MARKET INSIGHT

INLAND NAVIGATION IN EUROPE

PUBLISHED IN APRIL 2023

CCNR
CENTRAL COMMISSION FOR THE NAVIGATION OF THE RHINE

European Commission

Market Insight

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Published in

April 2023

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TABLE OF CONTENTS

01

FREIGHT AND PASSENGER TRANSPORT ON INLAND WATERWAYS (P.5)

Freight transport performance in Europe **(p.6)**

Transport performance in main European IWT countries **(p.8)**

Dry bulk, liquid bulk and container transport in main IWT countries and regions **(p.10)**

Rhine and Danube navigation **(p.12)**

Passenger transport in Europe **(p.16)**

02

OPERATING CONDITIONS (P.21)

Waterside goods handling in main Upper Rhine ports **(p.22)**

Loading degree of dry cargo vessels and number of voyages **(p.24)**

Freight rates in the Rhine region **(p.26)**

Fuel cost evolution **(p.30)**

03

FOCUS ON ITALY (P.33)

Inland waterway freight and passenger transport in Italy **(p.34)**

Freight transport in Italy **(p.36)**

The hydraulicity conditions on the river Po **(p.37)**

Passenger transport in Italy **(p.39)**

Fact sheet IWT in Italy - Annual figures **(p.42)**

01

FREIGHT AND PASSENGER TRANSPORT ON INLAND WATERWAYS

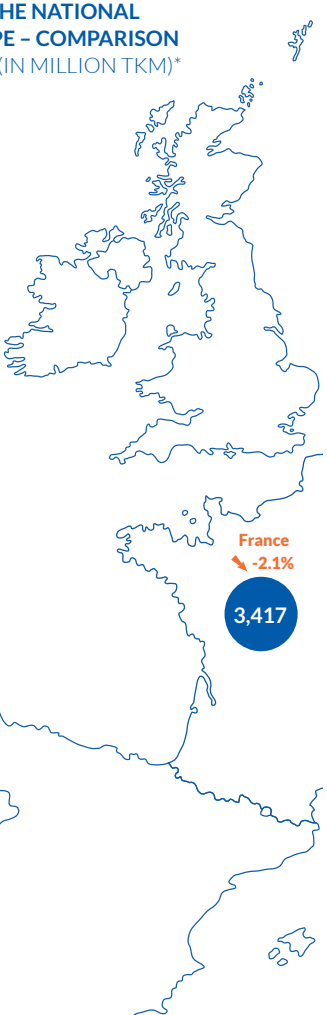
- **The first half of 2022 registered a 2.8% decrease in European inland waterway freight transport performance, compared to the same period in 2021.**
- **After the modest recovery registered at the beginning of 2022, the Russian war of aggression against Ukraine caused a decline in cargo transport on the Rhine for almost all cargo segments, especially for the transport of sand, stones and gravel. The exception was coal transport, which increased by 25.7%. The war also considerably impacted freight transport on the Danube, especially grain transport on the Middle Danube.**
- **Passenger transport on the Rhine and the Danube showed a strong recovery in the first semester of 2022, which led the sector to its pre-pandemic levels, at least for vessel movements.**

FREIGHT TRANSPORT PERFORMANCE IN EUROPE

TRANSPORT PERFORMANCE IN IWT ON THE NATIONAL TERRITORY OF EACH COUNTRY IN EUROPE – COMPARISON BETWEEN Q1+Q2 2021 AND Q1+Q2 2022 (IN MILLION TKM)*

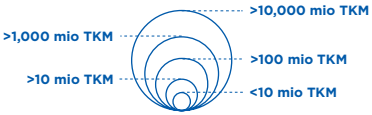
Sources: Eurostat [iww_go_qnave], OECD (Republic of Moldova, Lithuania, Switzerland, Ukraine). For Belgium, own calculation based on data from De Vlaamse Waterweg and Service public de Wallonie.

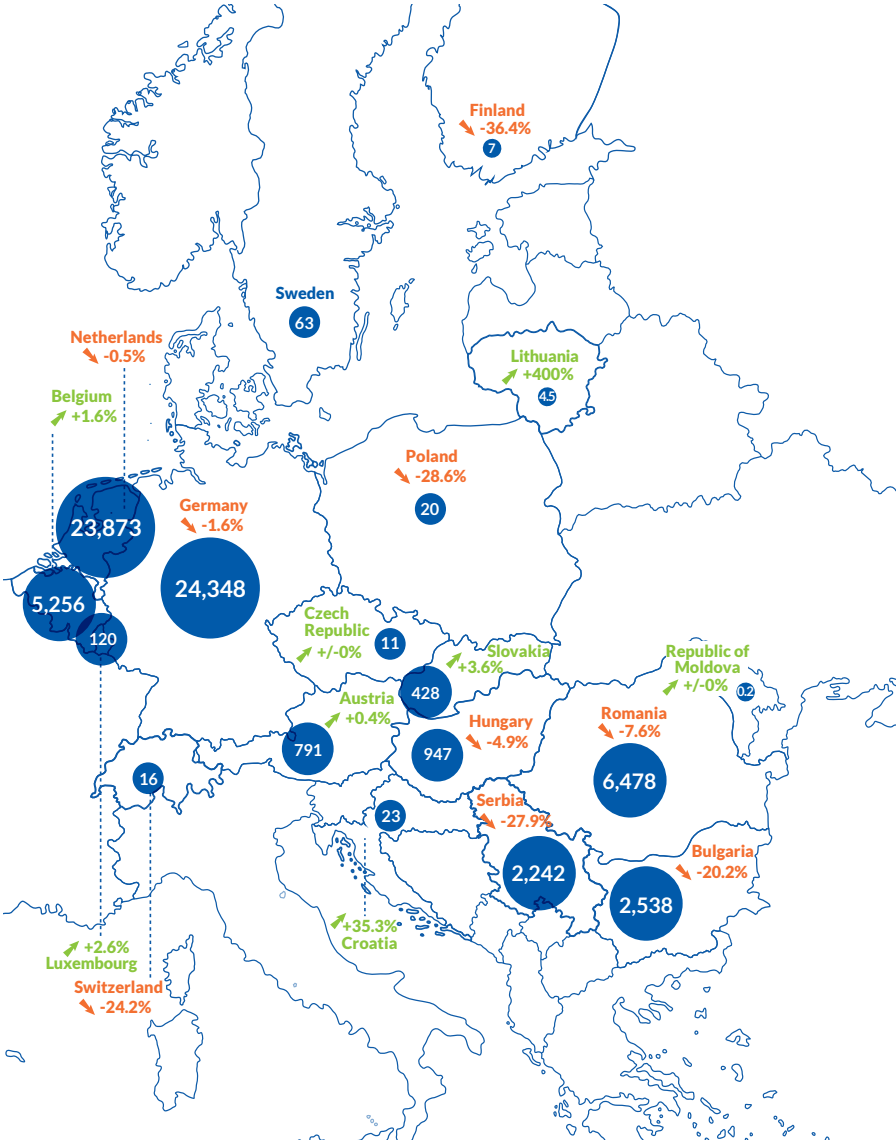
** For the UK and Italy, data are not available on a quarterly basis.*
For Ukraine, data for Q1+Q2 2022 were not available. The Danube Commission reported an increase of 234% in terms of waterside cargo transported in Ukrainian ports in Q1+Q2 2022 compared to the same period in 2021. It is assumed that this increase is linked with the 'Solidarity Lanes' initiative.
For Sweden, data were available only from Q1 2022 onwards. Therefore, a rate of change could not be calculated. Only the transport performance could be shown.



Positive rate of change in Q1+Q2 2022 vs Q1+Q2 2021

Negative rate of change in Q1+Q2 2022 vs Q1+Q2 2021

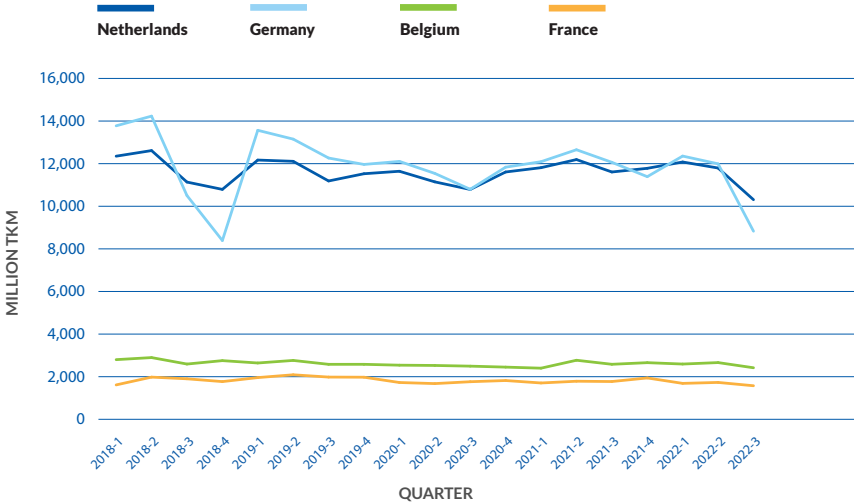



Finland
-36.4%
7
Sweden
63
Netherlands
-0.5%
Belgium
+1.6%
Lithuania
+400%
45
Poland
-28.6%
20
Germany
-1.6%
23,873
24,348
5,256
120
Czech Republic
+/-0%
11
Slovakia
+3.6%
428
Republic of Moldova
+/-0%
12
Austria
+0.4%
791
Hungary
-4.9%
947
Romania
-7.6%
6,478
16
23
Serbia
-27.9%
2,242
Bulgaria
-20.2%
2,538
+35.3%
Croatia
+2.6%
Luxembourg
Switzerland
-24.2%

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 Service public de Wallonie

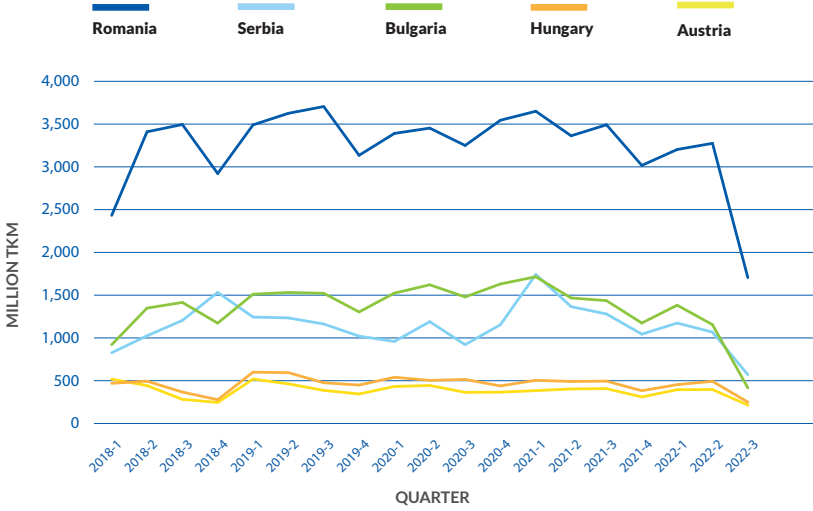


Due to a structural break in the data from the Belgian statistical office between Q4 2017 and Q1 2018, data for Belgium from this quarter onwards were recalculated. This was done by applying the rates of change present in the data from the Flemish and the Wallonian waterway administrations.[1]

[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]



THE WAR AGAINST UKRAINE AND THE LOW WATER PERIOD IN THE SUMMER OF 2022 IMPACTED FREIGHT TRANSPORT ON THE DANUBE.

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, Service public de Wallonie, Voies Navigables de France, Romanian Institute of Statistics

Notes: Traditional Rhine = Rhine from Rheinfelden (CH) to German-Dutch border. 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 contain total IWT on the territory of the country/region.

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

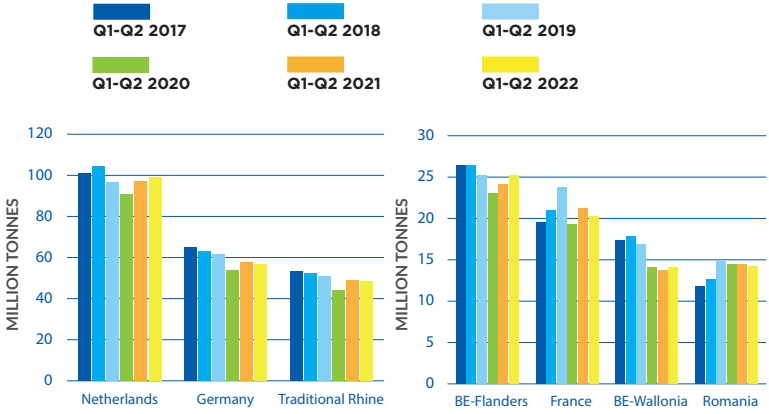


FIGURE 3: **LIQUID CARGO TRANSPORT** (IN MILLION TONNES)

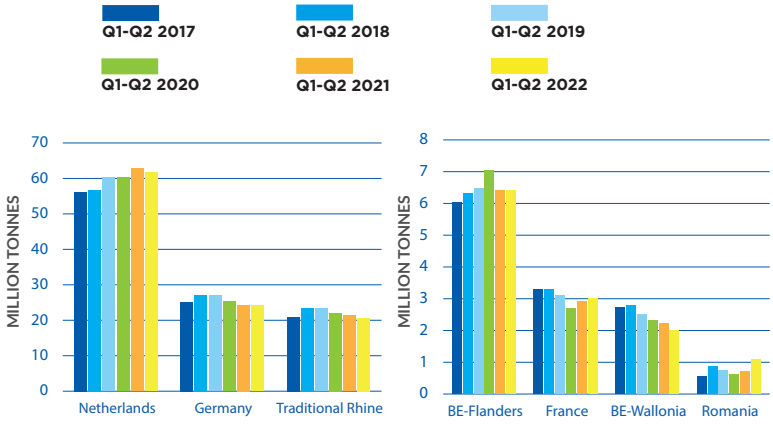
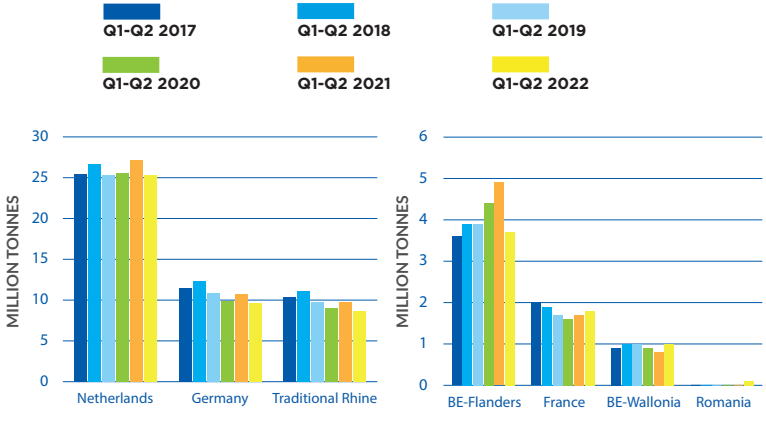


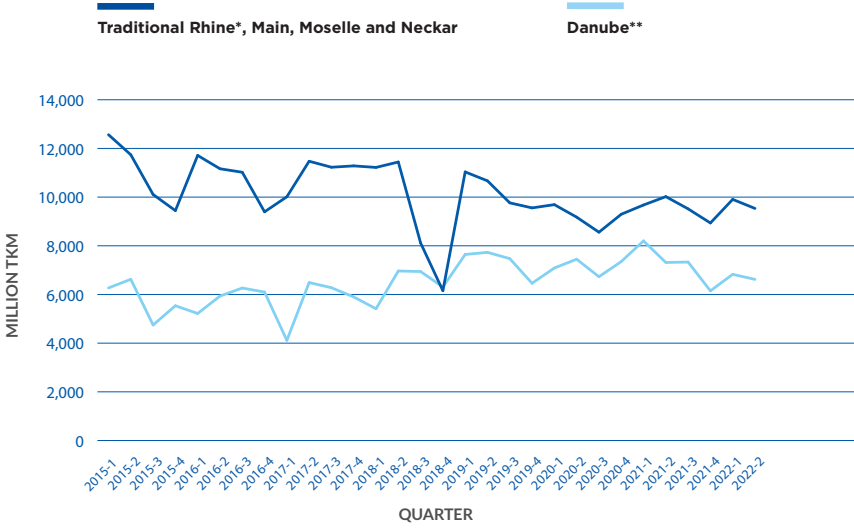
FIGURE 4: **CONTAINER TRANSPORT** (IN MILLION TONNES)



RHINE AND DANUBE NAVIGATION

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

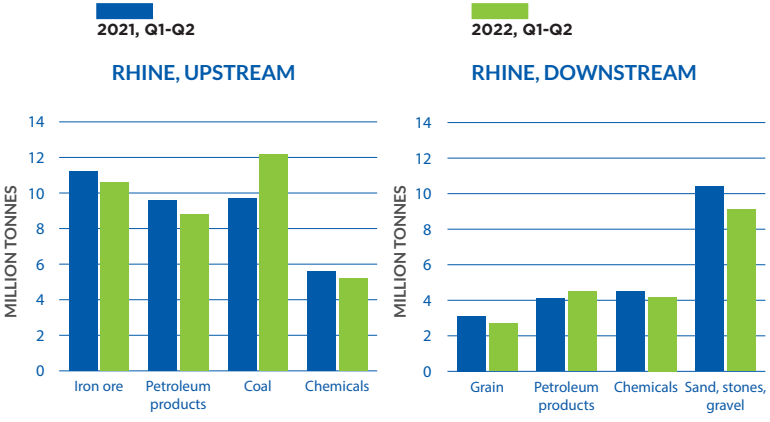
Sources: Eurostat [iww_go_qnave], Destatis (Rhine and affluents)



** Traditional Rhine = Rhine from Rheinfelden (CH) to German-Dutch border*
*** Danube = TKM in all Danube countries but without Ukraine*

FIGURES 6 AND 7: **RHINE TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR Q1-Q2 OF 2021 AND 2022)

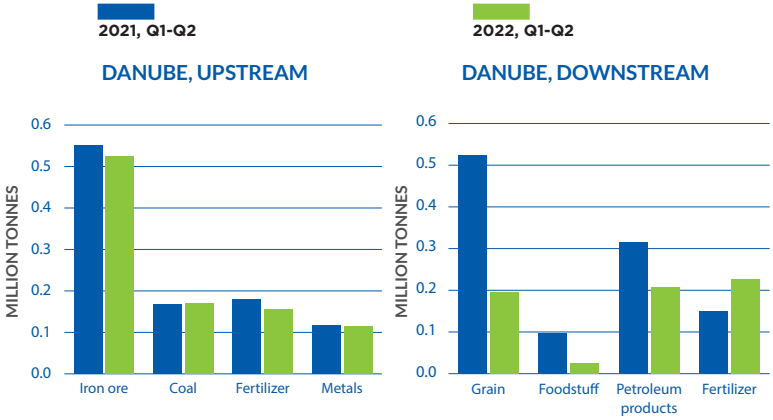
Source: CCNR analysis based on Destatis



- In the first semester of 2022, cargo transport on the traditional Rhine amounted to 84.7 million tonnes which represented -1.7% compared to the same period in 2021. After the two-year period of Covid-19, cargo transport experienced a small recovery at the very beginning of 2022. Nevertheless, Rhine transport started to decrease again due to the Russian war against Ukraine which began in February 2022. The main reasons were the supply side shortages for commodities, industrial input factors and energy. The only exception was coal transport, which went up by 25.7% due to the need to substitute gas in the energy sector. An example for the impact of shortages in input factors due to the war is the segment of sand, stones and gravel which declined by 12.5% in the first semester of 2022. The increase of the European Central Bank's short term interest rates should have further negative impacts on this particular market.

FIGURES 8 AND 9: **MIDDLE DANUBE TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR THE MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR Q1-Q2 2021 AND 2022)*

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 2022. Due to the absence of maritime grain exports because of the blockage of the Ukrainian seaports,[2] grain was partly exported from Ukraine via Lower Danube ports, leading to more grain transport in the Lower Danube section. On the Middle Danube, however, grain and foodstuff particularly suffered from this exceptional situation and diminished respectively by 63% and 75% in comparison with the first semester of 2021. This is because Middle Danube countries, in particular Hungary and Serbia, imposed restrictions on exports of agricultural and food products in order to accumulate national stocks at the very beginning of the war. This phenomenon is known in economics as 'hoarding effect'[3] and explains the low results of the first semester 2022.

[2] Except Reni, Izmaïl and Oust' Dounaïsk
[3] It refers to the concept of purchasing and storing a large amount of product belonging to a particular market, creating scarcity of that product, and ultimately driving the price of that product up. Commonly hoarded products include assets such as money, gold and public securities, as well as vital goods such as fuel and medicine.

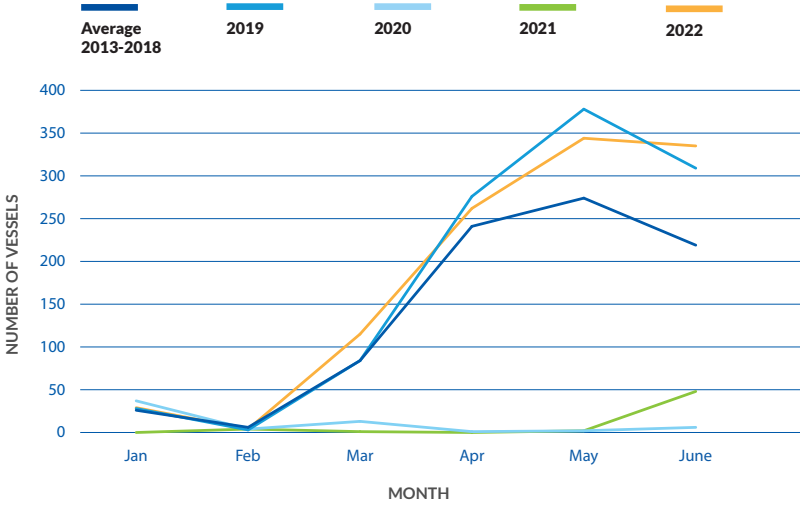
PASSENGER TRANSPORT IN EUROPE

- 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, next to 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



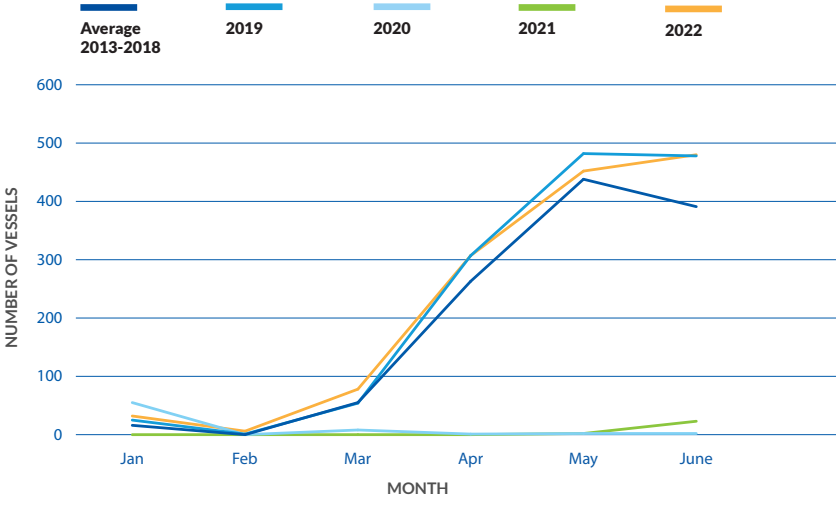
- The pre-pandemic levels were recovered in the first semester 2022 with 1,089 cruise vessels which passed through the lock of Iffezheim. In comparison, in the same period in 2019 and 2021, there were respectively 1,078 and 55 cruise vessels which passed through this lock.

- Moreover, the figures of April to June 2019 and 2022 show that passenger transport demand has considerably increased compared to the 2013-2018 period.

- 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



- The strong recovery of the first half-year of 2022 is also well illustrated for the Upper Danube in Figure 11 and suggests a positive development for the second half-year. Indeed, values similar to pre-pandemic levels can be observed from the very beginning of 2022. A comparison between the 2013-2018 period and the years 2019 and 2022 suggests a constant demand for passenger transport on the Upper Danube.

- 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 it comes to assessing the recovery of the river cruise sector. For the year 2022, however, the river cruise sector still reported about lower utilisation rates of cruise vessels compared to the pre-pandemic levels.

02

OPERATING CONDITIONS

- **Oil prices and fuel prices rose to their highest level since January 2006 in the first half of 2022. Freight rates fell slightly during the first half of 2022 but increased consistently due to the low water period of July and August 2022. Dry bulk spot market rates showed the strongest increase amongst the different market segments.**

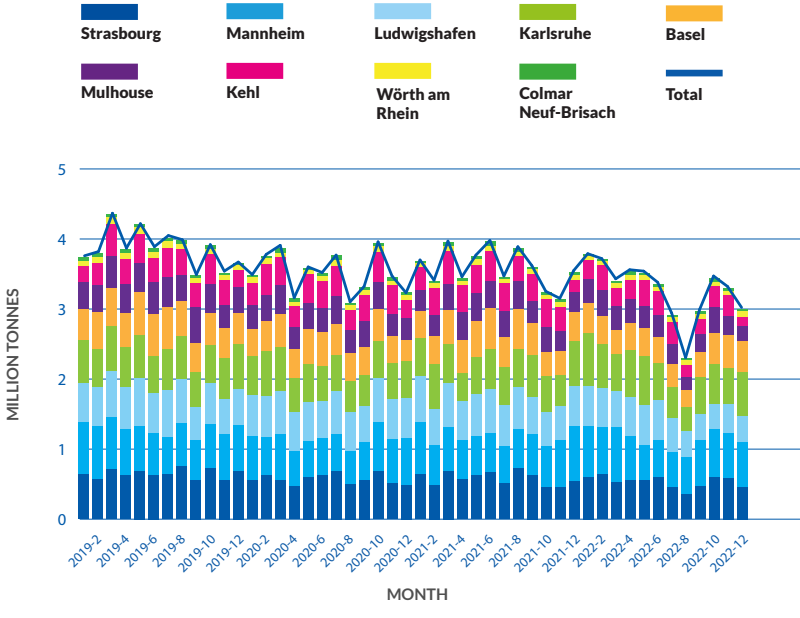
- **Due to the low water period in summer 2022, the average loading degree of inland vessels sailing on the Upper Rhine went down from more than 56% in May 2022 to around 31% in August 2022.**

WATERSIDE GOODS HANDLING IN MAIN UPPER RHINE PORTS

- Monthly data for waterside goods handling in Upper Rhine ports show that cargo handling was on an upward trend between August 2020 and August 2021, reflecting a recovery from the pandemic. But low waters in late 2021 and in mid 2022, as well as the impact of the war in Ukraine, put a stop to this trend.
- The war led to shortages in energy supply, strong price increases in the economy, and logistical disturbances. In the wake of this, cargo handling in inland ports was reduced.
- The effects of the 2022 low water period were confined to the months of July and August, when they unfolded a V-shaped reduction in cargo handling.

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

Source: CCNR analysis based on data provided by the ports



LOADING DEGREE OF DRY CARGO VESSELS AND NUMBER OF VOYAGES

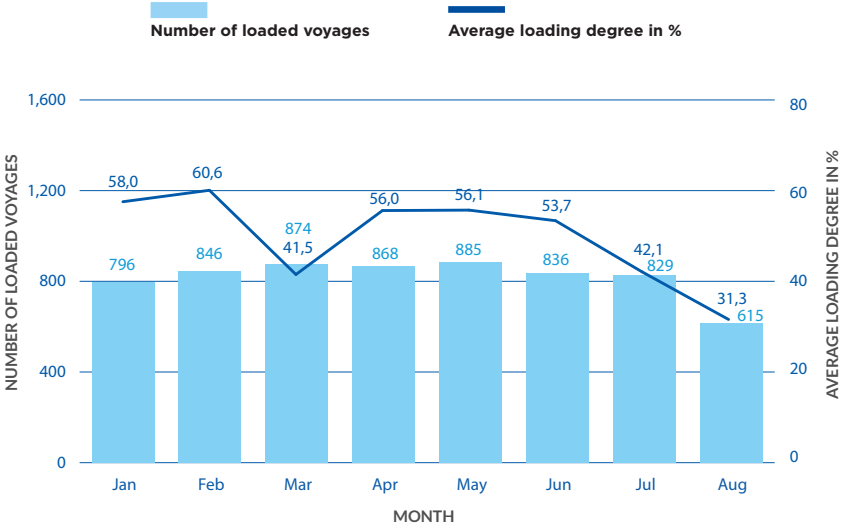
- In order to study the effects of the low water period in summer 2022 in more detail, a database provided by the German Waterways and Shipping Administration was analysed. It entails detailed data about all dry cargo vessel voyages on the Upper Rhine (lock of Iffezheim) in the first eight months of 2022. The following variables could be extracted and quantified:

  1. Average freight load per loaded voyage
  2. Average loading capacity of vessels
  3. Average draught of the vessel per voyage
  4. Total number of loaded voyages (by all dry cargo vessels taken together)
  5. Total volume of goods transported (by all dry cargo vessels taken together)

- Combining variables 1) and 2) allows the average loading degree of vessels (in percentage terms) to be determined. For this calculation, empty trips were not taken into account. The following graph shows a comparison of this indicator with the total number of loaded voyages (variable 4).

FIGURE 2: **NUMBER OF LOADED VOYAGES AND AVERAGE LOADING DEGREE PER VESSEL VOYAGE FOR DRY CARGO VESSELS AT THE IFFEZHEIM LOCK IN THE FIRST EIGHT MONTHS OF 2022**

Source: CCNR analysis based on data from the German Waterway and Shipping Administration



- With the onset of the low water period in July 2022, the average loading degree of vessels decreased from 53.7% in June to 42.1% in July. At the same time, the number of voyages remained rather constant (836 in June compared to 829 in July).

- In August 2022, water levels went down even further. This is reflected by a further decrease in the average loading degree of vessels (31.3%). Navigating conditions had become more difficult than in July, which is reflected by a reduction in the number of voyages that could be made (615 in August compared to 829 in July).

- As a result of reduced loading degrees in both months, and less voyages in August, the months of July and August saw a strong decline in the total amount of goods transported on the Upper Rhine (variable 5). In July 2022, the number of tonnes passing through the lock of Iffezheim was 49% lower than the figures recorded for July 2021. In August 2022, the reduction reached -77% compared to August 2021.

- It can also be observed that the average loading capacity of the vessels (variable 2) that were active on the Upper Rhine, changed during the low water period. While this average was 2,463 tonnes in the period from January to June, it reduced to 2,386 tonnes in July (-3%) and to 2,278 tonnes in August (-8%). Indeed, during this low water period in 2022, some of the largest vessels could barely use the Middle and Upper Rhine, with the result of a lower average vessel capacity in the observed operational figures.

FREIGHT RATES IN THE RHINE REGION[4]

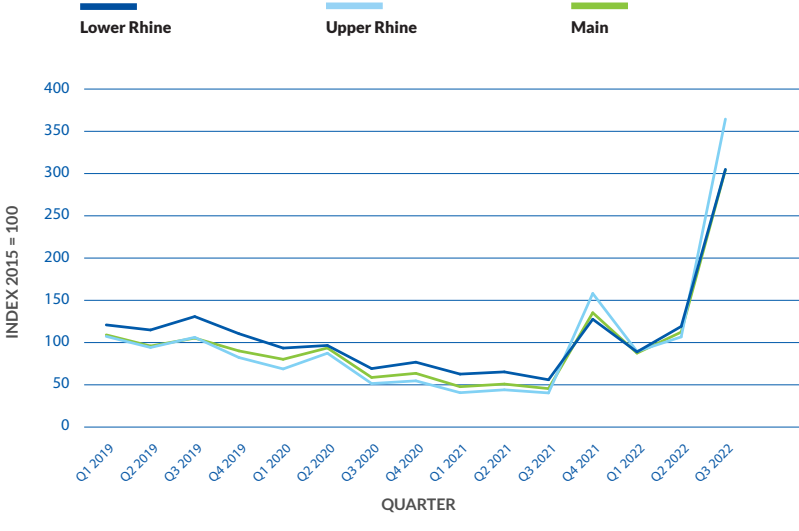
- In the Amsterdam-Rotterdam-Antwerp (ARA) Rhine traffic of liquid goods, spot market freight rates fell slightly in the first half of 2022, simultaneously to the rising water levels. In July and August 2022, a pronounced low water phase then caused an extraordinary increase in freight rates (Q3 2022). Apart from these hydrological effects, freight rates have followed a downward trend since the beginning of 2019.

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

FIGURE 3: **SPOT MARKET FREIGHT RATE EVOLUTION FOR GASOIL FROM THE ARA REGION TO RHINE DESTINATIONS** (INDEX 2015 = 100)*

Source: CCNR calculation based on PJK International

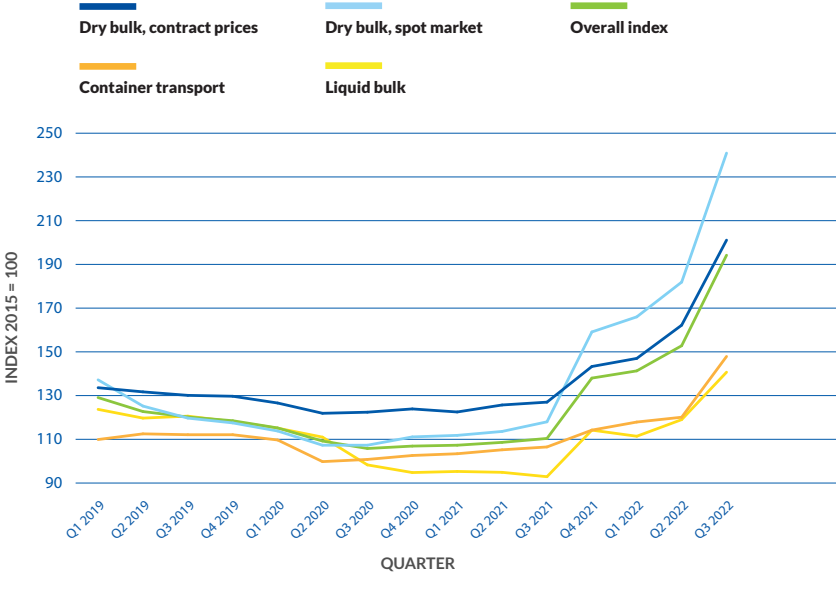
** PJK collects spot market freight rates (in Euro per tonne) for ARA-Rhine trade of liquid bulk. The CCNR transforms these values into an index with base year 2015. Lower Rhine: Duisburg, Cologne. Upper Rhine: Karlsruhe, Basel. Main: Frankfurt/Main.*



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

FIGURE 4: **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)



- Since the beginning of 2019, liquid bulk freight rates followed a downward trend, which matches the results from the PJK index.
- Dry bulk indices went up steeply. Booming coal transport is one explanation. Another explanation is the transfer of vessel capacity from the Rhine to the Danube region. According to estimations by brokers, around 3% of the dry cargo Rhine vessel capacity was transferred to the Danube region in 2022, where it was used to export Ukrainian grain ('Solidarity Lanes').
- In addition, indices for all market segments were pushed upwards during the low water periods in 2021 and 2022.

FUEL COST EVOLUTION

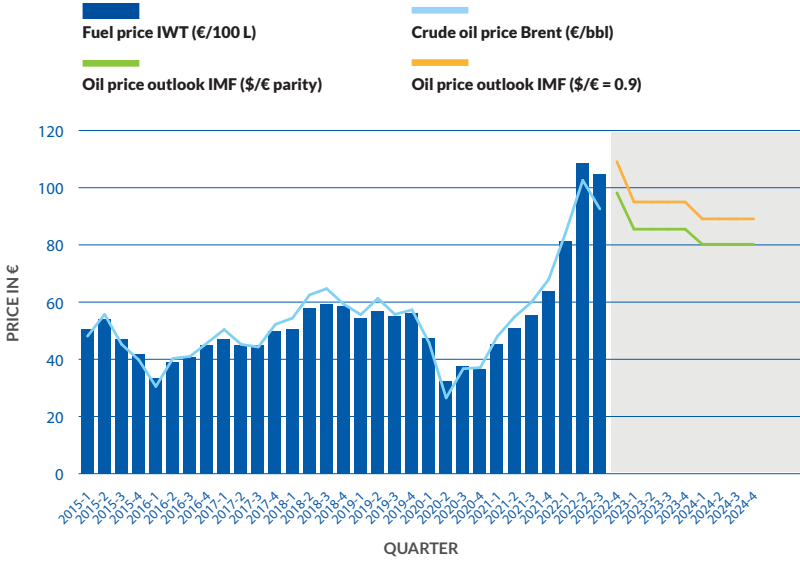
- In the first half of 2022, prices for crude oil, diesel, gas oil, electricity and natural gas reached their highest level since January 2006. Indeed, air, inland waterway, road and rail freight transport levy energy surcharges in their tariffs. This allows the increase in energy prices to be partially passed on to customers.

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

- 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 war in 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.

FIGURE 5: AVERAGE FUEL PRICES ACCORDING TO THE BELGIAN MINISTRY OF ECONOMIC AFFAIRS AND BRENT CRUDE OIL PRICES INCLUDING FORECAST

Sources: ITB and SPF Economie (fuel price), US Energy Information Administration (oil price), Federal Reserve Economic Data (historical exchange rate US-dollar/Euro)
1 barrel (bbl) = 159 litres



- The IMF oil price outlook[5] indicates a slight decline in oil prices in 2023 and 2024. This would imply that fuel costs would settle in a range between 80 and 100 Euro per 100 litre in 2023 and 2024. But the further geopolitical course will be decisive for the forecast horizon, especially with regard to the war in Ukraine. Escalations and de-escalations of this conflict can have a strong influence on the price development of crude oil and fuels.

[5] *The outlook on fuel prices is based on the oil price outlook in combination with assumptions on the exchange rate between the Euro and the US dollar. IMF forecasts are used for predicting the oil price, while two scenarios are designed for the exchange rate. One scenario assumes an exchange rate between US-Dollar and Euro of 0.9 (which was present at the end of 2022), while the second scenario assumes parity between the two currencies, which means an exchange rate of 1.0.*

03

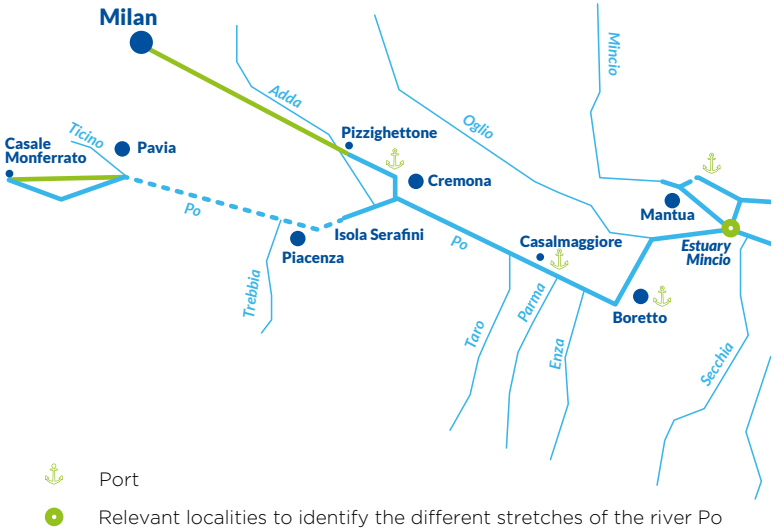
FOCUS ON ITALY

- **In Italy, freight transport develops almost entirely along the river Po and its adjacent canals. Between 2019 and 2021, the sector recorded an increase in the volume of goods transported, passing from 287,517 tonnes to 980,000 tonnes. This increase took place despite rather difficult hydrological conditions on the river Po.**

- **Passenger transport plays a major role in local public transport and tourism, and is highly developed on lakes in Northern Italy and in the Lagoon of Venice. The sector was severely affected by the Covid-19 pandemic in 2020. Nevertheless, figures for 2021 suggest a recovery to pre-pandemic levels.**

INLAND WATERWAY FREIGHT AND PASSENGER TRANSPORT IN ITALY

- Italian inland navigation develops almost entirely along the natural course of the river Po in northern Italy. The territory is characterised by a river system combining the river Po and artificial waterways or canals (Padano-Veneto waterway system), used for the transport of freight and passengers.



An important artificial waterway is the Fissero–Tartaro–Canalbianco canal, which connects Mantua and the Adriatic Sea as an alternative to the river Po. Another strategic part of the system is the stretch that links the city of Milan, which is a productive economic centre for the country, with Cremona.

- The waterway system of northern Italy and the northern Adriatic represents an interesting opportunity to connect the numerous industrial activities of the Po Valley and the Adriatic Sea, through an east-west connection.

Source: Agenzia Interregionale per il fiume Po – AIPo

FREIGHT TRANSPORT IN ITALY

- Over the last years, freight transport volumes on the Padano-Veneto waterway system followed a decreasing trend until 2019. For instance, in 2019 the volume of goods transported diminished by 19.06%, passing from 355,222 tonnes registered in 2018 to 287,517.

- The decreasing trend came to a halt in 2020, during the Covid-19 pandemic. Cross-border road transport was strongly reduced due to lockdowns. This caused a sudden need to increase inland waterway transport. The following strong demand lifted volumes up to 858,884 tonnes in 2020. The gain was confirmed in 2021, when 980,000 tonnes were transported.

- Other stimulating factors are coming from public initiatives. In 2019, the Italian government launched a decree to support inland waterway freight transport, with the aim of improving the modal split share in the future.[6]

- Within the Padano-Veneto waterway system, the Port of Mantua and its adjacent industry berths represent two vital spots for inland waterway freight transport in Italy. The city has a strategic position that connects its port to the Adriatic Sea through the Fissero-Tartaro-Canalbianco canal and the river Po. Moreover, the settlement of the chemical plants nearby the port favours the economic activity of the inland navigation sector in this area. Another relevant segment concerns metals.

- Project cargo has always represented a solid reality for the Padano-Veneto waterways transport sector. An increasing number of platforms and equipment for the transshipment of this cargo segment is available in inland and maritime ports of the Padano-Veneto waterway system.

[6] *For further information, see: https://ec.europa.eu/competition/state_aid/cases1/202144/SA_58817_B0FF097C-0000-C96D-BCBA-34B4F8441773_104_1.pdf*

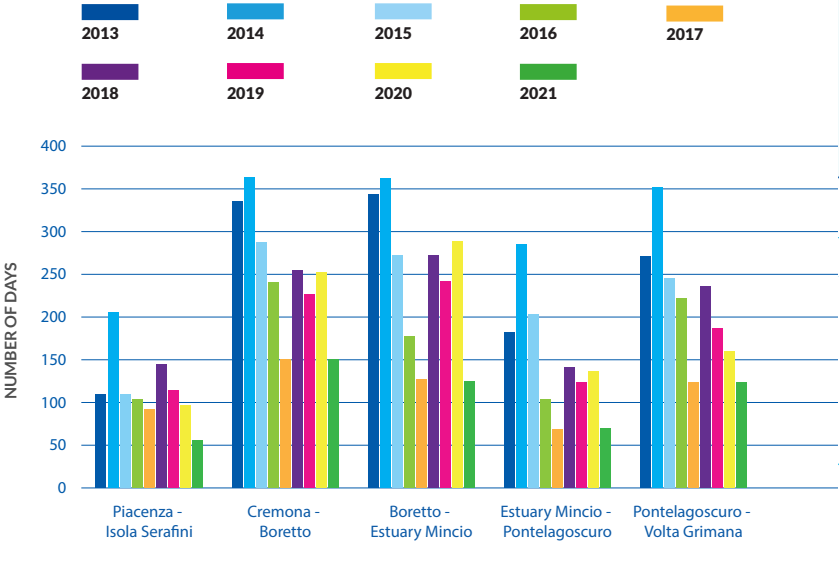
THE HYDRAULICITY CONDITIONS ON THE RIVER PO

- Figure 1 illustrates hydraulicity levels from 2013 to 2021 for five stretches that entirely cover the navigable parts of the river Po from west to east. Hereby, the stretch from Piacenza to Isola Serafini is the most western river stretch (see also the map). The most eastern stretch extends from Pontelagoscuro to the lock of Volta Grimana near the Adriatic Sea.

- The two stretches that connect Cremona with Mantua (Cremona – Estuary Mincio) showed the most favourable navigation conditions, with two metres draught guaranteed for an average of 270.0 days in 2020 and 137.5 in 2021. Conversely, the stretches between Mantua and Ferrara (Estuary Mincio – Pontelagoscuro) and between Piacenza and Isola Serafini presented critical water level conditions compared to the average of the whole river.

FIGURE 1: **NUMBER OF DAYS WITH AVAILABLE DRAUGHT LEVELS HIGHER OR EQUAL TO 2 METRES ON THE DIFFERENT STRETCHES OF THE RIVER PO – FROM 2013 TO 2021**

Source: Agenzia Interregionale per il fiume Po – AIPo



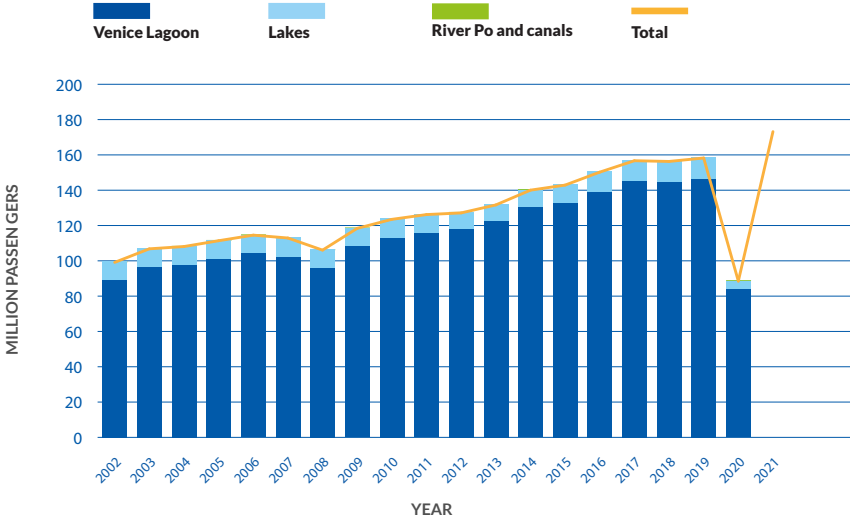
PASSENGER TRANSPORT IN ITALY

- Passenger transport in Italy plays an important role for local public transport and tourism, especially for the main lakes of the country and the Venetian Lagoon. Italy, together with Germany, the Netherlands, France and Switzerland, counts the highest turnover in the passenger transport sector and the highest number of day trip vessels in Europe. In 2020, the sector was severely affected by the consequences of the Covid-19 pandemic.

- As illustrated in Figure 2, the total number of passengers transported on Italian inland waterways (including lakes) shows an increasing trend rising from 99.4 million passengers in 2002 to 158.5 million in 2019. In 2020, the containment measures of the virus caused a drop of 44% in total passenger transport, down to 88.8 million persons. In 2021, the figures recovered and reached an estimated number of 173.4 million passengers (+9.4% compared to 2019).

FIGURE 2: **NUMBER OF PASSENGERS TRANSPORTED ON MAIN INLAND WATERWAYS IN ITALY - VENETIAN LAGOON, ITALIAN LAKES** (SCHEDULED SERVICES)**, RIVER PO AND CANALS** (IN MILLION PASSENGERS)*

Source: Italian Ministry of Sustainable Infrastructure and Mobility (Conto Nazionale delle Infrastrutture e del Trasporto)
** Data on passenger transport on the river Po and its canals are available from 2010 onwards. The total number of passengers in the year 2021 is an estimation. Detailed data for the three categories were not available.*



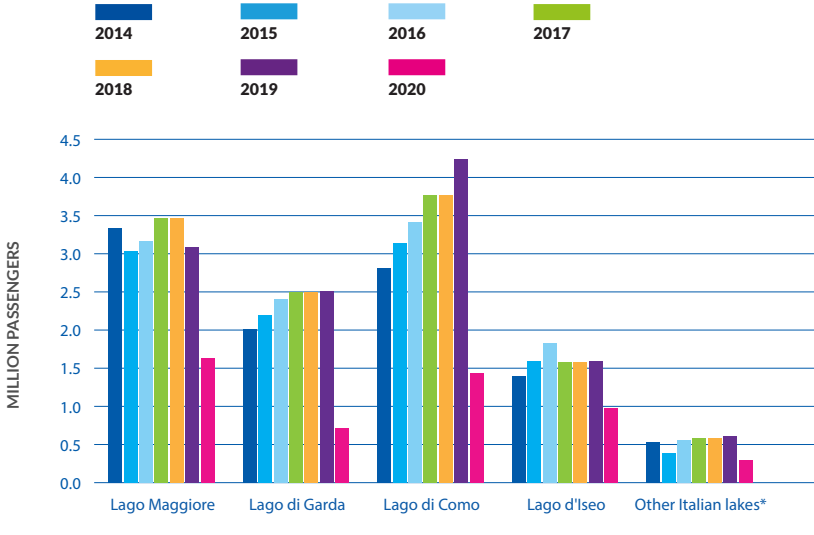
- The Venetian Lagoon represents about 92% of Italian passenger transport, accounting for 146 million passengers in 2019 and 84 million in 2020. Except for 2020, passenger numbers followed an increasing trend with a growth of 64% between 2002 and 2019. There are two main reasons behind this growing trend. Firstly, the public transport of citizens in Venice occurs to a large extent via navigation because of the geographical configuration of the city. Secondly, tourism represents the largest share of Venice's economic activity.

- Scheduled passenger transport services on the main Italian lakes represent around 7% of total passenger transport on Italian inland waterways and is developing in a positive direction.

- The transport of passengers on the Padano-Veneto waterways system (river Po and canals) amounted to 10,473 in 2019, representing only a tiny fraction (<0.1%) of total passenger transport on Italian inland waterways.

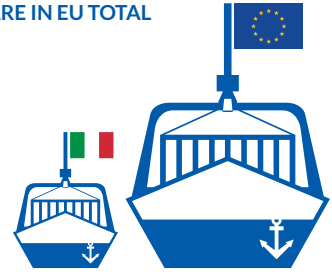
FIGURE 3: **: NUMBER OF PASSENGERS ON LAKE VESSELS FOLLOWING A SCHEDULED SERVICE IN ITALY** (IN MILLION PASSENGERS) *

Source: Italian Ministry of Sustainable Infrastructure and Mobility (Conto Nazionale delle Infrastrutture e del Trasporto)
** Other Italian lakes: Lago d'Orta, Lago di Ceresio/Lugano, Lago di Bolsena, Lago di Idro, Lago di Viverone, Lago Trasimeno*



FACT SHEET IWT IN ITALY – ANNUAL FIGURES

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

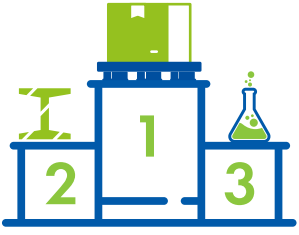


TRANSPORT PERFORMANCE TOTAL

140 million TKM
SHARE IN EU TOTAL **0.1%**

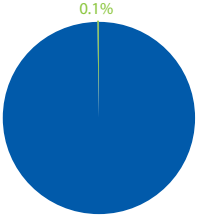
VOLUME OF TOTAL GOODS TRANSPORT

0.98 million tonnes



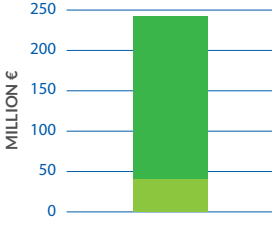
MAIN GOODS SEGMENTS IN IWT

1. Equipment and material utilised in the transport of goods
   50 million TKM SHARE IN EU TOTAL **5.4%**
2. Basic metals
   27 million TKM SHARE IN EU TOTAL **0.3%**
3. Chemicals and chemical products
   26 million TKM SHARE IN EU TOTAL **0.2%**



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

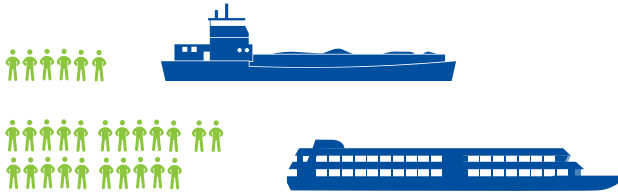
IWT



LEVEL OF IWT TURNOVER

SHARE IN EU TOTAL **3.5%** 242 million €
SHARE IN EU TOTAL **0.7%** Goods transport: 40 million €
SHARE IN EU TOTAL **18.4%** Passenger transport: 202 million €

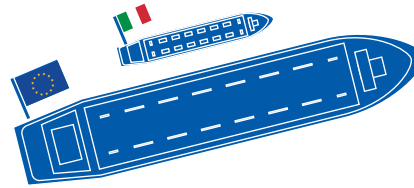
[7] *Data on transport demand are for 2021, fleet data for 2020, except for dumb barges and push and tug boats (2018), the modal split, data on companies, turnover and on employment are for 2020.*



PERSONS EMPLOYED IN IWT		SHARE IN EU TOTAL	NUMBER OF IWT COMPANIES
2,924	**4.3%**	**11.6%**	1,107
Goods transport: 665	**1.4%**	**2.0%**	Goods transport: 107
Passenger transport: 2,259	**11.3%**	**24.4%**	Passenger transport: 1,000

FLEET

Self-propelled barges and dumb barges
296 SHARE IN EU TOTAL **2.2%**
Push and tugs
332 SHARE IN EU TOTAL **12.2%**



Notes on the factsheet

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

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].

Sources: CCNR analysis based on Eurostat data [sbs_na_1a_se_r2], [iww_go_qnave]

GLOSSARY

Q1 20XX: first quarter

Q2 20XX: second quarter

Q3 20XX: third quarter

ARA REGION: Amsterdam-Rotterdam-Antwerp

AVAILABLE DRAUGHT: Minimum navigation channel depth + (Actual water level – Equivalent water level) – Under keel clearance

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

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

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.

HOARDING EFFECT: it refers to the concept of purchasing and storing a large amount of product belonging to a particular market, creating scarcity of that product, and ultimately driving the price of that product up. Commonly hoarded products include assets such as money, gold and public securities, as well as vital goods such as fuel and medicine.

IWT: Inland Waterways Transport

IWW: Inland Waterways

LOWER DANUBE: stretch of the Danube from the Iron Gates at the border between Serbia and Romania to Sulina at 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 at the border between Austria and Slovakia to the Iron Gates

MIO: million

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.

SOLIDARITY LANES: in the context of the Russian war of aggression towards 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.

TEU: Twenty-foot Equivalent Unit

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, at the border of Austria and Slovakia

UPPER RHINE: section of the navigable Rhine in the Upper Rhine Plain between Basel in Switzerland and Bingen in 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
Agenzia Interregionale per il fiume Po	Interregional Agency for the Po River	Italy
CCNR/ZKR/CCR	Central Commission for the Navigation of the Rhine (CCNR)	Europe
Conto Nazionale delle Infrastrutture e del Trasporto	Italian Ministry of Sustainable Infrastructure and Mobility	Italy
De Vlaamse Waterweg	Waterways in Flanders	Belgium
Donaukommission	Danube Commission	Europe
European Commission (Directorate-General for Competition)	European Commission (Directorate-General for Competition)	EU
EUROSTAT	EUROSTAT	EU
Federal Reserve Bank of St. Louis Economic Data	Federal Reserve Bank of St. Louis Economic Data	USA
Institut pour le Transport par Batellerie/ Instituut voor het Transport langs de Binnenwateren (ITB)	Institute for transport by skippers (ITB)	Belgium
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
SPF Economie	Federal Public Service Economy	Belgium
SPW Service Public de Wallonie	Public Service of Wallonia	Belgium

Original Name	English Name	Country
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 Waterway and Shipping Administration (WSV)	Germany

METHODOLOGY

Freight traffic on inland waterways and in ports

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.

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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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