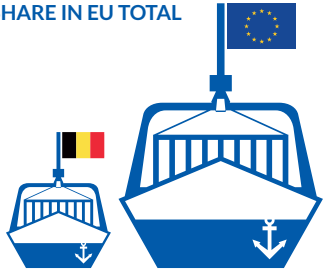
FIGURE 3: **YEARLY FIGURES FOR THE SEVEN PRODUCT SEGMENTS WITH THE HIGHEST TRANSPORT DEMAND ON INLAND WATERWAYS IN WALLONIA**



Source: Service public de Wallonie, CCNR analysis

FACT SHEET IWT IN BELGIUM – ANNUAL FIGURES

ABSOLUTE VALUE[7] FOR BELGIUM VS SHARE IN EU TOTAL

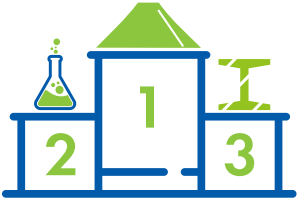


TRANSPORT PERFORMANCE TOTAL

7,559 million TKM
SHARE IN EU TOTAL **6.2%**

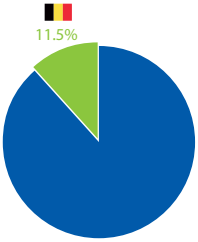
VOLUME OF TOTAL GOODS TRANSPORT

163.0 million tonnes



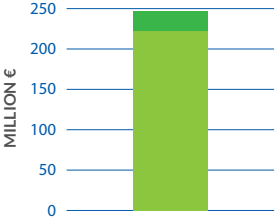
MAIN GOODS SEGMENTS IN IWT

1. Metal ores, sands, stones, gravel
   1,986 million TKM SHARE IN EU TOTAL **7.0%**
2. Chemicals and chemical products
   921 million TKM SHARE IN EU TOTAL **5.8%**
3. Basic metals and metal products
   596 million TKM SHARE IN EU TOTAL **7.6%**



MODAL SPLIT SHARE OF IWT WITHIN TOTAL LAND-BASED TRANSPORT PERFORMANCE

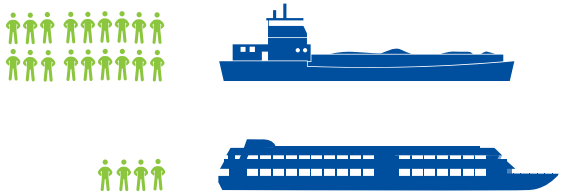
IWT



LEVEL OF IWT TURNOVER

SHARE IN EU TOTAL **3.3%** 234.0 million €
SHARE IN EU TOTAL **3.7%** **Goods transport:** 222.5 million €
SHARE IN EU TOTAL **1.0%** **Passenger transport:** 11.5 million €

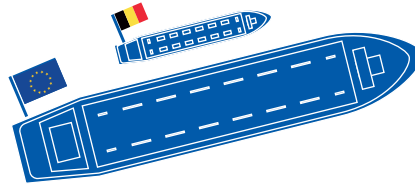
[7] *Data on transport demand are for 2022; fleet data, the modal split, data on companies, turnover and employment are for 2020. For the last three indicators, data for 2022 were only available for passenger transport and were as follows: companies (70), employed persons (142), turnover (24.2 million euros), showing that the IWT passenger transport sector is recovering since the Covid-19 pandemic in 2020.*



PERSONS EMPLOYED IN IWT		SHARE IN EU TOTAL	NUMBER OF IWT COMPANIES
743	**1.8%**	**3.6%**	346
Goods transport: 615	**2.7%**	**5.3%**	Goods transport: 288
Passenger transport: 128	**0.7%**	**1.4%**	Passenger transport: 58

FLEET

Self-propelled barges and dumb barges
1,114 SHARE IN EU TOTAL **8.5%**
Push and tugs
76 SHARE IN EU TOTAL **3.8%**



Notes on the factsheet

#) in contrast with transport performance, a country-specific share cannot be calculated for transport volume.

The modal split share is defined as the percentage of inland waterway freight transport performance (in TKM) within total land-based transport performance. Land-based freight transport modes include road, rail and inland waterways. The road freight activity is reported according to the territoriality principle, where international road freight transport data are redistributed according to the national territories of where the transport actually takes place. These principles are implemented in the Eurostat series [tran_hv_frmod].

Source: CCNR analysis based on Eurostat data [sbs_na_1a_se_r2], [iww_go_qnave], [iww_eq_loadcap], [iww_eq_power_ag], [iww_go_atygo]

GLOSSARY

Q1 20XX: first quarter

Q2 20XX: second quarter

Q3 20XX: third quarter

ARA REGION: Amsterdam-Rotterdam-Antwerp

BARREL: 1 barrel (bbl) = 159 litres. This unit is used for the oil price which is given in Euro per barrel.

CAPACITY UTILISATION: the ratio of the number of passengers divided by passenger capacity. The analysis of the capacity utilisation of a fleet enables a thorough overview of how the supply/demand relationship evolves throughout the years.

DANUBE COUNTRIES: Austria, Bulgaria, Croatia, Hungary, Moldova, Romania, Serbia, Slovakia, Ukraine

ENTIRE RHINE: Rhine from Rheinfelden (Switzerland) to the North Sea

EU: European Union

EUROPE: European inland navigation in this report includes four countries that do not belong to the European Union - Moldova, Serbia, Switzerland and Ukraine.

FREIGHT RATE: price at which a cargo is delivered from one point to another.

IWT: inland waterways transport

IWW: inland waterways

LOWER DANUBE: stretch of the Danube from the Iron Gates on the border between Serbia and Romania to Sulina on the Black Sea in Romania

LOWER RHINE: section of the Rhine which flows from Bonn, Germany, to the North Sea at Hoek van Holland, the Netherlands.

MIDDLE DANUBE: stretch of the Danube from Devín Gate on the border between Austria and Slovakia to the Iron Gates

MODAL SPLIT SHARE: the percentage of inland waterway freight transport performance (in TKM) within total land-based transport performance. Land-based freight transport modes include road, rail and inland waterways, if not specified otherwise.

NORTH RANGE: it designates the concentration of the main European ports lined up along the southern coast of the North Sea, serving as the maritime frontage of a vast territory centered on consumers in western Europe.

SOLIDARITY LANES: in the context of the Russian war of aggression against Ukraine, the European Commission set out an action plan to establish 'Solidarity Lanes' to ensure Ukraine can export grain, but also import the goods it needs, from humanitarian aid to animal feed and fertilisers.

TKM: Tonne-Kilometre (unit for transport performance which represents volume of goods transported multiplied by transport distance)

TRADITIONAL RHINE: section of the Rhine from Basel to the border between Germany and the Netherlands

TURNOVER: sales volume net of sales taxes

UPPER DANUBE: section of the navigable Danube from Kelheim, Germany, to Devín Gate, on the border between Austria and Slovakia

UPPER RHINE: section of the navigable Rhine in the Upper Rhine Plain between Basel, Switzerland, and Bingen, Germany

NATIONAL STATISTICAL OFFICES

Acronym	Original Name	English Name	Country
CBS	Centraal Bureau voor de Statistiek	Central Statistical Office	The Netherlands
Destatis	Statistisches Bundesamt	Federal Statistical Office of Germany	Germany
INS	Institut național de statistică	Romanian Institute of Statistics	Romania

OTHER SOURCES

Original Name	English Name	Country
CCNR/ZKR/CCR	Central Commission for the Navigation of the Rhine (CCNR)	Europe
Danube Commission	Danube Commission	Europe
De Vlaamse Waterweg	Waterways in Flanders	Belgium
EUROSTAT	EUROSTAT	EU
Federal Reserve Economic Data	Federal Reserve Economic Data	USA
Insights Global	Insights Global	The Netherlands
International Monetary Fund (IMF)	International Monetary Fund (IMF)	World
Organisation for Economic Co-operation and Development (OECD)	Organisation for Economic Co-operation and Development (OECD)	World
PJK International	PJK International	The Netherlands
Ports mentioned in the report	Ports mentioned in the report	Europe
Rijkswaterstaat	Ministry of Infrastructure and Water Management	The Netherlands
SPW Service Public de Wallonie	Public Service of Wallonia	Belgium
US Energy Information Administration	US Energy Information Administration	USA
Voies navigables de France (VNF)	Navigable Waterways of France (VNF)	France
Wasserstraßen-und Schifffahrtsverwaltung des Bundes (WSV)	German Waterways and Shipping Administration	Germany

BOOKS, JOURNAL ARTICLES AND STUDIES

Original Name	Country
Deutsche Verkehrszeitung (DVZ), „Welthandel kommt kaum vom Fleck“, 18 October 2023	Germany

METHODOLOGY

Freight traffic on inland waterways in Europe

Europe as defined in Chapter 1 is taking into account all European countries providing quarterly data on inland waterway transport. All these countries are listed on the "Transport Performance in Europe" map (page with map in Chapter 1).

When discrepancies on total transport performance are observed between Eurostat and national statistics data, the information is notified to Eurostat and to the national statistics office, and Eurostat data is taken into account.

When available, NST product classification is used in order to split transport performance on following transport segments: dry cargo, liquid cargo, containers.

Freight traffic for the entire Rhine (including link to Antwerp via the Rhine-Scheldt link)

In earlier reports, traffic on the Rhine was analysed on the basis of data for the "traditional Rhine", meaning the traffic between Basel and the German-Dutch border, provided by the German statistical institute Destatis. This concept did not take into account the transport of goods on the Dutch Rhine and in the Dutch Rhine Delta. As the Dutch Rhine forms a delta, the expressions "Dutch Rhine" and "Dutch Rhine Delta" are used synonymously.

As a result of cooperation with Rijkswaterstaat, it has now become possible to include freight transport in the Dutch Rhine Delta, and therefore to report on transport volumes on the entire Rhine from Basel to the North Sea. To this end, it was first necessary to define the geographical scope of the data collection and the waterways in the Netherlands that form part of the Rhine. The waterways considered were the following: Waal, Hollands Diep, Boven-Merwede, Oude Maas, Dordtsche Kil, Beneden-Merwede, Lek, Nieuwe Maas, Noord, Nieuwe Merwede, Nieuwe Waterweg, Amsterdam-Rijnkanaal, Rhine-Scheldt link, Hartelkanaal, IJssel.

The link between the Rhine delta and the port of Antwerp was also taken into account (Rhine-Scheldt link), which contributes in particular to the high volumes of petroleum products and chemicals observed on the Dutch Rhine.

To be able to represent transport activity on the Rhine as a whole, it was also necessary to develop the appropriate methodology, especially so as to avoid any risk of double counting of volumes transported on the different Rhine stretches. This risk arose above all from the fact that the volumes transported on the traditional Rhine came largely from Dutch and Belgian seaports. It was therefore necessary to avoid double counting of volumes recorded in the Dutch Rhine Delta (Rijkswaterstaat data) which are already taken into account within the traditional Rhine (Destatis data). Thus, volumes already counted as part of traditional Rhine traffic were excluded from the Dutch Rhine data (Rijkswaterstaat data). This was done by excluding all the volumes to and from Germany and Switzerland.

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This notice does not constitute a formal commitment on the part of those organisations referred to in the report.

The Market Insight of European inland navigation is a common project of the CCNR and the European Commission

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