



MARKET INSIGHT

INLAND NAVIGATION IN EUROPE

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01

FREIGHT AND PASSENGER TRAFFIC ON INLAND WATERWAYS

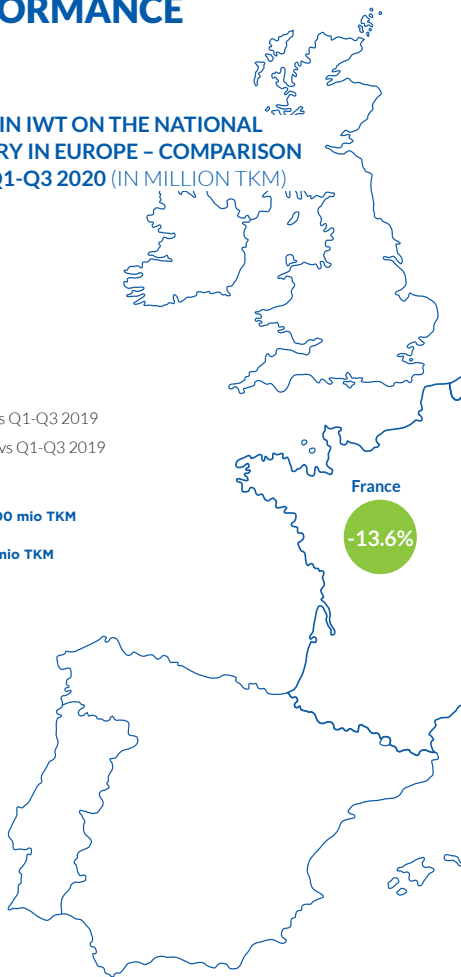
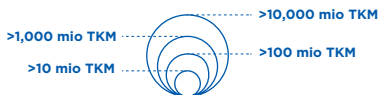
- Transport performance (TKM) on inland waterways in the EU decreased by 8.1% in the first three quarters of 2020, compared to the same period in 2019.
- In the two largest IWT countries the decrease was -11.9% (Germany) and -6.8% (the Netherlands). In Danube countries, transport performance was 9% lower.
- Passenger transport (river cruises) recorded a reduction of passengers by 90-95%.

TRANSPORT PERFORMANCE IN EUROPE

TRANSPORT PERFORMANCE IN IWT ON THE NATIONAL TERRITORY OF EACH COUNTRY IN EUROPE – COMPARISON BETWEEN Q1-Q3 2019 AND Q1-Q3 2020 (IN MILLION TKM)

Sources: Eurostat [*ivww_go_qnave*],
OECD (Switzerland)

- Positive rate of change in Q1-Q3 2020 vs Q1-Q3 2019
- Negative rate of change in Q1-Q3 2020 vs Q1-Q3 2019



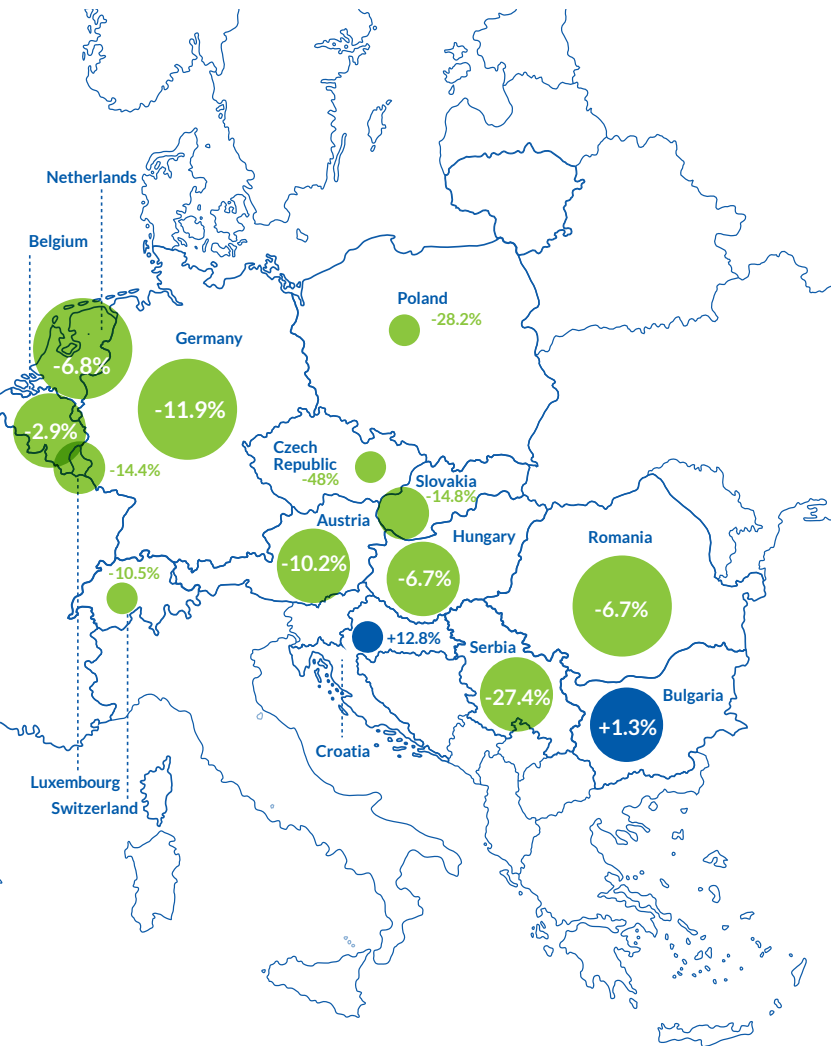
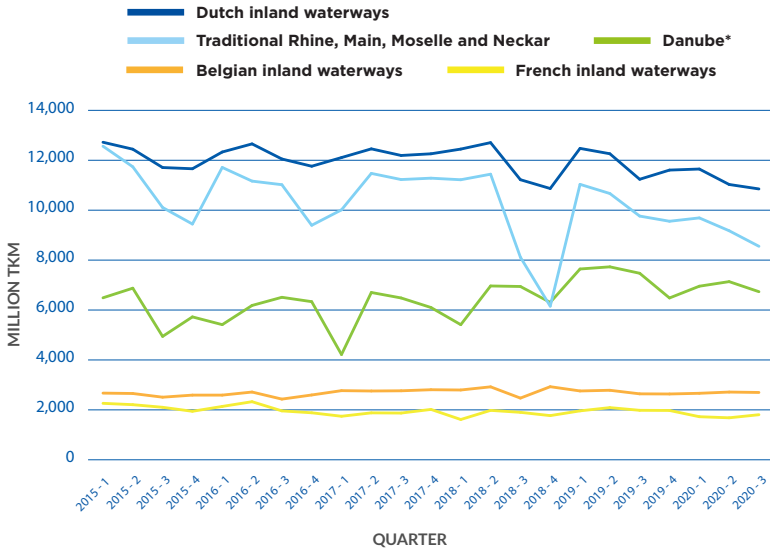


FIGURE 1: INLAND WATERWAY TRANSPORT (IWT) PERFORMANCE IN EUROPE BY REGION (IN MILLION TKM)

Sources: Eurostat [iww_go_qnave], Destatis

*Danube = TKM in all Danube countries



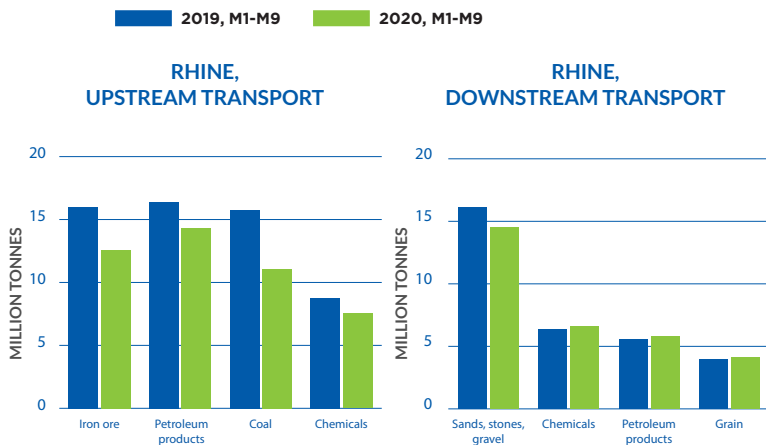
- Cargo related to steel production accounts for 25% of total Rhine transport. The decrease of steel production¹ due to a slowdown of the world economy in 2018-2019 and the Covid-19 crisis in 2020 resulted in less iron ore, coking coal and metal transport. This produces a considerable 'downward momentum' for the trend on the Rhine as well as on Dutch and German waterways. Coal that is used for energy generation (steam coal) accounts for 7%. By 2029, almost the entirety of steam coal transport will be phased out, due to the closure of coal fired power plants in Germany. For the Danube, a growth-orientated trend can be observed, which rests on a growing transport activity for agricultural products.

¹ Steel production in Germany amounted to 43.3 mio. tonnes in 2017, 42.4 million tonnes in 2018, 39.6 mio. tonnes in 2019 and 36.0 mio. tonnes in 2020. Source: World Steel Association and German 'Wirtschaftsvereinigung Stahl'.

RHINE AND AFFLUENTS

FIGURES 2 AND 3: **RHINE TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR THE FIRST NINE MONTHS OF 2019 AND 2020)

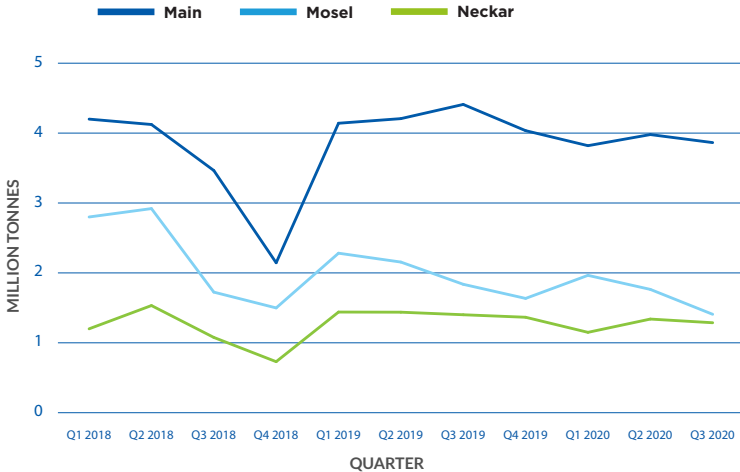
Source: CCNR analysis based on Destatis



- Cargo transport on the traditional Rhine was 11% lower in the first nine months of 2020, compared to the same period in 2019. Within upstream transport, the figures show a decrease in the two-digit range for iron ore (-21%) and chemicals (-14%). Losses in both segments were due to a reduction in industry production. The upstream transport of petroleum products fell by 12% due to lockdowns and the related drop in demand for liquid fuels (gasoline, gasoil, kerosene, etc.) The reduction in coal transport (-30%) was partly caused by less steel production and partly by energy transition.
- Downstream transport of sands, stones, gravel and building materials was reduced by 10%. Grain transport, with its relatively small share in total Rhine transport, increased its volume by 3%.

FIGURE 4: TRANSPORT VOLUME ON RHINE AFFLUENTS

Source: CCNR analysis based on Destatis



- Cargo transport on the Main amounted to 11.7 million tonnes in Q1-Q3 2020 (-9% compared to Q1-Q3 2019). The overall trend on the Main fluctuates at around 4 million tonnes of cargo per quarter. Liquid cargo, foodstuffs, sands, stones and gravel are core segments in Main navigation.
- The phasing out of coal weighs heavily on Moselle traffic and is the main reason for a decreasing trend.

DANUBE

- Between the Rhine and Danube, parallels emerge with respect to the development of industrial and non-industrial goods. Iron ore (-25%), coal (-30%) and metals (-17%) suffered with less production of steel.
- For all cargo related to the agricultural sector, an increase was observed. The strength of this increase was most clearly visible for grain, where transport volumes more than tripled, and for food products and foodstuffs, where volumes more than doubled. Fertilizers registered more upstream (+17%) as well as more downstream (+50%) transport.
- These data refer to the measurement point of Mohacs on the Middle Danube in southern Hungary, near the border with Croatia and Serbia. In total, 4.648 million tonnes of cargo crossed this border point in the first nine months of 2020. This was an increase of 7% compared to the same time period in 2019.

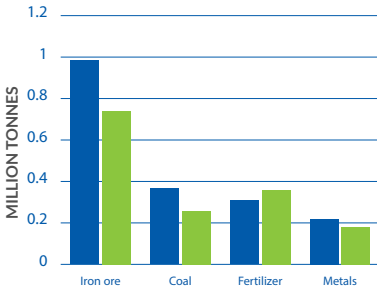


FIGURES 5 AND 6: **MIDDLE DANUBE TRANSPORT VOLUME UPSTREAM AND DOWNSTREAM FOR THE MAJOR CARGO SEGMENTS** (IN MILLION TONNES, FOR THE FIRST NINE MONTHS OF 2020 AND 2019)*

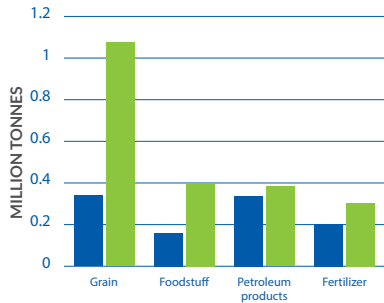
Source: Danube Commission Market Observation report
*On the Middle Danube at Mohacs

■ 2019, M1-M9 ■ 2020, M1-M9

**DANUBE,
UPSTREAM TRANSPORT**



**DANUBE,
DOWNSTREAM TRANSPORT**

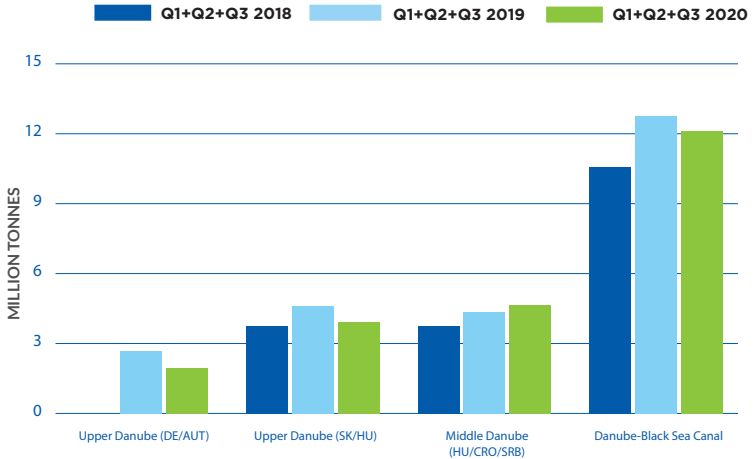


- Cargo transport on the Upper Danube in Germany, Austria and Slovakia decreased by 27% at the Austrian-German border and by 15% at the Slovakian-Hungarian border. The Lower Danube region (Romania, Bulgaria), which is presented by figures for the Danube-Black Sea Canal, lost only 5% in the first nine months. The Danube-Black Sea-Canal is the waterway connection between the port of Constanța and the Black Sea.

FIGURE 7: CARGO TRANSPORT ON THE DANUBE PER RIVER STRETCH*

Source: Danube Commission Market Observation reports

*DE/AT = German-Austrian border; SK/HU = Slovakian-Hungarian border; HU/CRO/SRB = border between Hungary, Croatia and Serbia (Mohacs)



THE MIDDLE DANUBE REGISTERED AN INCREASE IN TRANSPORT VOLUME OF 7% IN (Q1+Q2+Q3) 2020.

■ PASSENGER TRANSPORT

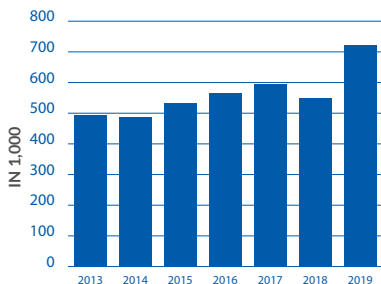
- Passenger transport on cruise ships on the Danube² had reached record levels in 2019, but was interrupted completely in March 2020. Only in June did isolated trips resume both on the Upper and the Middle Danube. This revival took place on a very limited basis, in compliance with the restrictions on the number of passengers per voyage.
- Passenger transport on day trip vessels - both regular liner services as well as non-scheduled excursion vessels - in the main tourist centres took place on a limited basis.

FIGURE 8: PASSENGER TRANSPORT (RIVER CRUISE VESSELS) ON THE UPPER DANUBE (IN 1,000 PASSENGERS)*

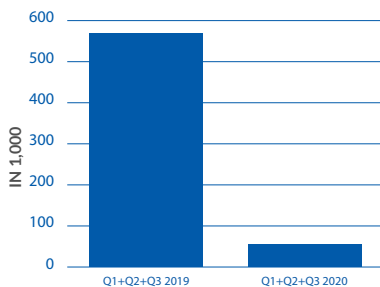
Source: Danube Commission Market Observation reports

*Upper Danube = lock of Gabčíkovo (border between Hungary and Slovakia)

YEARLY FIGURES



FIGURES FOR Q1 + Q2 + Q3



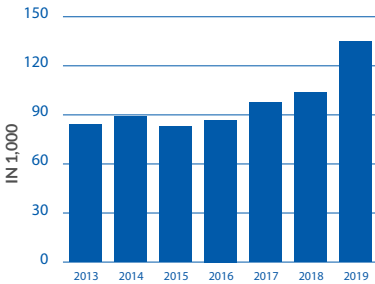
² At the time of writing, quarterly data on passenger transport were only available for the Danube.

FIGURE 9: PASSENGER TRANSPORT (RIVER CRUISE VESSELS) ON THE MIDDLE DANUBE (IN 1,000 PASSENGERS)*

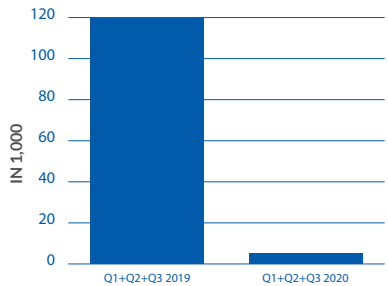
Source: Danube Commission Market Observation reports

*Middle Danube = measurement point of Mohacs in Hungary (border region with Croatia and Serbia). Figures indicate downstream traffic of passengers (in the direction of the Black Sea).

YEARLY FIGURES



FIGURES FOR Q1 + Q2 + Q3



TRANSPORT VOLUME IN MAIN EUROPEAN IWT COUNTRIES

FIGURE 10: INLAND WATERWAY TRANSPORT VOLUME (QUARTERLY DATA, NATIONAL TERRITORY OF EACH COUNTRY)

Source: Eurostat [iww_go_qnave]. Due to a lack of plausibility of Stat.Bel data from Q1 2018 onwards, the data for Belgium from this quarter onwards were recalculated. This was done by applying the rate of change that is present in the more plausible data from the Flemish waterway administration (De Vlaamse Waterweg). The series for Belgium then follows the trend for Flanders, but is located on a higher level.

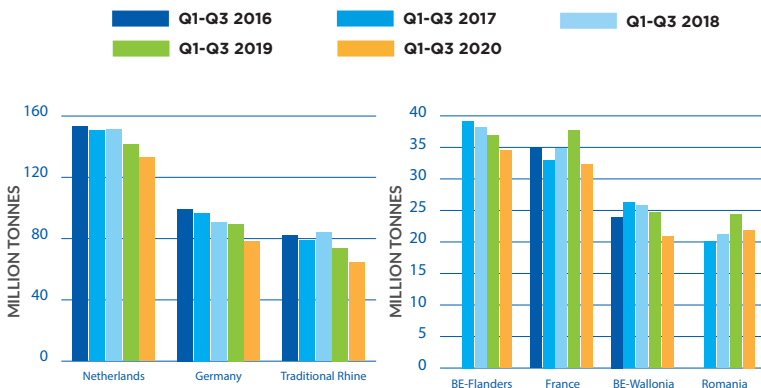


DRY BULK, LIQUID BULK AND CONTAINER TRANSPORT

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

Note: for Belgium-Wallonia, infra-annual 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 11: DRY CARGO TRANSPORT (IN MILLION TONNES)



DRY CARGO TRANSPORT FOLLOWS A FALLING TREND IN THE MAJORITY OF THE LARGE COUNTRIES IN IWT, WITH THE EXCEPTION OF FRANCE AND ROMANIA.

FIGURE 12: LIQUID CARGO TRANSPORT (IN MILLION TONNES)

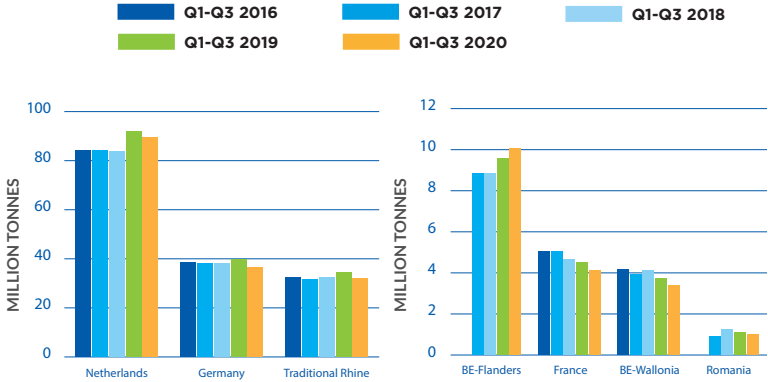
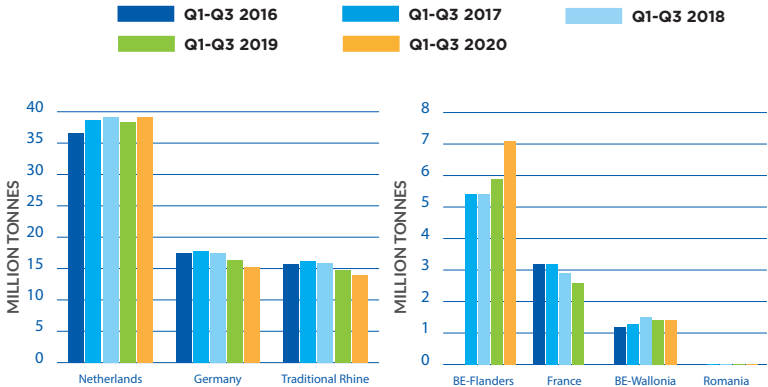


FIGURE 13: CONTAINER TRANSPORT (IN MILLION TONNES)







02

OPERATING CONDITIONS

- The year 2020 offered rather positive navigation conditions on the Rhine. At Kaub (Middle Rhine), the available draught was at least 1.90 m or higher on 87.3% of all days per year, compared to 98.3% in 2019 and only 63.5% in 2018.
- Fuel prices (gasoil/diesel) fell by 32% between Q1 2020 and Q2 2020. Between Q2 and Q3 they rose again (by 17%) but dropped by 3% between Q3 and Q4.
- For 2021, fuel prices are expected to experience a limited increase by 5-7%, based on oil price forecasts.

■ IMPACT OF WATER LEVELS

- The Waterway and Shipping Administration endeavours to achieve a minimum navigation channel depth for each gauge station, also under critical low water conditions. This minimum depth is represented by the vertical distance below a critical low water level. The critical low water level is known as equivalent water level. It is normally exceeded on at least 95% of all days per year. The following table shows these parameters, which are specific for each gauge station, for Kaub (Middle Rhine) and Duisburg-Ruhrort (Lower Rhine).

TABLE 1: NAVIGATIONAL PARAMETERS FOR IMPORTANT RHINE GAUGE STATIONS

Source: German Federal Waterways and Shipping Administration

Gauge station	Area	Equivalent water level (EWL)	Minimum navigation channel depth under the EWL	Under keel clearance
Duisburg-Ruhrort	Lower Rhine	233 cm	280 cm	27 cm
Kaub	Middle Rhine	78 cm	190 cm	32 cm

- The available draught for a vessel at a certain gauge station is calculated with the formula:³
possible or available draught = minimum navigation channel depth + (actual water level – equivalent water level) – under keel clearance.
- If the actual water level equals the equivalent water level (indicating that the water level is very low), the difference (actual water level – equivalent water level) will be zero. In this case, the possible draught of a vessel should still be equal to the minimum channel depth minus the under-keel clearance (see formula and drawing).

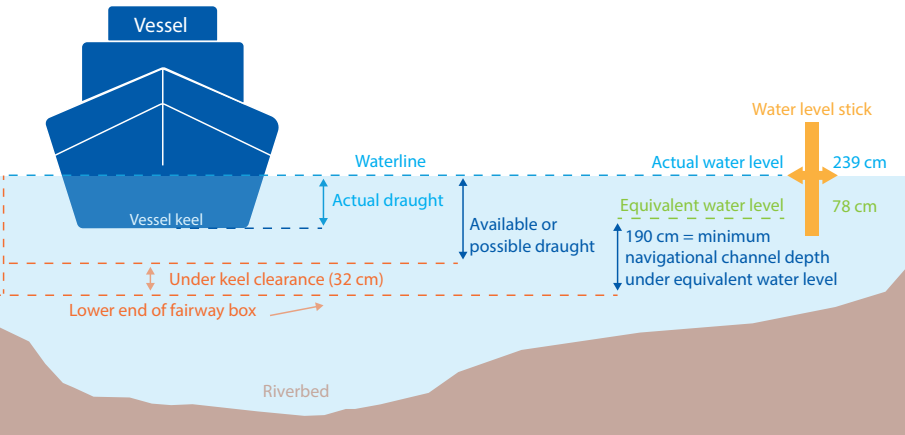
³ Regarding the formula, see: SVS Aktuell, Dec. 2018/Jan. 2019, pages 7 and 8, available at: http://www.svs-ch.ch/sites/default/files/svs-aktuell/winter_2018.pdf.

FIGURE 1: ACTUAL WATER LEVEL, ACTUAL DRAUGHT, EQUIVALENT WATER LEVEL, MINIMUM NAVIGATION CHANNEL DEPTH AND POSSIBLE OR AVAILABLE DRAUGHT AT KAUB/ MIDDLE RHINE*

Source: CCNR based on German Federal Institute of Hydrology (BfG) (2015)

*The distances in this drawing are not at scale.

In this illustration, the date chosen to determine the available or possible draught is 3 September 2020, when the actual water level was 239 cm on average.



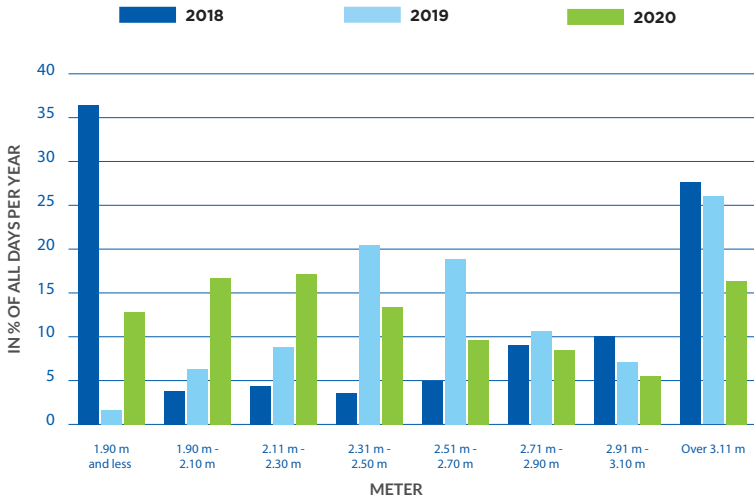
THE AVAILABLE OR POSSIBLE DRAUGHT OF A VESSEL AT KAUB EQUALS

190 CM PLUS (ACTUAL WATER LEVEL MINUS 78 CM) MINUS 32 CM.

- For the following figures, daily water level data for Kaub and Ruhrort were collected in order to verify to which extent the minimum navigation channel depth was actually achieved (at which percentage of all days per year).

FIGURE 2: AVAILABILITY OF DRAUGHT VALUES FOR THE MIDDLE RHINE AT KAUB (IN %)

Sources: CCNR calculation based on data from the German Federal Waterways and Shipping Administration, provided by the German Federal Institute of Hydrology (BfG)

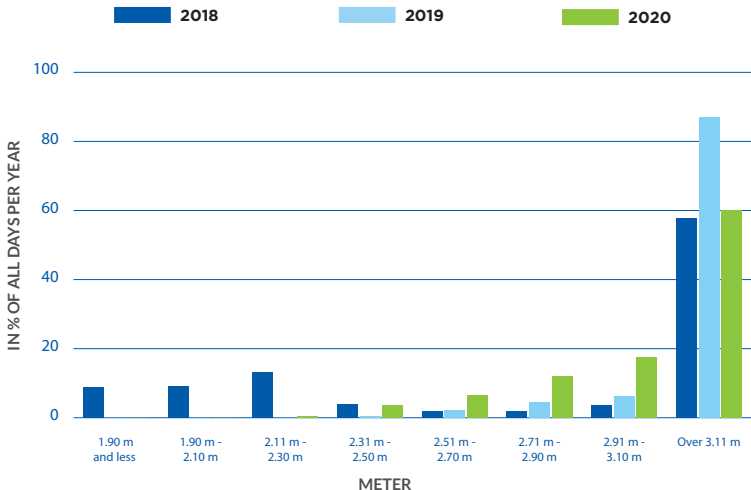


- The minimum navigation channel depth of 1.90 m was achieved at Kaub:
 - In 2018: on 63.5% of all days per year
 - In 2019: on 98.3% of all days per year
 - In 2020: on 87.3% of all days per year

- The fact that the 'achievement rate' in 2018 and 2020 was lower than the target rate of 95% reflects the occurrence of strong low water periods in both years.
- Duisburg-Ruhrort at the Lower Rhine offers higher water levels, channel depths and possible draughts in general, due to different morphological characteristics of the Rhine at this point. This is reflected by a higher target depth (2.80 m), but it was only in 2019 that this target could be reached at a rate of at least 95%.

FIGURE 3: AVAILABILITY OF DRAUGHT VALUES FOR THE LOWER RHINE AT DUISBURG-RUHRORT (IN %)

Sources: CCNR calculation based on data from the German Federal Waterways and Shipping Administration, provided by the German Federal Institute of Hydrology (BfG)



- Equivalent calculations can be carried out for the Danube. Two gauge stations on the Upper Danube in Austria are considered: Kienstock (122 km east of Linz and 90 km west of Vienna) and Wildungsmauer (250 km east of Linz and 38 km east of Vienna). The target depth for both stations is 2.50 m. The results of the data analysis show that Kienstock offered better navigational conditions than Wildungsmauer in 2018-2020.

TABLE 2: NAVIGATIONAL PARAMETERS FOR IMPORTANT UPPER DANUBE GAUGE STATIONS

Sources: Via Donau and Federal State of Lower Austria

Gauge station	Area	Equivalent water level (EWL)	Minimum navigation channel depth under the EWL	Under keel clearance
Kienstock	Upper Danube	164 cm	250 cm	40 cm
Wildungsmauer	Upper Danube	162 cm	250 cm	40 cm



FIGURE 4: AVAILABILITY OF DRAUGHT VALUES FOR THE UPPER DANUBE AT KIENSTOCK (IN %)

Source: CCNR calculation based on data from the Federal State of Lower Austria (<https://www.noel.gv.at/wasserstand/#/de/Messstellen/Map/Wasserstand>).

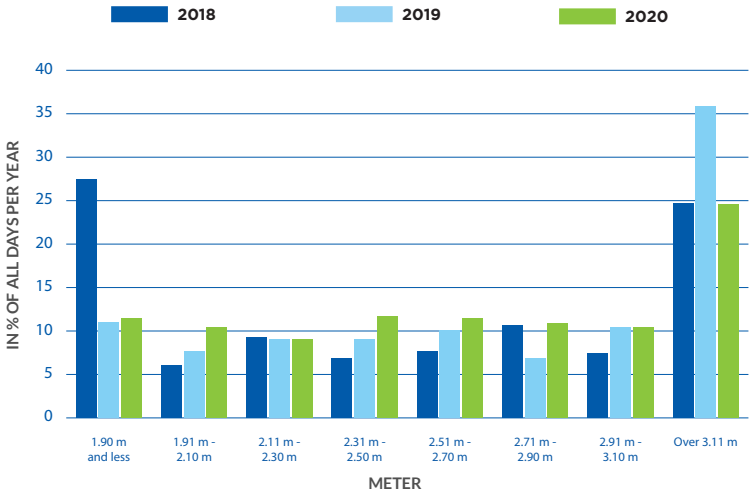
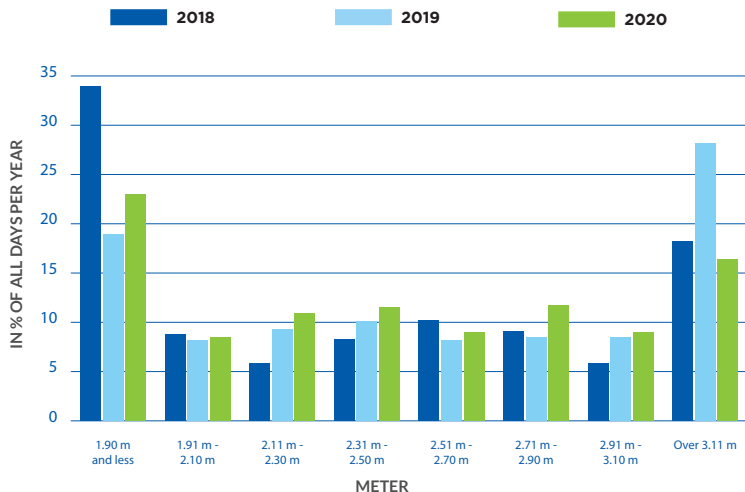


FIGURE 5: AVAILABILITY OF DRAUGHT VALUES FOR THE UPPER DANUBE AT WILDUNGSMAUER (IN %)

Source: CCNR calculation based on data from the Federal State of Lower Austria (<https://www.noel.gv.at/wasserstand/#/de/Messstellen/Map/Wasserstand>).



THE UPPER DANUBE OFFERED RATHER SIMILAR AVAILABLE DRAUGHTS IN 2020 AS IN 2019, WHICH WERE MORE FAVOURABLE THAN IN 2018.

■ FREIGHT RATES IN THE RHINE REGION

- Until October, gasoil and gasoline spot market freight rates on the Rhine remained rather low. In particular, full tanks and limited downstream refining activities - especially for motor fuels due to “lockdowns” - caused a significant drop of transport activity. Towards November and December 2020, higher seasonal demand for liquid cargo pushed freight rates up and this was supported by rapidly falling water levels.
- In October, November and December 2020, gasoil freight rates were much lower than in the same months one year earlier. For the Lower Rhine, the average difference in Q4 2020 compared to Q4 2019 was -31%, and for the Upper Rhine even -33% and -29% for the Main. The percentage differences for gasoline were of the same order (-29%, -32%, -28%).⁴

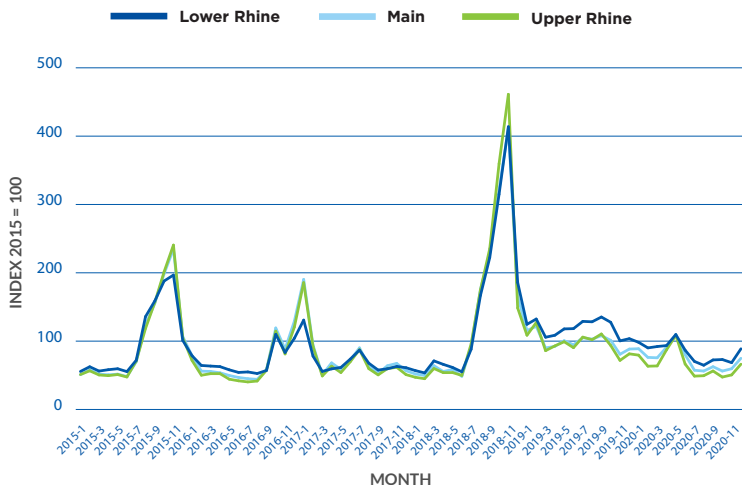
⁴ The figure for gasoline freight rates is not shown in the report, as it appears very similar to the graph for gasoil freight rates.



FIGURE 6: FREIGHT RATE EVOLUTION FOR GASOIL FROM THE ARA REGION TO RHINE DESTINATIONS (INDEX 2015 = 100)*

Source: CCNR calculation based on PJK International

*PJK collects 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/M.

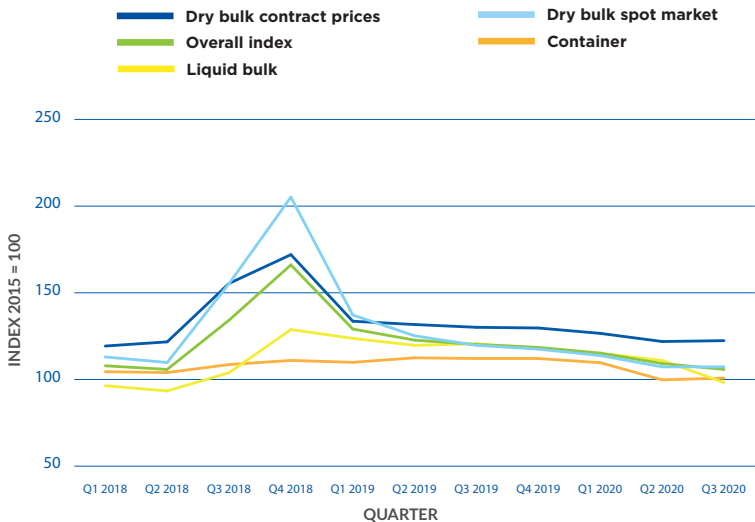


- While the freight rates presented in the above figure relate to spot market rates for ARA-Rhine traffic, the IWT market also experiences more long-term transport prices, which are quite frequently observed in the market segments of chemicals and container transport. Such data are collected by the statistical office of the Netherlands (CBS) from a panel of Dutch IWT companies, together with spot market rates. The prices of established routes within the panel are observed twice a quarter and include fuel and low water surcharges.

- Regarding the overall development of these data, a smaller 'low water elasticity' - or reactivity of transport prices toward low waters - is present.⁵ This is explained by the fact that the sailing regions of the barging companies in this CBS panel contain also regions other than the Rhine itself. In parts of the Netherlands, water level fluctuations are less pronounced than on the Rhine in Germany.

FIGURE 7: FREIGHT RATE EVOLUTION PER QUARTER FOR DUTCH IWT COMPANIES ACCORDING TO MARKET SEGMENT (INDEX 2015 = 100)

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



⁵ This can be verified by taking quarterly averages of the monthly ARA-Rhine index and comparing them with the quarterly index data from CBS. The average of the spot market rates for the ARA-Rhine index was around 300 in Q4 2018, while the highest value in the CBS index in this quarter was around 200.

- For Q3 2020, the data show a decline of 12% of the overall index, compared to Q3 2019. The decrease was strongest for liquid bulk (-18%), although this was still a smaller decrease than the one observed for ARA-Rhine trade (see figures above). A different regional scope of the CBS index, as explained above, can be regarded as the underlying cause. In Q1 2020 and Q2 2020, the drop of the liquid bulk index was only 7%.
- In the first half year 2020, the strongest fall of the index can be observed for dry bulk spot market freight rates. The drop was thus -17% in Q1 2020 and -14% in Q2 2020 (compared to Q1 2019 and Q2 2019 respectively). In Q3 2020, dry bulk spot market rates fell by 10%.

■ COST EVOLUTION

FUEL COSTS

- Fuel costs are analysed on the basis of gasoil/diesel prices published by the energy price monitoring system of the Belgian Ministry of Economic Affairs.⁶ A comparison with oil prices reveals a very close correlation which serves as a basis for an outlook on fuel prices.
- In the course of 2020, positive news about vaccines and their approaching availability brought oil prices back to higher levels. In December 2020, the Brent Spot market price once more reached a level of 50 US-dollars per barrel (= 41.1 euro, as the exchange rate USD/EUR was 1.217).

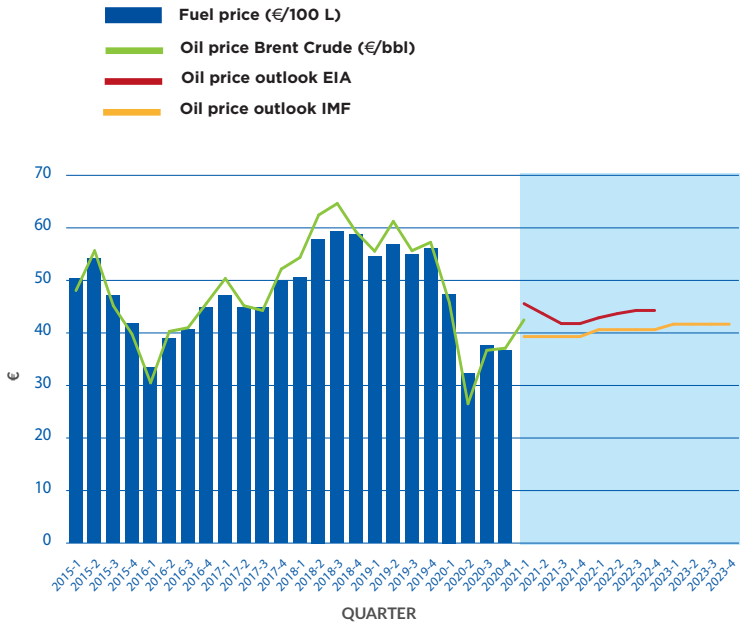
⁶ The data are received from ITB in Belgium. The prices are maximum prices and valid for a purchase volume of at least 2.000 litres of gasoil.

⁷ In December 2020, the exchange rate was 1.217 US-dollar per euro, compared to 1.126 US-dollar per euro in June 2020, and 1.110 US-dollar per euro in January 2020.

FIGURE 8: 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

*IMF = International Monetary Fund; EIA = US Energy Information Administration. The forecast assumes a nominal exchange rate of 1.22 US-\$ per euro throughout 2021 and 2022.



- Fuel prices in European IWT are not only influenced by oil prices but also by the exchange rate between US-dollar and euro. The depreciation of the US-dollar towards the euro, which started in March 2020, continued throughout the year 2020. This dampened fuel prices in European IWT.⁷

- Arguments for a further depreciation of the dollar are put forward by some organisations, which see the US twin deficits as a striking argument for a further devaluation of the dollar.⁸ Other observers (including OECD) put forward the very small interest differential between the two currency zones and therefore foresee a constant exchange rate in 2021 and 2022.^{9,10} For the present forecast, an exchange rate USD/EUR of 1.22 is assumed for the forecast horizon (2021 and 2022).
- Regarding oil prices, in its latest short-term outlook from January 2021, the US Energy Information Administration (EIA) forecasts Brent crude oil spot prices to average around 52.7 US-dollars per barrel in 2021, and around 53.4 US-dollars per barrel in 2022, compared with an average of 41.8 US-dollars in 2020.¹¹ The IMF oil price outlook points to similar values.
- Based on the data and the reasoning explained, an increase in fuel costs of 7.2% is expected for 2021. This is slightly higher than the forecast within the Panteia cost monitoring (+4.7% in 2021).

CAPITAL COSTS

- Capital costs are dependent upon interest rates for long-term loans and the insured values of vessels. Interest rates decreased in 2020, as - in the wake of the economic crisis in the last years - short-term interest rates were consequently cut by the European Central Bank. In the medium and long term, lower short-term interest rates are passed on to lower long-term interest rates.

⁸ QCAM Monthly. 2021. Available at: <https://q-cam.com/wp-content/uploads/2021/02/QCAM-MONTHLY-February-2021.pdf> Last consulted 5.02.2021.

⁹ Raiffeisen Währungsupdate 2021. Available at: <https://www.raiffeisen.ch/content/dam/www/rch/pdf/publikationen/waehrungsupdate/de/2021/waehrungsupdate-01-2021.pdf> Last consulted 5.02.2021.

¹⁰ OECD. Nominal exchange rates against US dollar, average of daily rates. 2021. Available at: <https://stats.oecd.org/Index.aspx?QueryId=51653#> Last consulted 5.02.2021.

¹¹ Source: <https://www.eia.gov/outlooks/steo/>. These values are transformed to values in euro and depicted in the figure. The assumed exchange rate for this transformation is 1.22 US-dollar per euro.

- The development of interest rates in the recently published Panteia cost report¹² shows a decline over the last years. For 2021, capital costs are expected to decrease further, as interest rates will be kept very low, and insurance values of ships will decrease due to the crisis in the inland waterway transport sector. It should be noted that available interest rates do not include individual risk premiums, that could be added on top of the interest rates by banks, in order to cover higher individual risks of companies.

LABOUR COSTS

- An analysis of labour costs was carried out in the Panteia cost report, published in January 2021. Due to a deviation of actual wages from official wages, interviews amongst IWT companies were necessary. According to these interviews, labour costs increased in 2020 by 2.8% compared to 2019. Other sources used for the labour costs assessment were official salary tables published by the 'Centraal Bureau voor de Rijn- en Binnenvaart' (CBRB) in the Netherlands. For 2021, labour costs are assumed to increase further, as the Covid-19 crisis leads to higher burdens for manning vessels.

INSURANCE COSTS

- In 2020, insurance companies have increased insurance premiums by 3.3%. As the value of the insured vessels dropped by 0.4%, insurance costs increased by 2.9%. For 2021, insurance premiums are expected to continue their increase by 2.9%. A limited drop in the values of vessels by 0.4% will again lead to higher insurance costs for companies. The sources of these estimations are consultations with insurance companies and barging companies.

¹² Source: Panteia (2021), *Kostenontwikkeling binnenvaart 2020 en raming 2021*, edited in January 2021

REPAIR AND MAINTENANCE COSTS

- On the basis of interviews with a panel of inland barging entrepreneurs, it is estimated that these types of costs increased in 2020 by 2.3% and will increase in 2021 by 2.0%.

TABLE 3: **DEVELOPMENT OF COSTS IN INLAND WATERWAY TRANSPORT (2020/2019) AND OUTLOOK FOR 2021**

Source: Panteia (2021)

Cost component	Index 2020 (2019 = 100)	Index 2021 (2020 = 100)
Labour costs	102.8	102.3
Capital costs		
- interest rates	92.3	96.0
- insured value of vessel	99.6	99.6
Fuel costs	83.3	104.7
Repair and maintenance	102.3	102.0
Insurance costs	102.9	102.4
Other costs	101.2	101.3

SHARE OF LABOUR COSTS IN TOTAL COSTS AND IN TURNOVER

- According to data from the statistical office of the Netherlands (CBS), the share of personnel costs within total costs in the Dutch IWT sector (freight and passenger transport) was 18.0% in 2018, 21.8% in 2017, and 23.0% in 2016. In the years 2009-2015, the share was 22.0% on average.
- The share of personnel costs within net turnover was 15.3% in 2018, 18.3% in 2017 and 18.7% in 2016. In the years 2009-2015, the share was 18.8% on average.





03

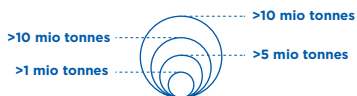
FOCUS ON FRANCE

- In France, the cargo segment of sands, stones and building materials is the largest segment in IWT. Its transport performance follows a positive trend. The segment was affected by the Covid crisis in March and April, but transport performance recovered until June to pre-crisis levels.
- Agricultural products are the second largest cargo segment in France. Its transport demand is closely linked with harvest results. After a good harvest season in 2019, the 2020 season was quite weak, which will affect transport of grain in 2021.

INLAND WATERWAY TRAFFIC IN FRENCH PORTS

Sources : Ministère de la Transition écologique et solidaire, Voies Navigables de France

Port	IWT in 2019 (million tonnes)
Paris	25.3
Strasbourg	7.5
Rouen	5.0
Mulhouse	4.9
Le Havre	3.0
Marseille	2.8
Dunkerque	2.4
Metz	2.2
Lille	1.9
Lyon	1.1
Villefranche sur Saône	0.8
Chalon-sur-Saône and Mâcon	0.8
Thionville	0.7



FACT SHEET IWT IN FRANCE - ANNUAL FIGURES

Notes on the factsheet - See page 52

ABSOLUTE VALUE¹³ FOR FRANCE VS SHARE IN EU TOTAL

TRANSPORT PERFORMANCE TOTAL

8,014 million TKM

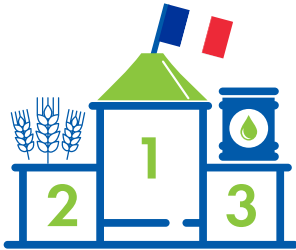
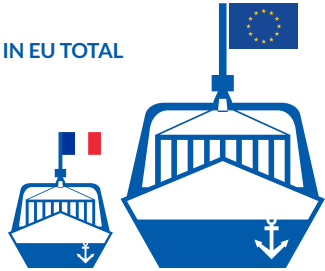
5.7% SHARE IN EU TOTAL

Volume of total goods transport:

64.313 million tonnes

Volume of container transport:

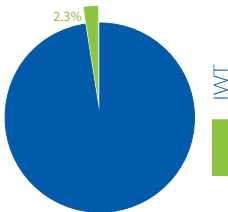
3.549 million tonnes (496,997 TEU)



GOODS SEGMENTS IN IWT

1. Sands, stones, gravel, metal ores: 2,614 million TKM
12.7% SHARE IN EU TOTAL
2. Agricultural products: 2,148 million TKM
7.5% SHARE IN EU TOTAL
3. Coke and refined petroleum products: 641 million TKM
2.8% SHARE IN EU TOTAL

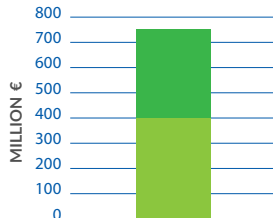
MODAL SPLIT - SHARE OF IWT WITHIN TOTAL LAND-BASED TRANSPORT PERFORMANCE



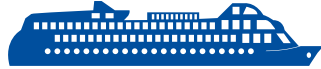
LEVEL OF IWT TURNOVER

750.6 million € ~9% SHARE IN EU TOTAL

- Goods transport: 397.3 million € 6.7%
- Passenger transport: 353.3 million € ~17%



¹³ Data on transport demand and fleet data are for 2019, the modal split, data on companies, data on employment and turnover are for 2018.



PERSONS EMPLOYED IN IWT

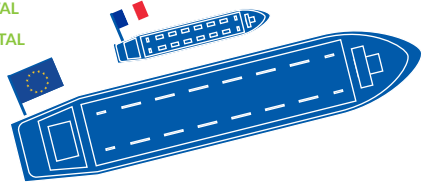
4,277	9.8%
Goods transport: 1,917	9.1%
Passenger transport: 2,360	10.5%

NUMBER OF IWT COMPANIES

935	9.4%
Goods transport: 674	12.3%
Passenger transport: 261	6.6%

NUMBER OF ACTIVE CARGO VESSELS

1,042	~7% SHARE IN EU TOTAL
Dry cargo: 996	9.0% SHARE IN EU TOTAL
Liquid cargo: 46	2.8% SHARE IN EU TOTAL



TONNAGE OF ACTIVE CARGO VESSELS

1.092 million tonnes	6.3% SHARE IN EU TOTAL
Dry cargo: 1.003 million tonnes	7.2% SHARE IN EU TOTAL
Liquid cargo: 0.089 million tonnes	2.7% SHARE IN EU TOTAL

IWW FREIGHT TRANSPORT IN FRANCE FOR THE TWO LARGEST CARGO SEGMENTS

- The Covid-19 pandemic had a V-shaped impact on the transport performance for sands, stones and gravel. The trough of this downturn was in April 2020. During the month of May, a recovery set in, which was completed in June 2020. The positive long-run trend reflects several influencing factors (demographic growth in France, rise in construction output). Short-run factors relate to individual one-off construction projects. The Olympic Games 2024 in Paris are an important example. From May until the end of October 2020, 125,000 tonnes of excavated material for the Olympic Village was transported on the river Seine.¹⁴

¹⁴ Source: Journal NPI, 01/2021, « Une dynamique dans différentes métropoles »

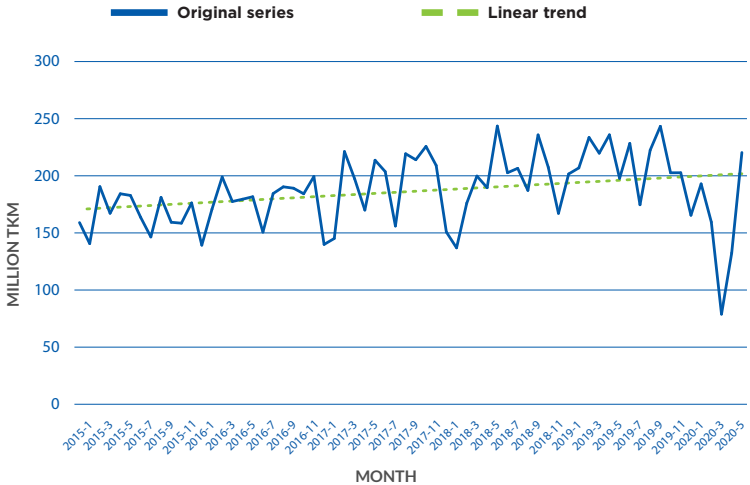
¹⁵ In France, inland waterway transport of agricultural products is closely correlated with harvest results. See: EU/CCNR (2018), *Inland Navigation in Europe – Annual Market Observation Report, Chapter 9*

¹⁶ Eurostat series [APRO_CPSH1], *Cereals for grain production (including seed production)*, (C0000)



FIGURE 1: TRANSPORT PERFORMANCE FOR SANDS, STONES, BUILDING MATERIALS IN IWT IN FRANCE (IN MILLION TKM)

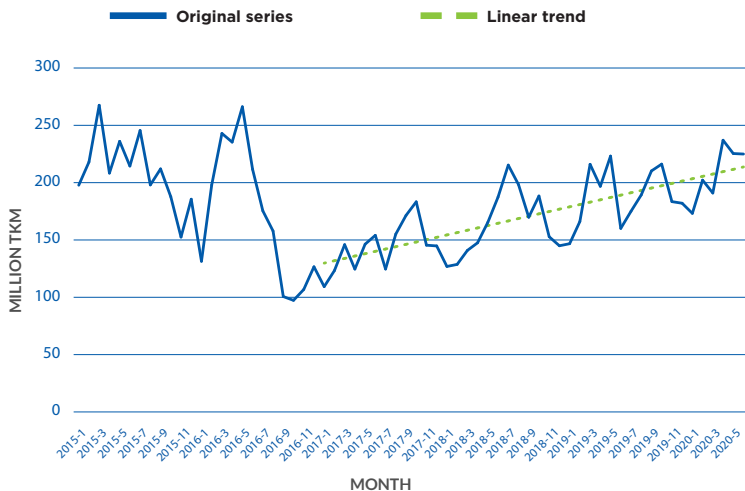
Sources: Ministère de la Transition écologique et solidaire, Données et études statistiques, CCNR calculation



- For agricultural and food products, the positive trend since 2017 is mainly explained by the development of harvest results.¹⁵ According to Eurostat data¹⁶, grain harvest in France amounted to 71.8 million tonnes in 2015, but dropped to 53.6 million tonnes in 2016. In the years 2017-2019, volumes recovered and reached 70.4 million tonnes in 2019. In 2020, however, grain harvest in France was only 56.7 million tonnes. A dampening of the positive trend can therefore be expected for 2021.
- In the river-sea-port of Rouen, which is among the three largest ports in Europe for the export of cereals, the modal split share of IWT, for grain coming from the hinterland to the port, rose slightly in recent years. It reached 32% in 2020, according to information from the logistics company which exploits the terminals.

FIGURE 2: TRANSPORT PERFORMANCE FOR AGRICULTURAL AND FOOD PRODUCTS IN IWT IN FRANCE (IN MILLION TKM)

Sources: Ministère de la Transition écologique et solidaire, Données et études statistiques, CCNR calculation



SINCE 2017, GRAIN TRANSPORT IN FRANCE BENEFITED FROM GOOD HARVEST SEASONS AND FROM A SLIGHT MODAL SHIFT TOWARDS IWT IN SOME REGIONS.



■ GLOSSARY

20XX-1/20XX-Q1: first quarter

20XX-2/20XX-Q2: second quarter

20XX-3/20XX-Q3: third quarter

ARA REGION: Amsterdam-Rotterdam-Antwerp

AVAILABLE OR POSSIBLE DRAUGHT OF A VESSEL: minimum navigation channel depth + (actual water level – equivalent water level) – under keel clearance

BN: billion

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

EQUIVALENT WATER LEVEL: refers to a low water level under which, on a 30-year average, the water levels do not fall below more than 20 ice free days per year.

EU: European Union

EUROPE: European inland navigation in this report includes two countries that are not members of the European Union, Switzerland and Serbia.

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

INLAND FREIGHT TRANSPORT MODES: these include road, rail and inland waterways.

IWT: inland waterway transport

IWW: inland waterway

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.

OECD: Organisation for Economic Co-operation and Development

RHINE COUNTRIES: Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland

TEU: twenty-foot equivalent unit

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

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

TURNOVER: sales volume net of sales taxes

UNDER-KEEL CLEARANCE: the distance between the lowest point on the ship's keel (or hull) and the highest point on the channel bottom beneath the ship. This is so to say the "security margin" under the keel.

NATIONAL STATISTICS OFFICES

Acronym	Original Name	English Name	Country
CBS	Centraal Bureau voor de Statistiek	Statistics Netherlands	Netherlands
Destatis	Statistisches Bundesamt	Federal Statistical Office	Germany
INSSE	Institutul Național de Statistică	Romanian Institute of Statistics	Romania

OTHER SOURCES

Original Name	English Name	Country
Bundesanstalt für Gewässerkunde (BfG)	German Federal Institute of Hydrology	Germany
CCNR/ZKR/CCR	Central Commission for the Navigation of the Rhine (CCNR)	Europe
Centraal Bureau voor de Rijn- en Binnenvaart (CBRB)	Central Bureau for Rhine and Inland Navigation (CBRB)	Netherlands
Danube Commission	Danube Commission	Europe
De Vlaamse Waterweg	The Flemish Waterways	Belgium
EUROSTAT	EUROSTAT	EU
Federal Reserve Economic Data	Federal Reserve Economic Data	USA
Institut pour le Transport par Batellerie (ITB)	Institute for Inland Waterway Transport	Belgium
International Monetary Fund (IMF)	International Monetary Fund (IMF)	World
Land Niederösterreich	Federal State of Lower Austria	Austria
Ministère de la transition écologique et solidaire	Ministry of ecological and solidarity transition	France
OECD	Organisation for Economic Co-operation and Development (OECD)	World
Panteia	Panteia	Netherlands
PJK International	PJK International	Netherlands
Ports mentioned in the report	Ports mentioned in the report	Europe
SPF Economie	Federal Public Service Economy	Belgium

Original Name	English Name	Country
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	France
Wasserstraßen- und Schifffahrtsverwaltung des Bundes (WSV)	German Federal Waterways and Shipping Administration	Germany
Wirtschaftsvereinigung Stahl	German Steel Federation	Germany
World Steel Association	World Steel Association	World

BOOKS, JOURNAL ARTICLES AND STUDIES

Original Name	Country
Danube Commission Market Observation reports	Europe
EIA, Short-term energy outlook, February 2021, Short-Term Energy Outlook - U.S. Energy Information Administration (EIA), https://www.eia.gov/outlooks/steo/	USA
EU/CCNR, Inland Navigation in Europe - Annual market observation report 2018 (chapter 9 – Outlook)	Europe
NPI, 01/2021, « Une dynamique dans différentes métropoles »	France
OECD, Nominal exchange rates against US dollar, average of daily rates. 2021, https://stats.oecd.org/Index.aspx?QueryId=51653#	World
Panteia, Kostenontwikkeling binnenvaart 2020 en raming 2021, January 2021	Netherlands
QCAM Monthly, February 2021, https://q-cam.com/wp-content/uploads/2021/02/QCAM-MONTHLY-February-2021.pdf	Switzerland
Raiffeisen Währungsupdate 2021, https://www.raiffeisen.ch/content/dam/www/rch/pdf/publikationen/waehrungsupdate/de/2021/waehrungsupdate-01-2021.pdf	Switzerland
SVS Aktuell, Dec. 2018/Jan. 2019, pages 7 and 8, http://www.svs-ch.ch/sites/default/files/svs-aktuell/winter_2018.pdf	Switzerland
The Federal State of Lower Austria, https://www.noel.gv.at/wasserstand/#/de/Messstellen/Map/Wasserstand	Austria

■ NOTES ON THE FACTSHEET

'Share in EU total' contains figures for the EU plus Switzerland and Serbia.

In contrast to 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].

■ 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 National Statistics Office 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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