# ANNUAL MARKET OBSERVATION REPORT ON INLAND NAVIGATION IN EUROPE: 2023 EDITION

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Continuing its long and fruitful collaboration with the **European Commission**, the **Central Commission for the Navigation of the Rhine** (CCNR) is delighted to present its **2023** European Inland Navigation Market Observation **annual report**.


The publication of the annual Market Observation report on inland navigation in Europe is an example of **successful European level collaboration,** embracing all European inland navigation actors and stakeholders, including the river commissions and representatives of the sector. The **forewords by** Mr Habersack, President of the **Commission for the Hydrology of the Rhine basin (CHR)**, and Ms Luijten, Secretary General of the **CCNR**, illustrate the resolutely European dimension of the publication.

The new annual report provides an **exhaustive overview of the market situation** and developments in inland navigation in Europe **during 2022**. You will find below the **executive summary** of this report. The **full report** can be downloaded in PDF format in French, German, Dutch or English or viewed directly online at: **www.inland-navigation-market.org.**

**We wish you an enjoyable read!**

## *EXECUTIVE SUMMARY*

In 2022, the year was overrun with events that hampered the economy in general. The inland waterway transport (IWT) sector could not escape the negative overflows which emerged from the armed conflict between Russia and Ukraine. The low waters, the rapid rise in commodity prices and the energy crisis among other unfortunate factors, led to an overall negative impact on the IWT activities. All cargo segments, except for coal, presented a negative growth rate with regard to their transport volumes, and the magnitude of this negative impact varied. In 2022, an economic recession was observed for the inland navigation freight transport sector. The amount of cargo transported in Europe decreased by -5.5%. On the entire Rhine (from Basel to the North Sea), this decrease reached -6.8% compared to 2021: specifically, the Traditional Rhine (from Basel to the German-Dutch border) had a decrease in cargo transport of -7.8%, and the Rhine delta in the Netherlands (from the German-Dutch border to the North Sea) had a decrease of -5.7%, compared to 2021. While the end of 2021 and the first two months of 2022 showed positive signs towards a certain growth in transport volumes on the Danube, the war in Ukraine led to the emergence of several factors weighing on Danube navigation. As a result, volumes of transport decreased for all cargo segments in 2022.

Due to the energy crisis observed in 2022, the demand for natural gas increased and the prices boomed at the start of the year. This incited other energy options to be used, such as coal, to the detriment of natural gas. Hence, the demand for coal significantly increased, which contributed to a growth rate of +10.6% for the entire Rhine, compared to 2021. The war between Russia and Ukraine, which was accentuated by the presence of low waters in 2022, the increase on commodity prices that inflated the production costs, and the closure of Ukrainian ports at the Black Sea, all contributed to a slowdown in the demand for the remaining segments and consequently their transport cargo reduced. On the Rhine, metals (-7.5%), construction materials (sand, stone, gravels) (-12.1%), containers (-11.1%) and agrifood products (-5.9%), experienced strong decreases. Contrary to the significant increase in 2021, the iron ore segment (-2.8%) experienced a slight decrease in 2022. Likewise, chemicals (-1.6%) suffered a slight decrease in 2022, compared to the moderate growth observed in the previous year. On the Danube, transport volumes were negatively affected, especially on its upper and middle section. More specifically, transport of grain and other agribulk dropped significantly, going downstream (from the ports of the Middle Danube in direction of Constanța). However, the Lower Danube region, in particular the canals connecting the Danube to the Black Sea, recorded a clear upward trend in goods transport.

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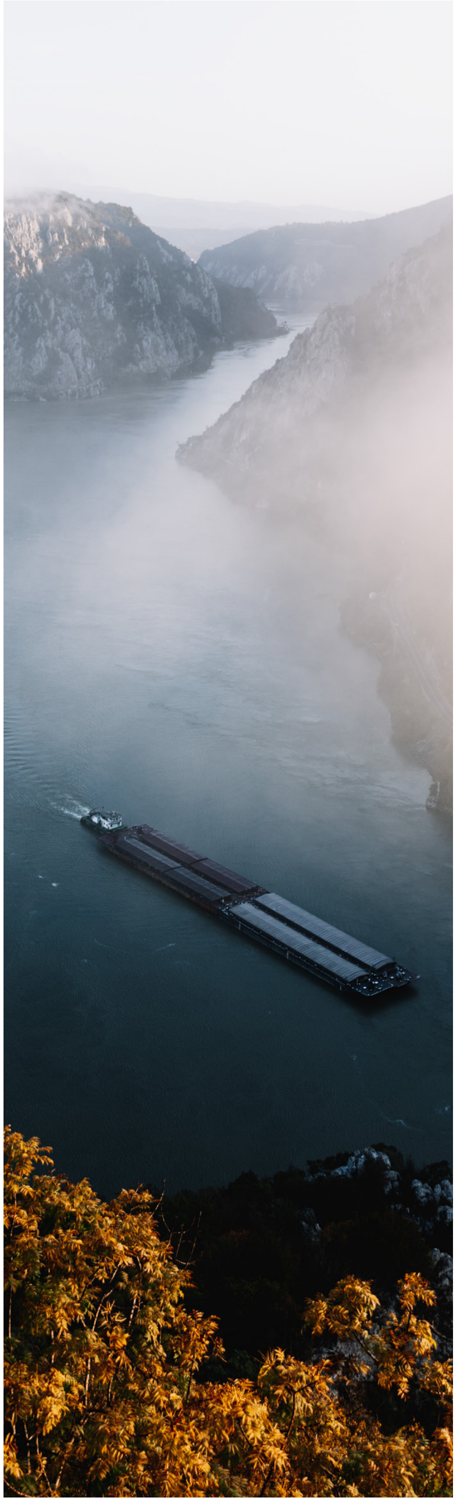
The recessionary economic situation extended also to the main European seaports. However, some seaports such as Hamburg and the North Sea Port showed positive growth rates in 2022. The Port of Rotterdam (-4.1%) observed a decrease on the inland waterway cargo volume handled, as did the Port of Antwerp-Bruges (-7.5%). IWW cargo handling at the port of Constanța remained at a similar level as in 2021. Since the beginning of the war, the IWW cargo handled at this port in relation to Ukraine reached 5.4 million tonnes. Likewise, a decrease was observed in main inland ports in 2022, except for the two Ukrainian ports Reni and Ismail which recorded an exceptional growth of IWT volumes, driven by the need to support Ukrainian exports of grain via alternative routes.



Inland waterway transport in 2022 was also strongly affected by the low water level conditions observed in July and August 2022. Between 2015 and 2022, the two years with the highest number of low water days were 2018 and 2022. This is reflected on both the Rhine and the Danube by a higher number of critical low water days in 2022 compared to 2021. This number, however, remained smaller than in 2018. For instance, for the gauge station of Kaub at the Middle Rhine, the number of days below the equivalent water level was 41 in 2022, compared to 10 in 2021 and 107 in 2018. On the Danube, the two German gauge stations on the Upper Danube, Pfelling and Hofkirchen, registered a higher number of low water days in 2022, compared to 2021.

Driven by the effect of low waters, and taking into consideration all market segments, freight rates increased on average by +42.5% in 2022 compared to 2021. Since 2020, dry bulk and container freight rates have been following a rising trend due to their demand recovery from the pandemic, which was further accentuated in 2022 by booming coal transport, the transfer of vessel capacity from the Rhine to the Danube region, and low waters. Liquid cargo freight rates had been following a decreasing trend since 2019 owing to a weaker development of transport demand compared to dry cargo, both during and after the pandemic. However, liquid cargo freight rates also realised a strong increase in 2022 owing mainly to low water conditions. To illustrate the increase on the freight rate indices between 2021 and 2022, for the volatile dry bulk spot market, the freight rate indices at the end of the year 2022 (Q3 and Q4) were around 240.9 and 203.9, respectively, while for the year end of 2021 (Q3 and Q4) the freight rate indices were about 118.1 and 159.1, respectively. For liquid cargo, freight rate indices were 140.7 and 134.4 in 2022 (Q3 and Q4) compared to 92.9 and 114.2 in 2021 (Q3 and Q4), respectively.

In 2022, the fleet of inland vessels in Europe counted almost 10,000 vessels registered in Rhine countries, 3,500 in Danube countries and 1,200 in other European countries. Overall, from 2016 to 2020, newbuilding activity has shown a recovery, which is more pronounced for liquid cargo than for dry cargo. The year 2021 was marked by a moderation in newbuilding activity due to the deterioration of transport demand conditions caused by the pandemic, which was further accentuated in 2022. While the number of new dry cargo vessels remained the same (21 units) compared to 2021, the number of newly built tanker vessels (31 units) decreased by 27 units compared to 2021. The number of small dry cargo vessels continues to follow a downward trend while larger vessels tend to increase (liquid) or to remain stable (dry). With regard to innovative developments in the inland navigation fleet contributing to reducing emissions, it can be noted that the number of innovative vessels in service represents less than 0.2% of the entire inland navigation fleet in Europe. Nevertheless, their number increased significantly between 2021 and 2022.

With regard to passenger transport, figures show a recovery from the Covid-19 pandemic. Concerning river cruises, the yearly cruise vessel movement figures for the Danube, Rhine and Moselle show a remarkable rebound in 2022, compared to 2021, recovering to pre-pandemic values. In terms of vessel movements, the cruising activity on the Upper Danube (at the Austrian-German border) and the Moselle were respectively 5% and 1% above the pre-pandemic levels of 2019. However, on the Rhine, this figure was still 6.5% below the level of 2019. Beyond vessel movements, the evolution of passenger numbers and the cruise vessel utilisation rate are also crucial factors in assessing the recovery of the river cruise sector. Figures for these two indicators confirm that the river cruise activity picked up significantly, even though it is still slightly below 2019 levels.

Despite the Covid-19 pandemic coming to an end, the new building for river cruises remained rather slow in 2022. The year was marked by inflationary tendencies, contributing to an increase in shipbuilding costs, which was a hurdle for the newbuilding activity and it is likely to remain weak in 2023. It is interesting to note that the armed conflict between Russia and Ukraine led to an increased demand for hotel capacity for war refugees. As a result, some vessels are being used as floating hotels, sometimes permanently (particularly the oldest vessels) or in parallel to their cruising activities.

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Concerning the employment level in passenger transport in the IWT sector in Europe, there was a remarkable decrease between 2019 and 2020. This resulted from the Covid-19 pandemic, which severely affected passenger transport and interrupted the positive trend which had been observed since 2010. The number of employed people was 17,895 in 2010, 23,100 in 2019 and 17,503 in 2020. However, the number of companies has continuously increased since 2013 (from 3,529 companies in 2013 to 4,231 in 2020). Employment level in the goods transport sector has been following a slightly decreasing trend since 2010 (23,300 in 2010, 22,365 in 2019 and 22,417 in 2020). The lowest employment point was reached in 2018, which could be attributed to the impact of low waters. In the same sector, the number of active companies also followed a similar trend (from 5,995 companies in 2010 to 5,486 in 2020). Regarding the net turnover in the EU (plus Switzerland and Serbia) for inland waterway (IWW) freight companies in 2020, approximately 6.6 billion Euro was registered. This figure amounted to 1.6 billion Euro for the IWW passenger companies in 2020.

Overall, the outlook for cargo transport appears to be favourable, specifically from 2024 onwards. However, it is difficult to establish in 2023 a precise forecast for the near future due to the volatile underlying conditions stemming from the armed conflict between Russia and Ukraine and the resulting energy crisis. Regarding river cruises, their demand is expected to return to pre-pandemic levels in 2023. However, the outlook for the river cruise new building activity still seems uncertain for the near future.

## *ABOUT THE CCNR*

*The Central Commission for the Navigation of the Rhine (CCNR) is an international organisation that exercises an essential regulatory role in the navigation of the Rhine. It is active in the technical, legal, economic and environmental fields. In all its areas of action, its work is guided by the efficiency of transport on the Rhine, safety, social considerations, and respect for the environment. Many of the CCNR's activities now reach beyond the Rhine and are directly concerned with European navigable waterways more generally. The CCNR works closely with the European Commission as well as with the other river commissions and international organisations.*

## *ABOUT THE MARKET OBSERVATION AND MARKET INSIGHT*

*The Market Observation and Market Insight reports are respectively annual and biannual publications by the CCNR dealing with the European inland navigation market. The CCNR also publishes thematic reports, the theme of which is defined in consultation with the European Commission. These analyses of the economic situation, which are free of charge, aim to assist strategic decision making in this sector in Europe, by both the profession and firms as well as in terms of transport policy and within administrative authorities. The gathering and analysis of this data by the CCNR has been co-financed by the European Commission since 2005. This fruitful collaboration has enabled the CCNR to extend this activity, which historically it has been carrying on for almost two centuries, beyond the Rhine region to cover all Europe's navigable waterways.*

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