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2026

INLAND NAVIGATION IN EUROPE
MARKET OBSERVATION

CCNR
CENTRAL COMMISSION
FOR THE NAVIGATION OF THE RHINE

European Commission

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October 2026

FOREWORD



Hester Duursema
Secretary General
Central Commission for the Navigation of the Rhine (CCNR)

2025: Navigating uncertainty

The Central Commission for the Navigation of the Rhine (CCNR) is pleased to present the 2026 edition of its *Market Observation Annual Report*, prepared once again in close cooperation with the European Commission (EC).

Throughout 2025, the resilience of the inland navigation sector was again put to the test by an increasingly complex economic and geopolitical environment. While global gross domestic product (GDP) growth remained relatively solid, economic conditions in Europe became more fragile, particularly in industrial sectors closely linked to inland waterway transport. Towards the end of the year, escalating tensions in the Middle East and rising crude oil and natural gas prices further increased cost pressures and uncertainty for European industries and transport markets.

Against this backdrop, transport volumes on the Rhine declined overall, with only a limited number of cargo segments recording growth. Cargo transport on the Danube also decreased, while the river cruise sector maintained its positive trajectory. Navigation conditions became more demanding, with both rivers experiencing more low-water days than in 2024. Together, these developments underline the need to continue strengthening the competitiveness and flexibility of inland navigation. This is particularly important given the sector's vital contribution to Europe's competitiveness, sustainability and supply chain resilience. Reliable market intelligence is an essential part of that resilience.

New insights into market developments

This year's report not only analyses market developments but also introduces new analytical tools that deepen our understanding of the factors shaping the sector. For example, freight rates have been adjusted to account for rising costs, revealing that operating costs have increased more rapidly than freight rates in recent years. As a result, profit margins have come under pressure, except during periods of low water.

The report also introduces econometric models identifying the key drivers of demand for petroleum products and iron ore transport on the Rhine. By confirming important long-term trends, including the structural decline in petroleum transport linked to the energy transition, these models support better-informed strategic decision-making.

It is essential to understand today's market developments, but so is recognising our sector's remarkable capacity to adapt. This broader perspective is reflected in the accompanying foreword by the International Association for the representation of the mutual interests of the inland shipping and the insurance and for keeping the register of inland vessels in Europe (IVR), which places today's transition in its historical context.

Acknowledgements

I would like to thank all contributing partners, including the Danube, Moselle and Sava Commissions, the Corporation Inland Tanker Barge Owners (CITBO), the European Barge Union (EBU), the European Skippers' Organisation (ESO), Rijkswaterstaat, IVR, Mr Arnulf Hader, Eurostat, Destatis, the national statistical offices, ports and waterway administrations, and the many other stakeholders whose contributions made writing this report possible.

A special word of thanks goes to Ms Frouwke de Vries, Secretary General of IVR, for our valued cooperation over many years and for contributing the accompanying foreword to this edition of the report. I would also like to express my sincere appreciation to my colleagues at the CCNR Secretariat, whose dedication and expertise transform complex data into valuable market intelligence.

The CCNR remains committed to supporting an inland waterway transport sector that is resilient, competitive and sustainable. We trust that the 2026 Market Observation Annual Report will continue to serve as a valuable reference for policymakers, industry stakeholders and all professionals engaged in inland navigation.

CCNR
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FOR THE NAVIGATION OF THE RHINE



Frouwke de Vries
General Secretary of the International Association for the representation of the mutual interests of the inland shipping and the insurance and for keeping the register of inland vessels in Europe (IVR)

It is both a pleasure and an honour for me to contribute to the foreword of this year's Market Observation Annual Report of the CCNR, prepared in close cooperation with the EC. Year after year, this publication has provided valuable insights into the development of the European inland navigation sector, offering policymakers, industry professionals, researchers, and other stakeholders a comprehensive overview of the trends, challenges, and opportunities that shape our sector.

Writing this foreword also provides an opportunity to reflect on the longstanding relationship between the CCNR and IVR. Both our organisations share a history that spans well over a century. IVR was founded in Frankfurt am Main in 1877 and is approaching a remarkable milestone as we prepare to celebrate our 150th anniversary in 2027.

When IVR was re-established in Rotterdam in 1947, it was the CCNR that supported and protected the renewed association. It initially consisted of Dutch, French, Swiss, and Belgian organisations, and acted as its patron under whose auspices the association was able to develop in its early years.

Today, our members come from 13 different European countries and represent every part of the European inland navigation sector and the spirit of international cooperation remains just as important. Our shared history offers a valuable perspective as inland navigation enters into another period of transformation, as reflected in the historical records maintained by IVR.

Since 1879, IVR's European Ship Register has documented the remarkable evolution of inland navigation, highlighting how innovation has consistently driven the sector's competitiveness and resilience.

Today, discussions about sustainability and transition sometimes create resistance or uncertainty. But with nearly 82% of the fleet effectively operating as "zero-emission" in 1926, history reminds us that our sector has already successfully undergone enormous transformations. The inland navigation industry has repeatedly proven its resilience, its pragmatism, and its ability to innovate.

The challenges we face today are undoubtedly significant. Global geopolitical developments continue to have direct and immediate consequences for our industry. Trade routes are shifting, economic confidence is under pressure, and logistics chains are becoming increasingly fragile. At the same time, our sector is expected to accelerate its transition towards climate neutrality while maintaining its role as one of the most sustainable modes of freight transport.

Meeting these challenges requires collective responsibility. As we invest in digitalisation and smart infrastructure, we must not overlook the equally urgent need to maintain and modernise Europe's physical waterway infrastructure. At the same time, I remain convinced that the innovations currently taking place offer an opportunity not only to maintain inland navigation's position but to strengthen it further. Just as steam propulsion and later motor engines transformed the sector more than a century ago, today's technological innovations can once again make inland navigation an even more attractive and competitive transport solution.

However, innovation never succeeds in isolation. It requires cooperation across the entire value chain. Only through joint efforts can we create the conditions necessary for a successful and sustainable transition. IVR hopes to contribute to this by bringing together and connecting all the different actors within our sector.

Finally, I would like to express my sincere appreciation to the Secretary General and the Secretariat of the CCNR for the excellent cooperation that has characterised the relationship between our associations over many decades. I am confident that, building upon our solid foundation, we will continue working together to ensure that the European inland navigation sector remains resilient, innovative, and well-positioned to meet the challenges and opportunities of the future.


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Prag
Linz
Vienna
Bratislava
Budapest
Belgrade
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Constanța

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Detailed data per country about infrastructure spending are also available on the market observation website by clicking on this QR Code.

II EXECUTIVE SUMMARY

In 2025, the global economy demonstrated resilience, performing better than initially anticipated with global GDP growth reaching +3.4% and inflation stabilising at +4.1%, helping to maintain consumer demand. However, economic recovery remained uneven, with the European Union (EU) recording a modest growth of +1.6%. On the one hand, global trade volumes expanded by +5.1% in 2025, driven by strong exports in technology sectors and by companies accelerating imports ahead of anticipated tariff increases and higher prices; on the other hand, the European inland waterway transport (IWT) sector remained under pressure, reflecting the relatively weak European economic environment, especially due to subdued industrial activity and increased trade policy uncertainty.

Commodity markets provided relatively favourable conditions for inland navigation during the first half of 2025, particularly due to lower average energy prices. However, from August 2025 onwards, disruptions to shipping routes in the Middle East led to sharp increases in oil and gas prices. These developments pointed towards a more volatile and costly operating environment for transport operators and for industrial sectors heavily dependent on inland shipping, particularly chemicals and manufacturing.

In 2025, 458.4 million tonnes of goods were transported on EU-27 waterways (-3.2% compared to 2024). and the IWT transport performance reached 118.0 billion TKM (-3.0%). In terms of inland navigation for Europe (EU-27 plus Switzerland, Serbia, the Republic of Moldova and Ukraine), freight transport performance decreased by -3.3% compared to 2024, reaching 122.7 billion TKM.

In 2025, freight transport on the entire Rhine (from Basel to the North Sea) amounted to 281.9 million tonnes, representing a modest decline of -0.9% compared to 2024. Transport on the traditional Rhine decreased by -1.9%, while transport on the lower Rhine in the Netherlands declined by -1.3%. The slight downturn reflected weaker industrial demand and more frequent low water periods during spring 2025. This overall contraction was reflected in key product segments on the Rhine, with declines in mineral oil products (-2.9%), chemicals (-2.0%), and iron ore (-14.4%), though coal (+8.1%), metals (+1.6%), and agribulk (+1.4%) recorded growth. Container transport remained stable (-0.3%).

While domestic container transport within the Netherlands increased, international container transport remained weak due to continued low growth in maritime container throughput which was affected by geopolitical instability combined with persistent congestion in seaports and the long-term effects of previous low water periods.

In 2025, cargo transport on the Danube declined due to weak economic conditions, unfavourable water levels and the ongoing Russian war of aggression against Ukraine which intensified attacks on Ukrainian port infrastructure, damaging logistics assets, vessels, and posing serious risks to navigation and personnel. Efforts under the EU-Ukraine “Danube Solidarity Lanes” initiative continued to support the stabilisation of trade flows via the Danube. Nevertheless, in Gabčíkovo, the most representative measurement point on the Slovak Hungarian border, transport volumes of food products, foodstuffs and iron ore declined compared with 2024. Increases were observed in the transport of mineral oil products, metals, and fertilisers.

Hydrological conditions represented one of the major operational challenges for inland navigation in 2025. Water levels on the Rhine were less favourable than in 2024, with several temporary low water periods, particularly during spring 2025. Although conditions did not reach the severity of the extreme low water years 2018 or 2022, low water periods continued to constrain vessel loading capacity and reduce transport efficiency. In 2025, a significant deterioration in water level conditions was observed across all gauge stations along the Danube, compared with previous years.

Freight rates in tanker shipping on the Rhine remained structurally elevated in 2025. Although fuel costs eased during large parts of the year, long-term cost pressures continued to shape the market. Personnel costs remained particularly high due to shortages of skilled personnel, while repair and maintenance costs, insurance premiums and capital costs also increased substantially compared to pre-pandemic levels. In the dry cargo market, the situation proved more challenging, as cost-adjusted freight rates remained below baseline levels during 2024 and 2025. Overall, the analysis suggests a weak income evolution in the inland navigation industry, particularly in the dry cargo transport.

Inland waterway cargo handling at major seaports reflected a mixed macroeconomic landscape. The Port of Rotterdam handled 141.6 million tonnes in 2025, a slight decrease of -0.2%. The Port of Antwerp-Bruges saw a decrease to 98.7 million tonnes (-3.2%), driven by weaker liquid and dry bulk transport linked to reduced production in the European chemicals sector. The North Sea Port recorded a -4.3% decline to 61.5 million tonnes in 2025. In the Danube region, the Port of Constanța experienced a significant -23.8% drop in 2025, handling 13.1 million tonnes, primarily because transit flows normalised as Ukrainian seaports resumed activities. Additionally, total handling in major traditional Rhine ports fell by -4.3% in 2025.

The European inland fleet comprised 13,263 vessels, with 8,992 registered in the Rhine region and 3,376 in the Danube region. The Rhine dry cargo fleet registered a slight decline in vessel numbers to 6,224 in 2024 but maintained a constant loading capacity of 10.0 million tonnes. The liquid cargo fleet grew to 1,477 vessels with a total capacity of nearly 4.0 million tonnes, confirming a structural trend towards larger tanker vessels. Newbuilding activity rebounded in 2025, with 87 new freight vessels entering the market, including a notable 67 new tanker vessels and 18 dry cargo vessels.

The European river cruise sector continued its expansion in 2025. During the 2025 season, 1.5 million passengers (+8.0% compared to 2024) travelled on European rivers, generating 3.7 billion euro in gross ticket sales (+5.0%). The active river cruise fleet increased to 420 vessels, with 14 new vessels entering the market in 2025. The sector exhibits a positive outlook on both the supply side, with a strong order book of 17 new vessels expected in 2026, and the demand side, with continued growth expected in passenger numbers and revenue. Day-trip passenger transport also continued to play a significant role across Europe, with particularly high passenger volumes recorded in France, the Netherlands, Italy, and along the Danube.

Company and employment data continue to show diverging trends between freight and passenger transport. In 2024, there were 5,477 active IWW freight transport companies in Europe, with 86% registered in Rhine countries. The number of freight transport companies has declined by -9.5% since 2011, and employment in the sector fell by -5.6% to 23,183 persons in 2024. Conversely, passenger transport has seen sustained long-term growth, with the number of companies increasing by +44.5%

since 2011 to reach 5,103 in 2024. Employment in passenger transport has recovered from the pandemic, reaching 29,055 persons employed.

In the short term, the outlook for IWT markets remains constrained by economic and trade realities. Steel demand showed signs of stabilisation for 2025, although newly developed econometric models indicate only a limited recovery in iron ore transport over the coming years, depending on industrial activity and water level conditions. Similarly, the model's results for mineral oil transport confirm a continued structural decline linked to the energy transition, with future transport demand remaining sensitive to water levels and storage incentives in energy markets. The chemical industry expects a challenging year 2026, operating at historically low-capacity utilisation (70-72%). Container transport recovery is threatened by the unpredictable Middle East conflict, which has led to a decrease in global trade growth forecasts for 2026. Over the coming decades, long-term transport demand will be heavily shaped by Europe's ongoing energy transition and decarbonisation efforts.

Looking ahead to 2026, global growth is expected to moderate to between +2.9% and +3.1%, as geopolitical tensions, particularly the conflict in the Middle East, continue to disrupt energy markets and increase trade uncertainty. These developments are expected to put pressure on industrial production and freight demand, creating a more challenging environment for inland navigation. At the same time, some sectors, such as container transport and chemicals, are showing signs of stabilisation, while agricultural transport could continue to benefit from export demand. Nevertheless, inland navigation still faces significant structural challenges, including more frequent low water periods linked to climate change, the ongoing energy transition, and increasing competition from other transport modes. The 2026 annual report provides a detailed overview of these developments and their implications for the future of inland navigation in Europe.







01

MACROECONOMIC CONTEXT AND OUTLOOK

- In 2025, the global economy remained resilient, with global GDP growth reaching +3.4%, supported by favourable financial conditions and strong investment in technology. In the EU, economic growth was more modest (+1.6%) and the OECD projects global GDP growth to moderate to +2.9% in 2026, and the IMF forecasts global GDP growth at +3.1% in 2026.
- Global trade volumes expanded by +5.1% in 2025. However, supply chains continued to undergo structural changes, with increasing trade fragmentation, policy uncertainty and geopolitical tensions affecting international trade flows.
- Commodity markets remained favourable during most of 2025, with lower oil prices reducing transport costs. Towards the end of the year, however, rising energy prices and disruptions linked to the conflict in the Middle East created a more volatile environment for inland shipping, particularly for the chemical and manufacturing sectors.

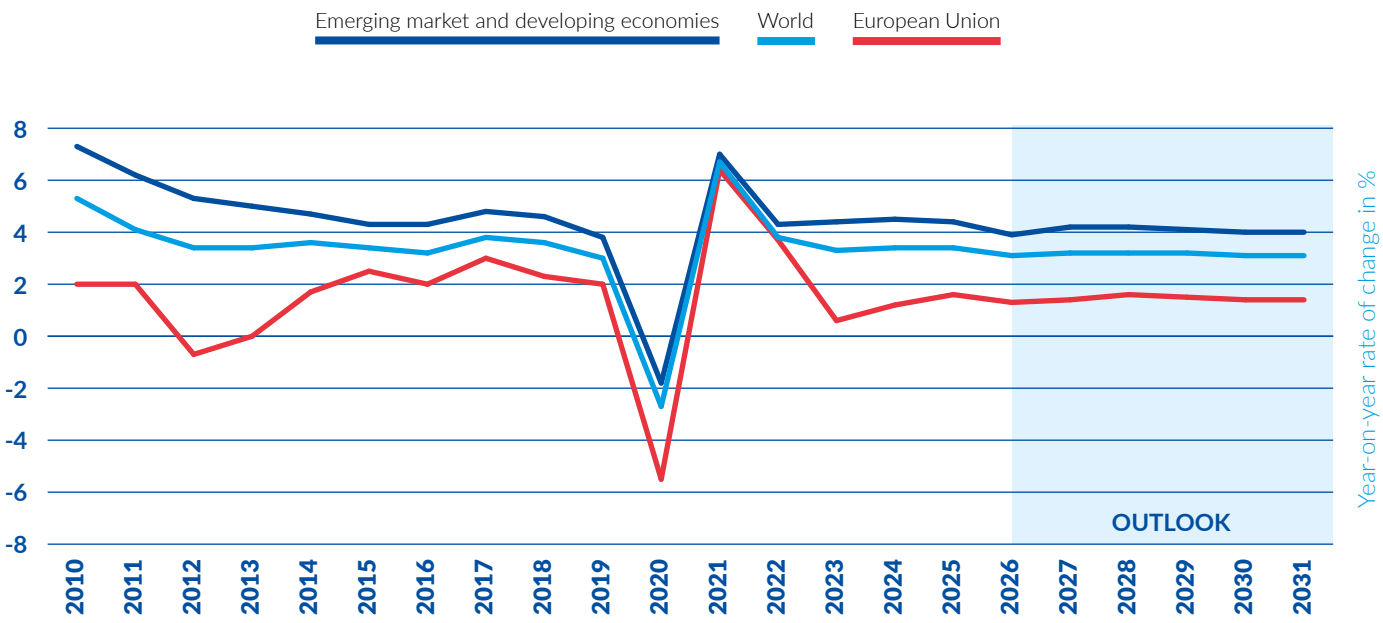
Economic overview

This chapter draws on recent analyses from the International Monetary Fund (IMF) *World Economic Outlook of April 2026*, supplemented by the Organisation for Economic Co-operation and Development (OECD) *Economic Outlook of March 2026*, the United Nations Conference on Trade and Development (UNCTAD) Global Trade Update of March 2026, and the Spring 2026 Economic Forecast of the EC to outline the macroeconomic context and its implications for inland waterway transport.

Throughout 2025, the global economy demonstrated resilience, performing better than initially anticipated. Global GDP growth reached +3.4% in 2025, a performance supported by favourable financial conditions, fiscal support in major economies, and strong investment in technology. At the same time, global inflation remained largely stable, registering at +4.1% for the year, which provided some stability to household purchasing power globally. However, the economic recovery remained uneven across different regions. In the EU, the macroeconomic environment was more modest. The EU recorded an economic growth of +1.6% in 2025 and the euro area of just +1.4% in 2025, while consumer prices grew by +2.1% in the euro area. Areas particularly relevant for Rhine navigation, such as Germany, experienced weak growth of +0.2%, constrained by weak industrial activity and persistent difficulties in its manufacturing sector. The Netherlands fared somewhat better with a real GDP growth of +1.9% in 2025. Meanwhile, Belgium recorded a modest growth of +1.0% during the same year.

According to both the IMF and the OECD, global growth is projected to moderate in 2026. The OECD projects global GDP growth to moderate to +2.9% in 2026, and the IMF forecasts global GDP growth at +3.1%. Both institutions outline the same core drivers behind this downward shift in global prospects: the unpredictable nature of the conflict in the Middle East and the resulting disruptions to energy markets. Higher energy prices are expected to increase business costs and reduce demand. Consequently, the OECD expects headline inflation across the G20 to rise significantly to +4.0% in 2026, while the IMF similarly projects world consumer prices to increase to +4.4%. Furthermore, according to the EC's Economic Forecast, EU GDP growth is projected to slow down to +1.1% in 2026 (+0.9% in the euro area) following an expansion of +1.5% in 2025. Additionally, according to the EC, EU inflation is expected to surge to +3.1% in 2026 before easing down to +2.4% in 2027.

FIGURE 1: **PERCENTAGE CHANGE IN GDP, CONSTANT PRICES**



Source: IMF World Economic Outlook Database, Outlook from April 2026

Trade

Global trade volumes experienced an expansion in 2025, growing by +5.1%[1].
This strong increase was driven in part by rising exports in the technology sector and by companies anticipating their imports early in the year in anticipation of new tariffs and higher prices. This situation carried into early 2026 with the OECD reporting that global manufacturing export orders reached their highest level since November 2021.

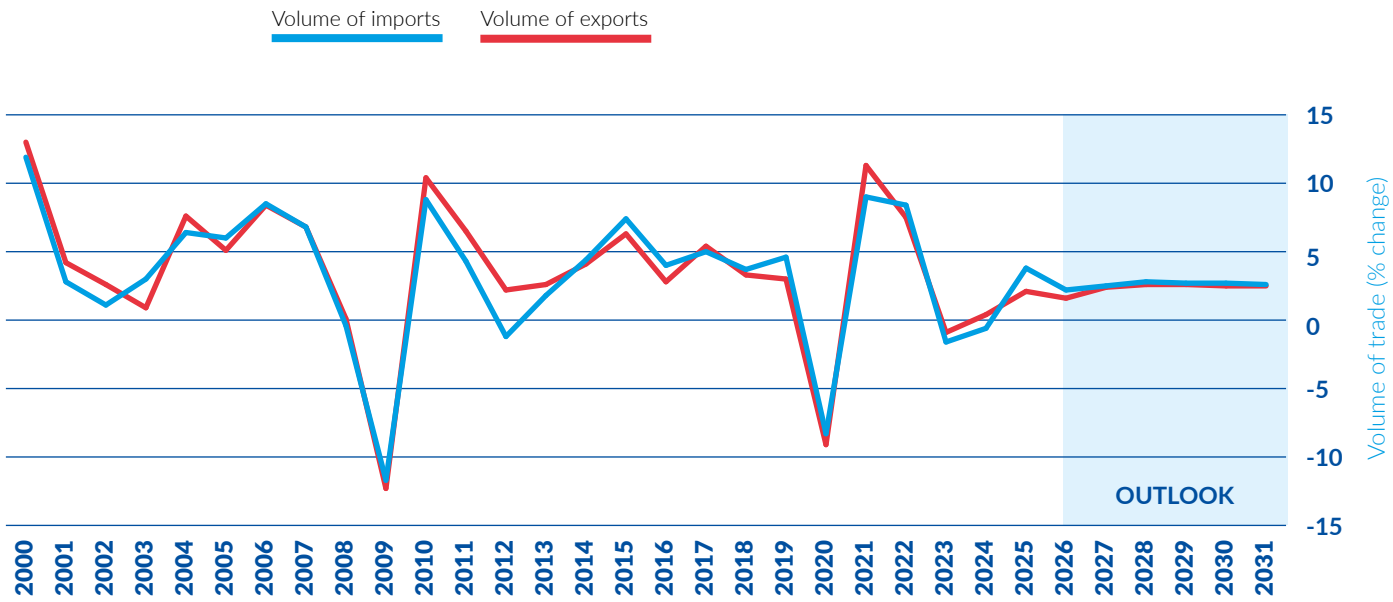
Despite this growth, changes in global supply chains continued throughout 2025. International trade flows saw a reorientation, with shifts in trading relations and a growing fragmentation of markets. For the European inland waterway transport sector, while the overall increase in global trade volumes supported hinterland container traffic, the structural shifts in supply chains and the weak domestic demand in key European economies kept industrial cargo flows limited.

According to the UNCTAD Global Trade Update, the structural shifts in global trade are being driven by a transition away from non-discriminatory trade policies toward differentiated integration and bilateral agreements. Major economies are increasingly relying on unilateral measures, such as export controls, to advance industrial policy objectives and national security priorities. This environment has increased trade policy uncertainty, increasing costs for businesses and making market access less predictable for producers and investors.

[1] *Source: International Monetary Fund (IMF), World Economic Outlook 2026, Chapter 1, available on the IMF website*

This situation is being reinforced by changing tariff regimes and disruptions in global logistics. In particular, the ongoing conflict in the Middle East poses a serious threat to global supply chains. According to the OECD and the International Energy Agency, a near disruption in shipments through the Strait of Hormuz would affect around 25% of global seaborne oil trade and nearly 20% of global liquefied natural gas trade.

FIGURE 2: **PERCENTAGE CHANGE IN VOLUME OF IMPORTS AND EXPORTS**

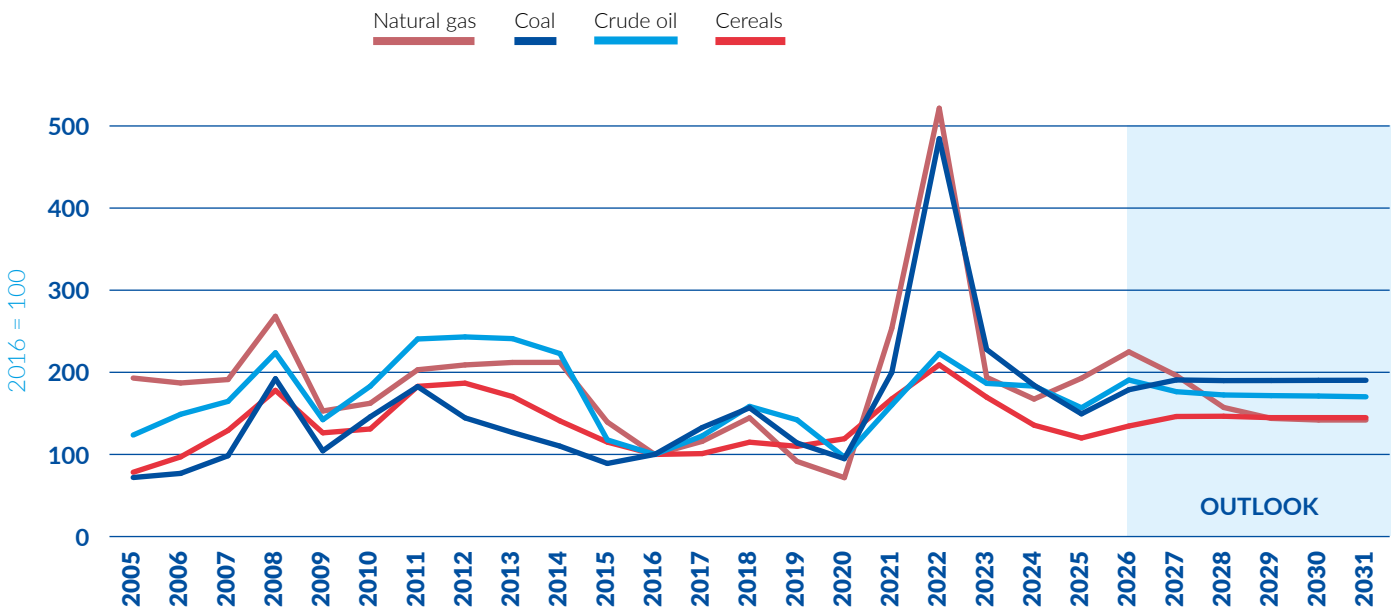


Source: IMF World Economic Outlook Database, Outlook from April 2026

Commodity prices

During most of 2025, commodity markets offered a favourable environment for the inland waterway transport sector and for the market it serves. Indeed, the earlier months provided substantial relief to vessel operators by lowering fuel and operational costs. However, towards the end of the year, energy prices (specifically crude oil and natural gas) rose, and global supply chains were disrupted again. These late-year developments reversed part of the earlier cost relief and resulted in higher and less predictable operating costs, particularly for the European chemical and manufacturing industries that rely on inland shipping.

FIGURE 3: **COMMODITY PRICE INDICES** (2016 = 100)



Source: IMF World Economic Outlook Database, Outlook from April 2026

Crude oil

Crude oil prices were generally low for most of 2025, averaging 67.74 US dollars per barrel for the year, representing a -14.4% drop compared to the year 2024. This decline provided substantial relief to inland waterway transport operators by lowering their fuel expenses. However, this period of relief was abruptly interrupted in the latter half of the year. Between August 2025 and March 2026, crude oil prices spiked by +57.6%, eventually reaching 105.8 US dollars per barrel, as military conflicts in the Middle East disrupted shipments through the Strait of Hormuz and threatened critical global shipping routes.

Gas and coal

Natural gas prices followed a trajectory similar to oil, moving from relatively stable prices to price increases late in 2025 due to supply disruptions. As from August 2025, prices at the European Title Transfer Facility (TTF) trading hub rose by +61%. In Asia, liquefied natural gas (LNG) markets experienced a sharper increase, rising by +80.6% from August 2025 onward as a result of the Middle East disruptions. Conversely, United States Henry Hub prices increased only slightly, rising by +4.9% to 3 US dollars per million British thermal units, largely because export facilities were already operating near maximum capacity, preventing the diversion of domestic gas to international markets.

Agricultural commodities and foodstuff

Agricultural commodities presented a mixed picture during 2025. During the first half of the year, food prices were weak, with cereal prices dropping to historical lows. However, the IMF's broader food and beverages price index rose by +4.7% starting in August 2025, driven primarily by rising food prices that outweighed declines in beverage costs. Cereal prices began rebounding toward the end of the year due to emerging weather concerns in key producing regions. Looking ahead, in contrast to beverage prices, food prices are expected to increase by +6.0% in 2026.

Economic sentiment - Consumer confidence

Consumer confidence provides an indication of developments in households' consumption and savings. An indicator above 100 in the Economic Sentiment Indicator (ESI) signals a boost in consumers' confidence in the future economic situation and points to consumers being more inclined to spend money. Values below 100 indicate a pessimistic attitude towards future developments in the economy, possibly resulting in a tendency to save more and consume less. Consumer confidence has an impact on the transport of containers, with high consumer confidence leading to more container transport.

Throughout 2025, the ESI for the EU exhibited a trajectory of gradual recovery, starting at 95.8 in January and climbing to 97.1 by December. While the index remained below the long-term baseline of 100, the steady month-over-month increases - particularly in the final quarter - indicated an improvement in economic sentiment across the Member States. By the close of 2025, the euro area (20 countries) followed a similar trend, ending the year at 96.7, reflecting a gradual improvement in confidence in the industrial and service sectors. For the first quarter of 2026, the EU-27 indicator reached a high of 99.0 in January before falling to 93.5 by April. This decline in sentiment could be attributed to the economic uncertainty associated with ongoing geopolitical conflicts and the expectations of rising prices across business sectors.

Main consequences for Rhine and Danube navigation in brief

Overall, the macroeconomic environment in 2025 presented a mixed but generally positive landscape for Rhine and Danube navigation before conditions deteriorated later in the year. The inland waterway sector benefited from the -14.4% decline in average crude oil prices, which reduced operating costs for fuel during large parts of the year. Despite the +5.1% expansion in global trade volumes, container transport on European inland waterways recorded slight declines in tonnes and TKM in 2025. Nevertheless, container traffic measured in TEU increased marginally, largely driven by developments in the Netherlands. At the same time, the sector faced persistent challenges. Germany's weak economic performance (+0.2% GDP growth) limited the demand for traditional industrial bulk transport along the traditional Rhine corridor. By contrast, the Dutch Rhine region benefited from the somewhat stronger economic performance in the Netherlands (+1.9%) and the more moderate growth in Belgium (+1.0%), helping to support more stable transport activity. By the end of the year 2025, the sudden rises in natural gas prices, together with renewed supply chain disruptions, increased operating costs and created more difficult conditions, especially for the European chemical and manufacturing industries that generate crucial cargo for inland shipping. Looking ahead to 2026, the outlook for inland navigation remains uncertain and constrained by the new economic and trade realities.







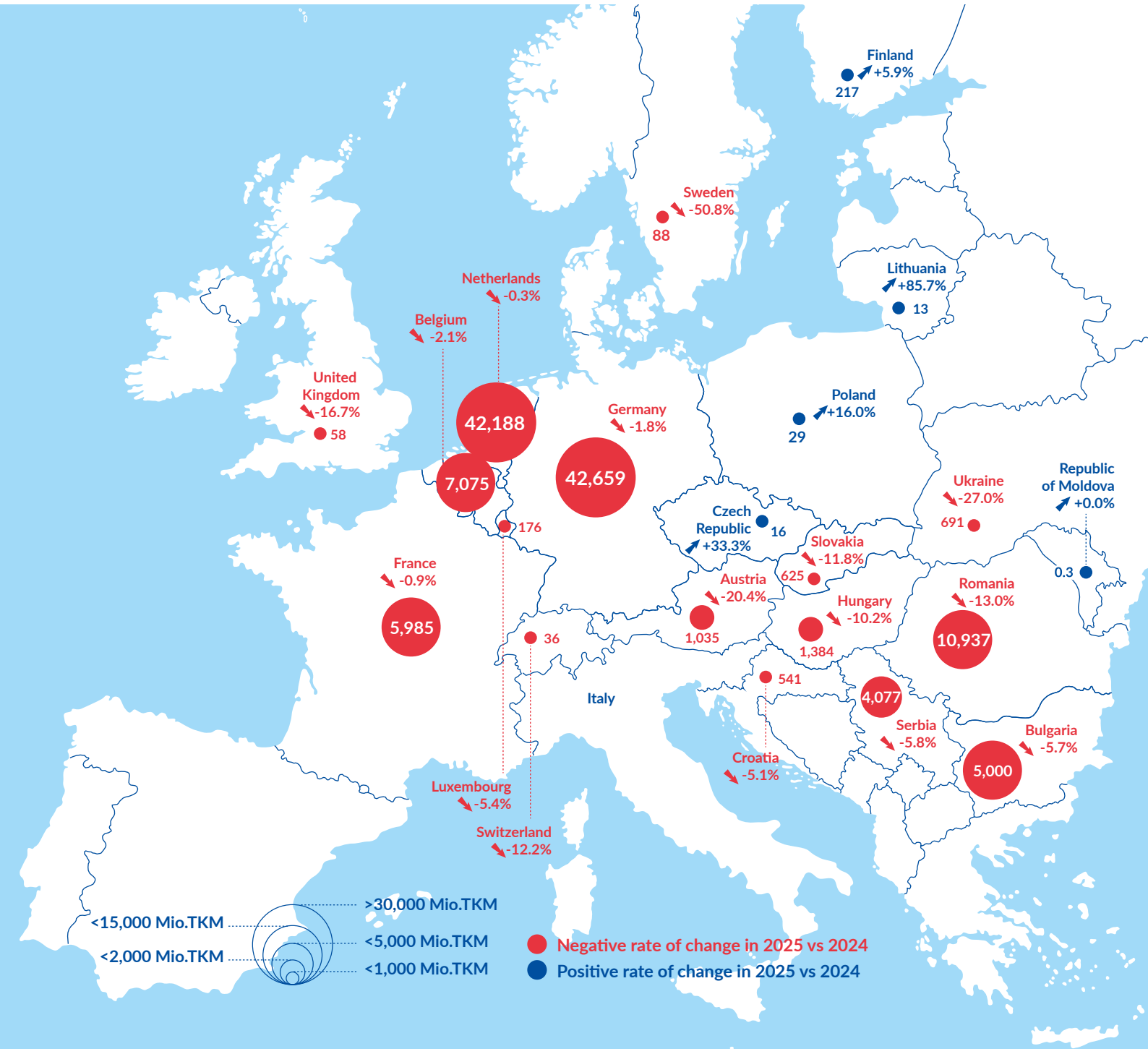
02

FREIGHT TRANSPORT ON INLAND WATERWAYS

- **Inland waterway freight transport performance in Europe (EU-27 plus Switzerland, Serbia, the Republic of Moldova, and Ukraine) reached 122.7 billion TKM in 2025, representing a decrease of -3.3% compared to 2024. Rhine countries accounted for 80.0% of total transport performance, while Danube countries represented 19.8% (including Ukraine).**
- **Cargo transport on the entire Rhine amounted to 281.9 million tonnes in 2025, a decrease of -0.9% compared to 2024. Most cargo segments recorded lower volumes, while coal (+8.1%), metals (+1.6%), and agricultural products (+1.4%) registered increases.**
- **On the Danube, freight volumes declined in 2025 due to weak economic conditions, less favourable water levels and the continued impact of the war in Ukraine. Significant decreases were observed for agricultural products, food products and iron ore transport.**

TRANSPORT IN EUROPE
AND BY COUNTRY

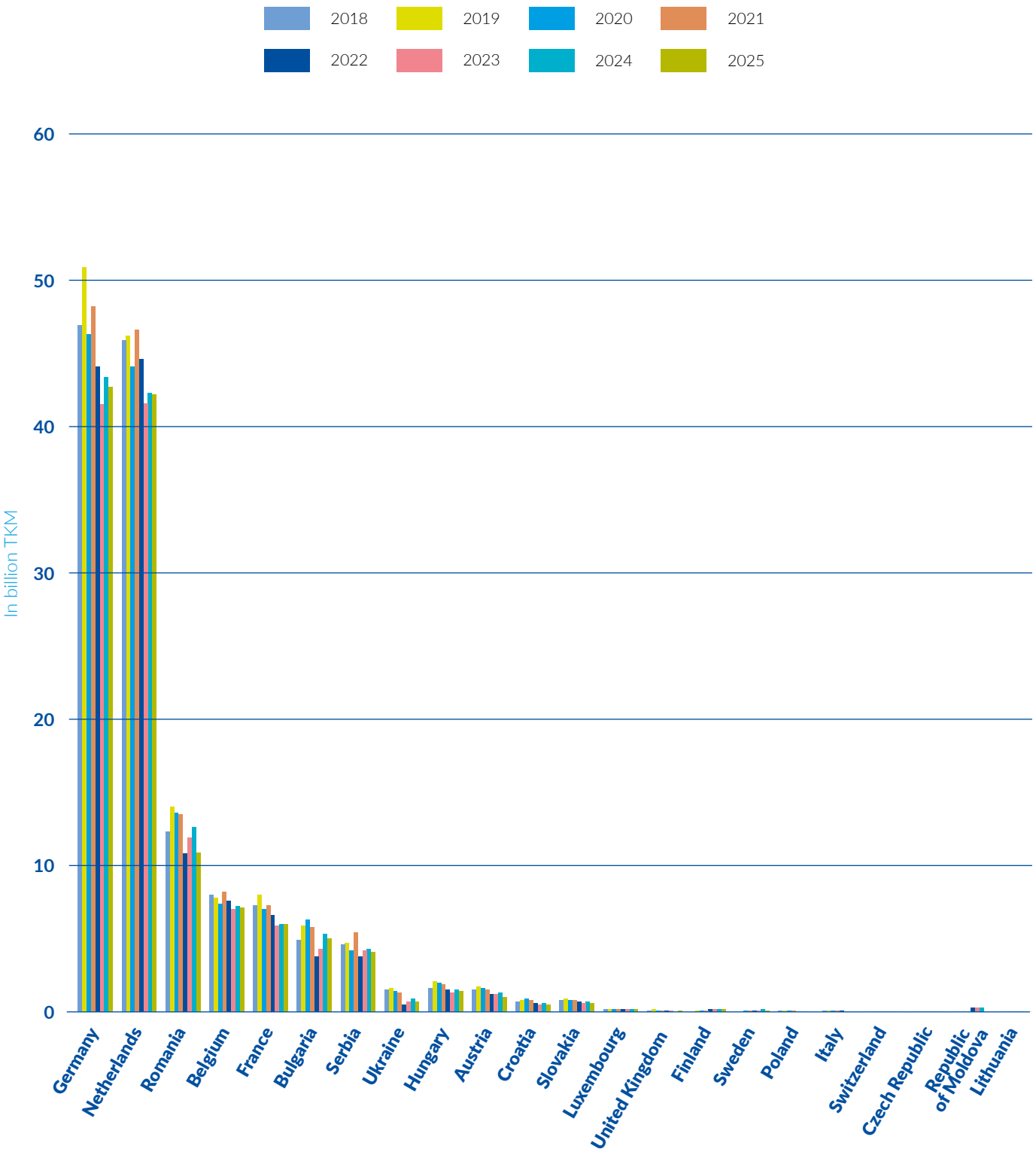
TRANSPORT PERFORMANCE IN IWT ON THE NATIONAL TERRITORY OF EACH COUNTRY IN EUROPE – COMPARISON BETWEEN 2024 AND 2025 (IN MILLION TKM) *



Sources: Eurostat [iww_go_atygo] and [iww_go_qnave], OECD (Switzerland, Ukraine and the Republic of Moldova), UK Department for Transport

** The share of IWT performance in Europe in 2025 for Italy is not available.*

FIGURE 1: **IWT TRANSPORT PERFORMANCE BETWEEN 2018 AND 2025 IN MAIN EUROPEAN IWT COUNTRIES** (IN BILLION TKM) *



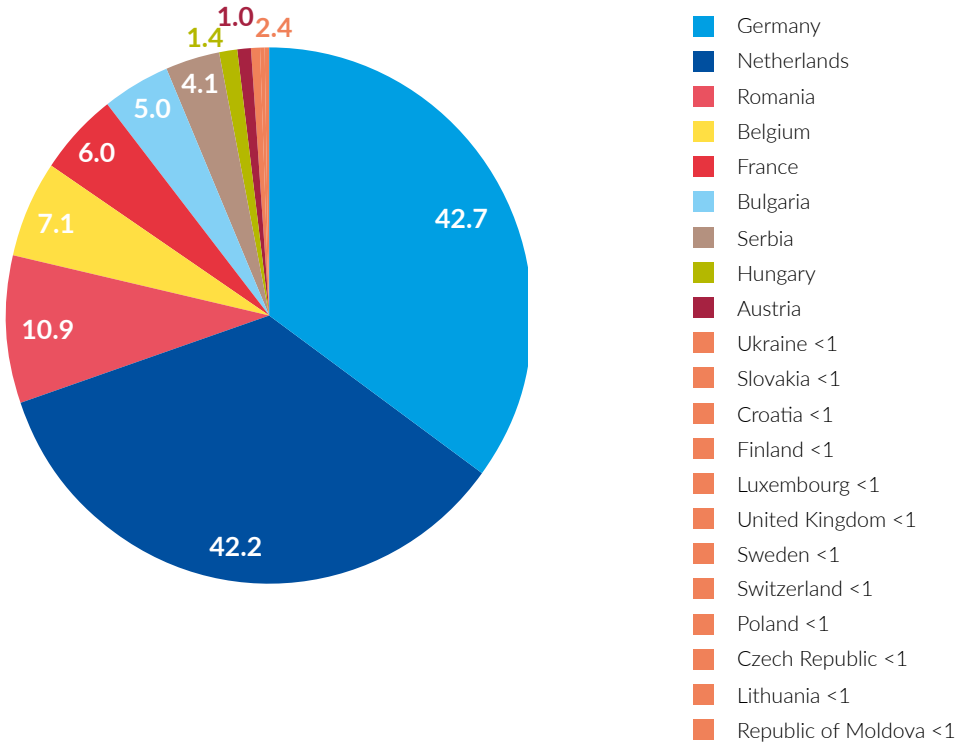
Sources: Eurostat [iww_go_atygo] (for most countries) and [iww_go_qnave] (Serbia), OECD (Switzerland, Ukraine and the Republic of Moldova), UK Department for Transport (UK)

** The values for Italy (2025) and Finland (2018) are not available.*

Note: for the UK, IWT is defined as non-seagoing traffic which takes place entirely within inland waters and river-sea transport (seagoing vessels navigating partly at sea and on inland waterways). In this figure, for the sake of consistency with the methodology used by Eurostat, only the transport performance related to the traffic taking place wholly within inland waters is reported (amounting to 58 million TKM in 2025). However, it is worth noting that most of IWT in the UK consists of river-sea transport (amounting to almost 1.1 billion TKM in 2025). Overall, the IWT performance in the UK is reported to reach almost 1.2 billion TKM in 2025.

In 2025, in terms of inland navigation for Europe (EU-27 plus Switzerland, Serbia, Ukraine and the Republic of Moldova), freight transport performance decreased by -3.3% compared to 2024, reaching 122.7 billion TKM. Rhine countries (Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland) accounted for 80.0% of total inland waterway transport performance in the EU-27, plus Switzerland, Serbia, Ukraine and the Republic of Moldova. The share for Danube countries was 19.8%.

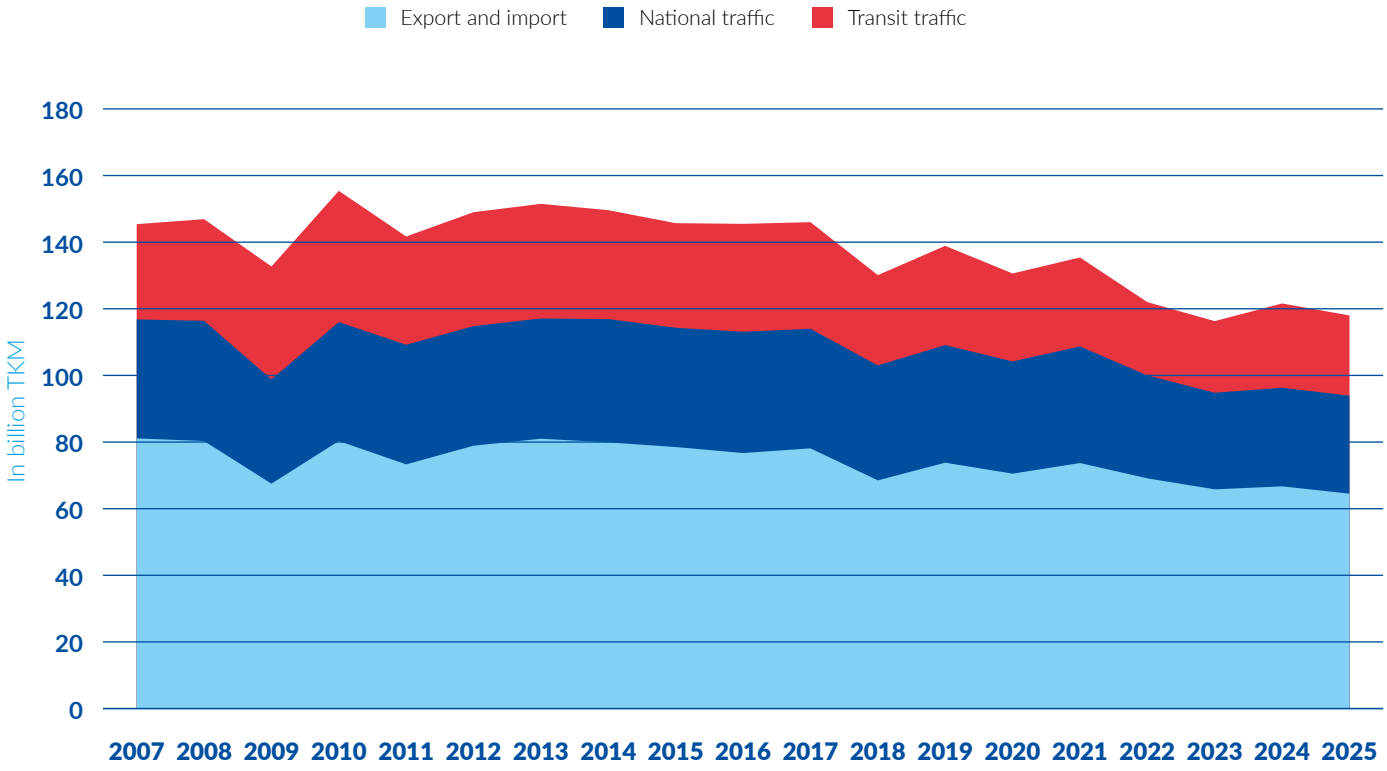
FIGURE 2: **INLAND WATERWAY TRANSPORT PERFORMANCE IN EUROPEAN COUNTRIES IN 2025** (IN BILLION TKM) *



Sources: Eurostat [iww_go_atygo] (for most countries) and [iww_go_qnave] (Serbia), OECD (Switzerland, Ukraine and the Republic of Moldova)
** Data for Italy were not available for 2025.*

In 2025, 458.4 million tonnes of goods were transported on EU-27 waterways (-3.2% compared to 2024). From the total inland waterway transport performance in the EU-27 in 2025, which amounted to 117.97 billion TKM, a decrease of -3.0% compared to 2024 (EU-27 only), 75.1% represented transport that crossed a border in one way or another – whether it be in the form of export, import or transit traffic. Transit traffic taken separately had a share of 20.4% and export and import traffic had a share of 28.7% and 26.0%, respectively.

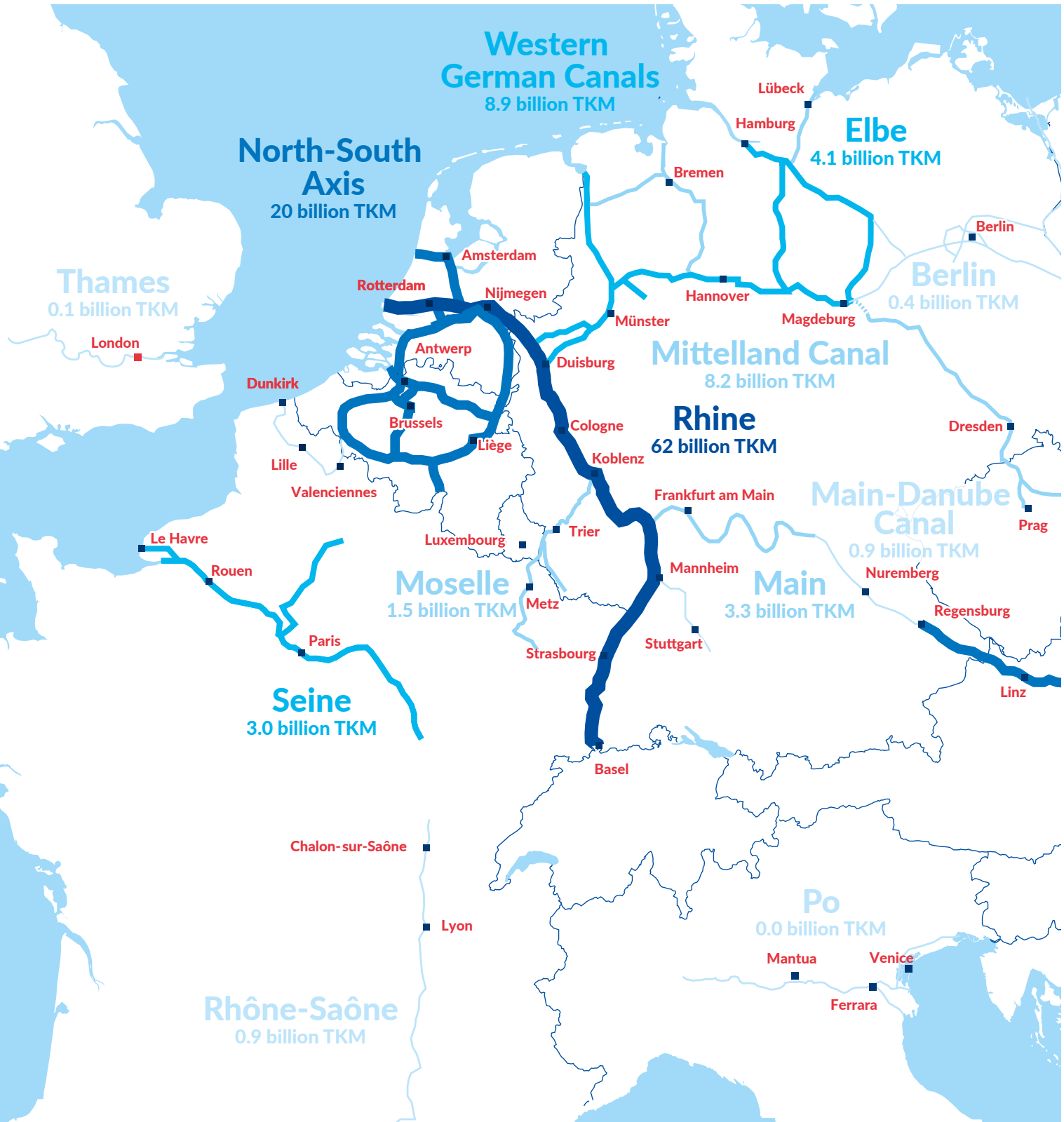
FIGURE 3: **YEARLY INLAND WATERWAY TRANSPORT PERFORMANCE IN THE EU-27** (IN BILLION TKM) *



Source: Eurostat [iww_go_atygo]
** EU-27 according to member countries in 2025*



TRANSPORT
BY MAIN EUROPEAN RIVER BASINS



TRANSPORT PERFORMANCE IN MAIN EUROPEAN RIVER BASINS (IN BILLION TKM)



Sources: figures for the Po are from 2022, figures for the Thames are from 2023, the others are from 2024. CCNR analysis based on Destatis, VNF, Eurostat [iww_go_atygo], UK Department for Transport.



RHINE BASIN



Cargo transport on the entire Rhine:

281.9 million tonnes in 2025

Growth rate 2025/2024:

-0.9%

Sources: Destatis (Emmerich), WSV, VNF, Moselle Commission, Swiss Rhine Ports

Transport volume and transport performance on the entire Rhine (from Basel to the North Sea)

In previous annual reports, this chapter focused solely on volumes transported along the traditional Rhine, namely the Rhine from Basel to the German-Dutch border. From 2024 onwards, reporting includes transport volumes on the entire Rhine from Basel to the North Sea (including the link to Antwerp via the Rhine-Scheldt link). In addition, in 2024, more refined data provided by VNF on the parts of the upper Rhine regarding traffic between French Rhine ports, and between Swiss and French Rhine ports, were incorporated for the years 2014 onwards[2].

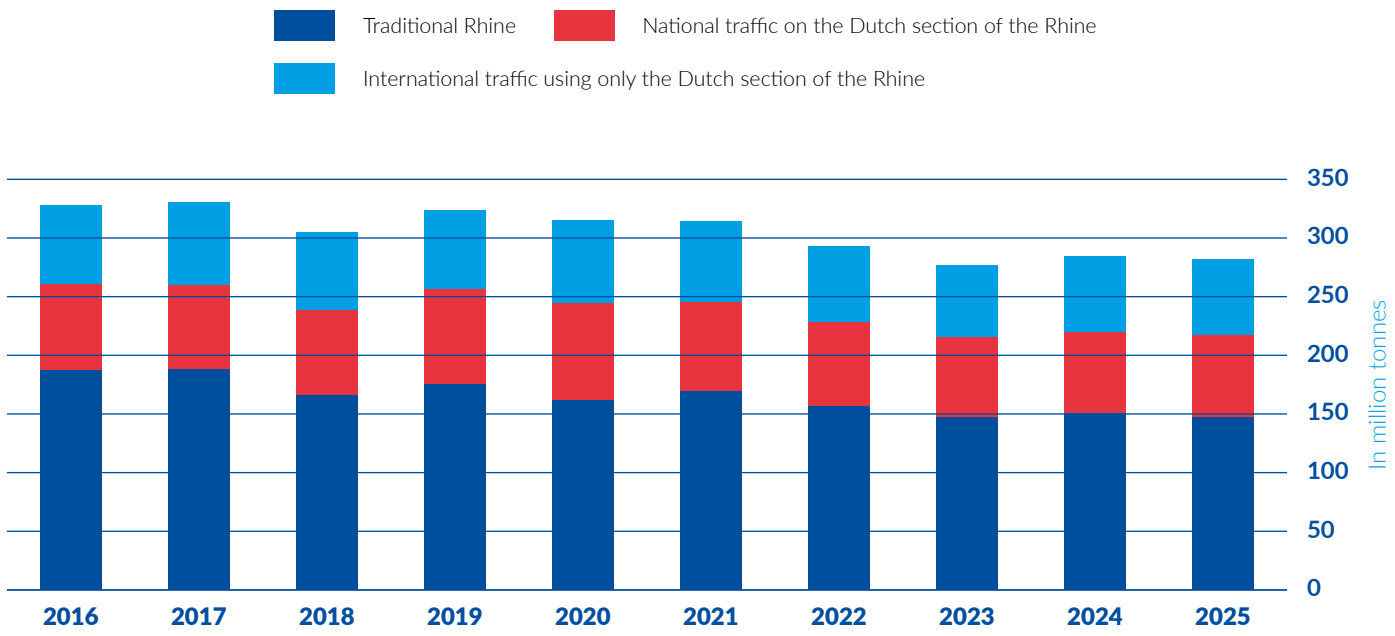
Cargo transport on the entire Rhine (from Basel to the North Sea) amounted to 281.9 million tonnes in 2025, compared to 284.6 million tonnes in 2024. The result in 2025 was -0.9% lower than in 2024.

- The traditional Rhine (from Basel to the German-Dutch border) amounted to 147.3 million tonnes in 2025, compared to 150.2 million tonnes in 2024 and 146.8 million tonnes in 2023; the result in 2025 was -1.9% below the result of 2024.
- The lower Rhine in the Netherlands (from the German-Dutch border to the North Sea, including the link to Antwerp via the Rhine-Scheldt link[3]) amounted to 230.8 million tonnes, compared to 234.0 million tonnes in 2024. The result in 2025 was -1.4% below the result of 2024.

When calculating the total volume of goods transported on the entire Rhine, all steps were taken to avoid the double counting of volumes transported on both stretches. This is why the volumes on these two stretches cannot simply be added together, as certain volumes are transported on both stretches.

[2] Close to 25% of all inland waterway transport in France takes place on the French Rhine.
[3] Waterway sections considered: Waal, Hollands Diep, Boven Merwede, Oude Maas, Dordtsche Kil, Beneden Merwede, Lek, Nieuwe Maas, Noord, Nieuwe Merwede, Nieuwe Waterweg, Amsterdam-Rijnkanaal, Rijn-Schelde-Verbinding, Hartelkanaal, IJssel.

FIGURE 4: **FREIGHT TRANSPORT VOLUME** (IN MILLION TONNES) **ON THE ENTIRE RHINE ***

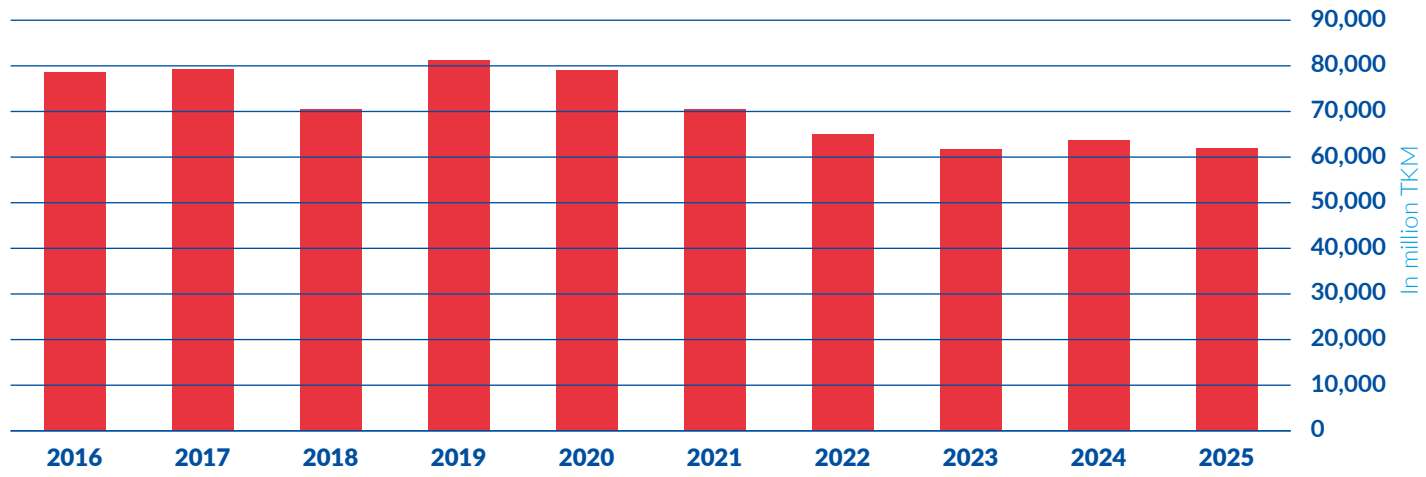


Sources: CCNR analysis based on Destatis, VNF (data for the traditional Rhine) and Rijkswaterstaat (data for the lower Rhine in the Netherlands)

** Note that the traditional Rhine data capture all cargo transport on the Rhine in Germany as well as more refined data for the parts of the upper Rhine reflecting traffic between French Rhine ports and between Swiss and French Rhine ports. Note that the latter represent less than 1% of all transport volumes on the entire Rhine.*

The declining trend that is observed for the traditional Rhine can be attributed to a combination of factors: 1) the decrease in German industry production since 2018; 2) recurring low water periods (especially in 2015, 2018, 2022); 3) a certain deindustrialisation following the financial crisis of 2008/2009.

FIGURE 5: **TRANSPORT PERFORMANCE** (IN MILLION TKM) **ON THE ENTIRE RHINE**



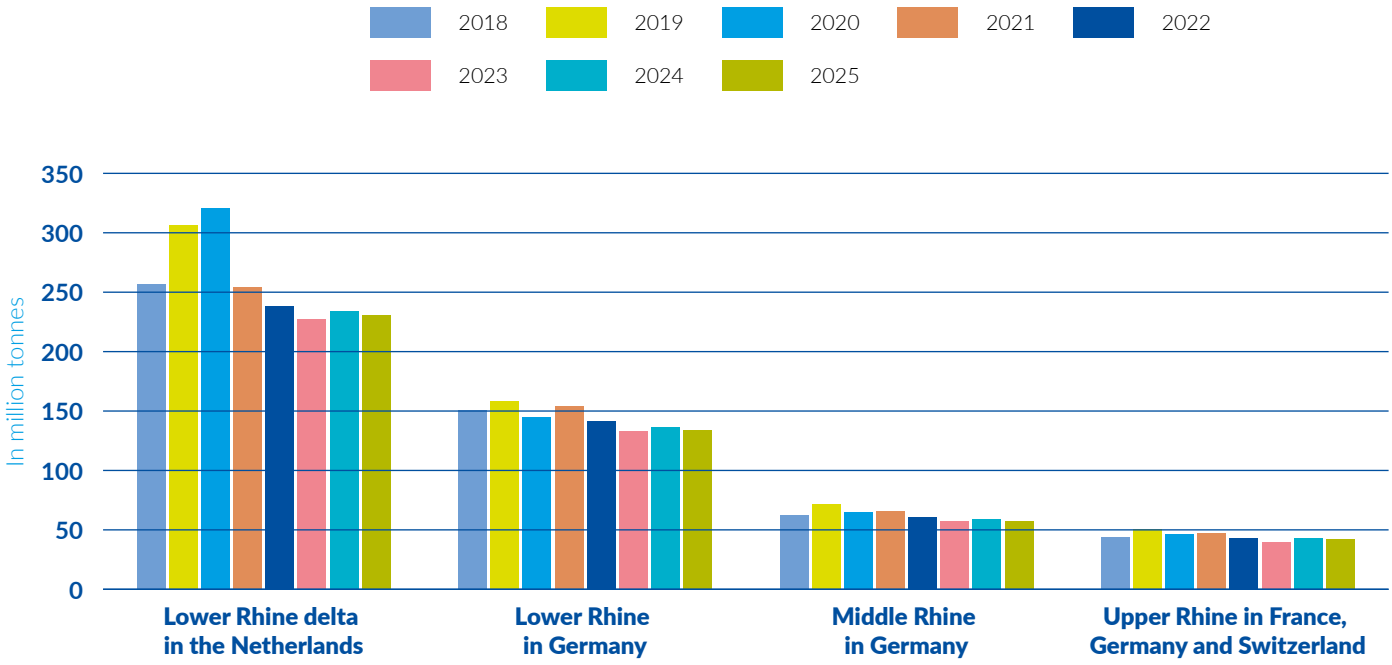
Sources: CCNR analysis based on Destatis, VNF (data for the traditional Rhine) and Rijkswaterstaat (data for the lower Rhine in the Netherlands)

Transport activity on different stretches of the Rhine, on Rhine affluents and on canals linked to the Rhine

In terms of geographical structure, transport demand is higher on the lower Rhine compared to the middle and upper Rhine, as illustrated in figure 6. This higher transport demand on the lower Rhine can be explained by several reasons:

- Dense delta network in the Netherlands and inter-port traffic (Rotterdam, Antwerp, Amsterdam, North Sea Port) connecting important petroleum and chemical industrial hubs as well as a high number of container terminals.
- Important steel and petroleum industrial hub in the lower Rhine region in Germany.
- High fairway depths on the lower Rhine.

FIGURE 6: **FREIGHT TRANSPORT ON THE DIFFERENT STRETCHES OF THE RHINE** (IN MILLION TONNES) *



Sources: CCNR analysis based on Destatis (lower, middle and upper Rhine in Germany), VNF (upper Rhine in France and Switzerland) and Rijkswaterstaat (lower Rhine delta in the Netherlands)

** To avoid double counting, the volumes on the different stretches of the Rhine cannot be added together, as certain volumes are present on several Rhine stretches.*

Rhine transport by cargo segment

In terms of global cargo transport volumes for the entire Rhine, the segments of mineral oil products, chemicals and sand, stones, gravel, are the top three contributors.

FIGURE 7: **CARGO TRANSPORT ON THE ENTIRE RHINE * BY TYPE OF GOODS** (IN MILLION TONNES) **



Sources: CCNR analysis based on Destatis, VNF and Rijkswaterstaat
** Entire Rhine = Rhine from Rheinfelden (CH) to the North-Sea (including link to Antwerp via the Rhine-Scheldt link)*
*** For containers: net-weight of goods in containers*

The following table gives an overview on key indicators/influencing factors that are important for the explanation of the evolution of cargo transport on the Rhine for the particular goods' segments.

Cargo segment	Indicator/influencing factor	Growth/Decline of the indicator/influencing factors (2025/2024)
Transport of mineral oil products	Long run trend, seasonal effects, gasoil price expectations, hydraulicity	Long run trend on the traditional Rhine is -0.7% per year. Hydraulicity: more low water days in 2025 compared to 2024; winter temperature in January and February above long-term average; backwardation[4] building up over the entire year leading to less storage and transport.
Transport of chemicals	Chemical production, hydraulicity	DE: -3.4%; FR: -3.4%; NL: -4.8%; BE: -2.4%. Hydraulicity: more low water days in 2025 compared to 2024
Transport of sand, stones, gravel	Construction output, hydraulicity	DE: -2.0%; FR: -3.7%; NL: +1.5%; BE: +0.1%. Hydraulicity: more low water days in 2025 compared to 2024.
Transport of iron ore and metals	Steel production, hydraulicity	DE: -9.0%. Hydraulicity: more low water days in 2025 compared to 2024.
Transport of container	Maritime container throughput especially Rotterdam and Antwerp, hydraulicity, logistical inefficiencies	Gross weight of goods handled in maritime containers in the port of Rotterdam was -1.9% lower in Q1-Q3 2025 than in Q1-Q3 2024; in the port of Antwerp this was +0.7% higher in 2025 than in 2024. Hydraulicity: more low water days in 2025 compared to 2024; congestion in main European container ports in 2025, fuelled also by strikes.
Transport of coal	Use of hard coal in the steel industry (61%), in the electricity sector (34%) and in the heating sector (5%), coal prices, hydraulicity	The use of hard coal for electricity production in Germany increased by +10.9%, the use in steel production decreased by -7.7%, the use in the heating market increased by +2.2%, coal import prices were -19.5% lower in 2025 than in 2024 and -32.8% lower than in 2023.
Transport of agribulk and food products	Harvest results in France and Germany, hydraulicity, trade	Excellent yields in France. Hydraulicity: more low water days in 2025 compared to 2024. Trade: increased exports from France to the EU and third countries.

Sources: CCNR analysis based on data from Eurostat [sts_inpr_q] Manufacture of chemicals and chemical production, [apro_cpsh1] Production in main cereals, [sts_copr_a] Production in construction, [mar_qg_qm_pwhc] Gross weight of goods in containers handled in each port and based on data provided by the German Steel Federation, the German Federal Waterways and Shipping Administration (WSV), the German Federal Institute of Hydrology (BfG), German Meteorological Service (temperature data), Investing.com London (gasoil spreads), German Working Group on Energy balances (coal statistics), Association of German Coal importers (VDKI) (on the share of coal used in different sectors, Destatis (coal prices), VNF.

[4] *Backwardation is a market situation where future prices are lower than current prices, reducing the incentive to store commodities over time.*

The mineral oil segment is driven by a combination of factors (see also chapter 8, short-term outlook). Next to hydraulicity, the transport is influenced by a negative long run trend which is present on the traditional Rhine. Other important influencing factors are seasonal effects regarding heating oil demand (in autumn and winter) and price expectations for gasoil that affect the incentive for storage of mineral oil products (triggering an increase or a decrease of storage in the Rhine hinterland and related transport demand).

In 2025, all of these factors pointed to a decrease in mineral oil transport:

- More low water days (in particular in spring 2025) led to physical limitation of transport.
- Winter temperatures were above the average (compared to reference period 2003-2025) resulting in less heating oil demand in winter.
- Actual gasoil prices were higher than future prices (London Gas Oil futures market), showing a positive spread ('backwardation') for the entire year which reduced incentives for storing heating oil in the hinterland.

Compared to the traditional Rhine, the transport on the Dutch Rhine in the ARA region[5] is also driven by additional influencing factors: 1) bunkering of seagoing vessels by inland vessels; 2) blending of fuel for exports towards overseas destinations via ARA seaports[6]. These activities modify the negative trend on the traditional Rhine positively.

Two other goods segments in Rhine transport are influenced by long run trends or factors: iron ore (see chapter 8, short-run outlook) and container.

- Iron ore transport was negatively affected by the financial crisis 2008/2009, and volumes are systematically lower (-25%) since this crisis. The crisis seems to have acted as a catalyst for deindustrialisation.
- Decreasing trend observed in recent years for container transport driven by several influencing factors.

The reasons for the strong increase in coal transport in 2025 are a drop in the electricity generation by wind onshore: -5%, biomass: -4%, hydraulic power: -24% in Germany in 2025, combined with low coal prices[7]. The strong drop in hydraulic electricity generation was due to climatic factors (draughts). Hard coal had to substitute these reductions so that its use in gross electricity generation increased by +11%. This has led to a sharp increase in coal transport promoted by falling coal prices, despite the decline in the use of coal in steel production.

Regarding agricultural products, there has been a sharp increase (+30%) in the transport of agricultural products registered at the lock of Gambsheim on the upper Rhine, compared with 2024. This increase was notably bolstered by excellent yields and a resurgence in exports to the European Union and third countries. This trend thus confirms the strategic role of inland waterway transport for the cereals sector[8]. But for the entire Rhine, the increase in agricultural products and food products taken together was only marginal.

[5] ARA = Amsterdam, Rotterdam, Antwerp
[6] The reason for this activity is an imbalance between refinery production of fuels and fuel demand in western Europe. Due to the long-term decrease in fuel demand in Europe, refinery output is more and more orientated towards exports to overseas destinations. For refineries in the Dutch and German Rhine region, an increase in transport towards ARA ports can be noted.
[7] Source: AG Energiebilanzen e.V. (German Working Group on Energy balances)
[8] Source: Voies Navigables de France (VNF), En 2025, envolée des trafics céréaliers (+30 %) et record inédit des croisières sur le Rhin (article from 28.04.2026 and last consulted on 04.05.2026), available on the VNF website.

Container transport on the Rhine

Container transport on the Rhine is impacted by a combination of influencing factors. One important factor is maritime container throughput in the seaports (in particular Rotterdam and Antwerp). A second influencing factor is logistical efficiency of IWT, which is in particular related to the transshipment of inland vessels in seaports, and a third factor is the effect of low water.

Maritime container handling in ARA ports: for instance, the port of Rotterdam where, after a serious drop in 2022, gross weight of goods in containers handled in the port stagnated over three years (2023, 2024 and 2025). Within the first three quarters of 2025, there was only a small decrease of -1.9% compared to Q1-Q3 2024 (based on tonnes)[9]. The reason for the drop and the stagnation in container throughput is the Russian war of aggression against Ukraine, which caused an increase in European energy prices, reducing purchasing power, and consequently, private consumption. As containers transport a great deal of consumer goods, this has an impact on volumes.

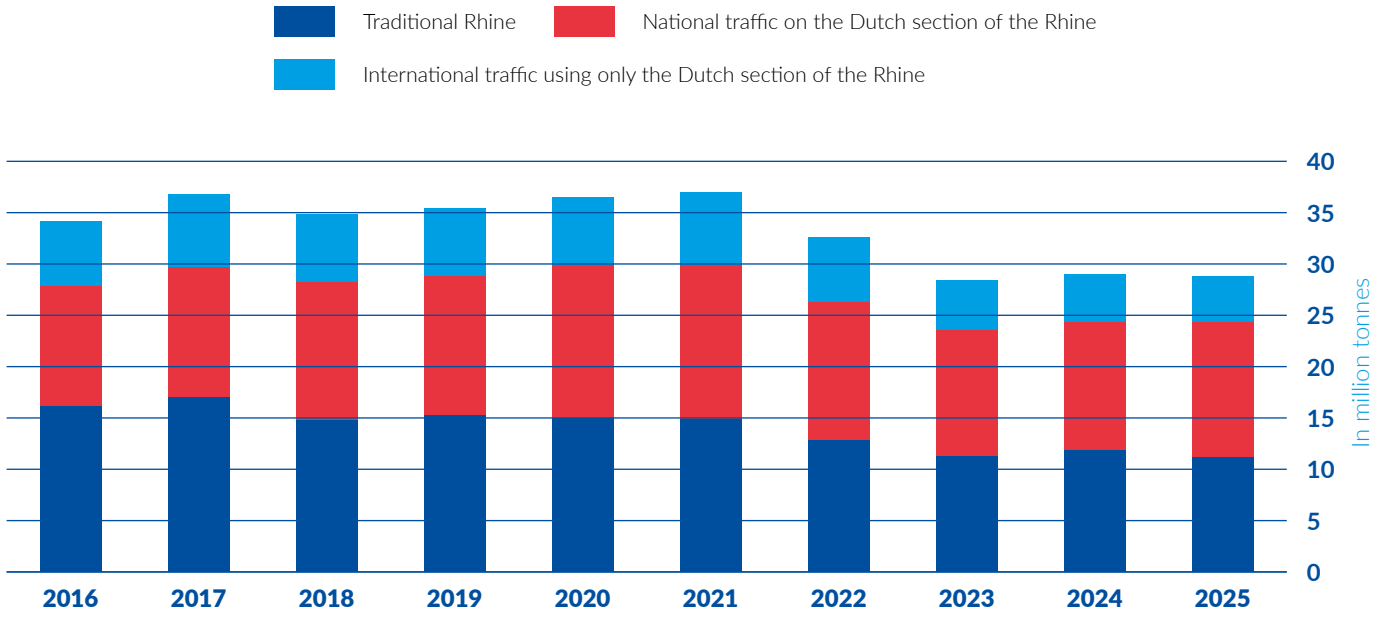
Permanent effect of low water: a comparison between maritime container throughput in the port of Rotterdam and container transport on the traditional Rhine (both series in tonnes) shows that the close relationship of the two variables was disrupted in Q3 and Q4 2018. In this half year, a strong low water period had a significant negative impact on container transport on the Rhine. Also, the 2022 low water period led to a renewed divergence between the Rhine data and the maritime data. These data suggest that certain severe low water periods have a long-term effect, due to modal shift towards railways.

Logistical efficiency: congestion and long waiting times for processing inland barges at container terminals in seaports is a structural problem. It is caused by the priority given to increasingly larger seagoing vessels and weighs on the reliability and the competitive position of inland container barging[10].

The result measured in million tonnes, for container transport on the entire Rhine (from Basel to the North Sea) in 2025 was 28.9 million tonnes, which meant more or less stagnation (-0.3%). The results vary depending on the section of the Rhine in question: on the traditional Rhine, container transport was -4.4% lower than in 2024. On the Dutch section of the Rhine, national container traffic showed an increase of +4.7%, confirming the upward trend of national container transport in the Netherlands. But international traffic using only the Dutch section of the Rhine decreased by -3.6%.

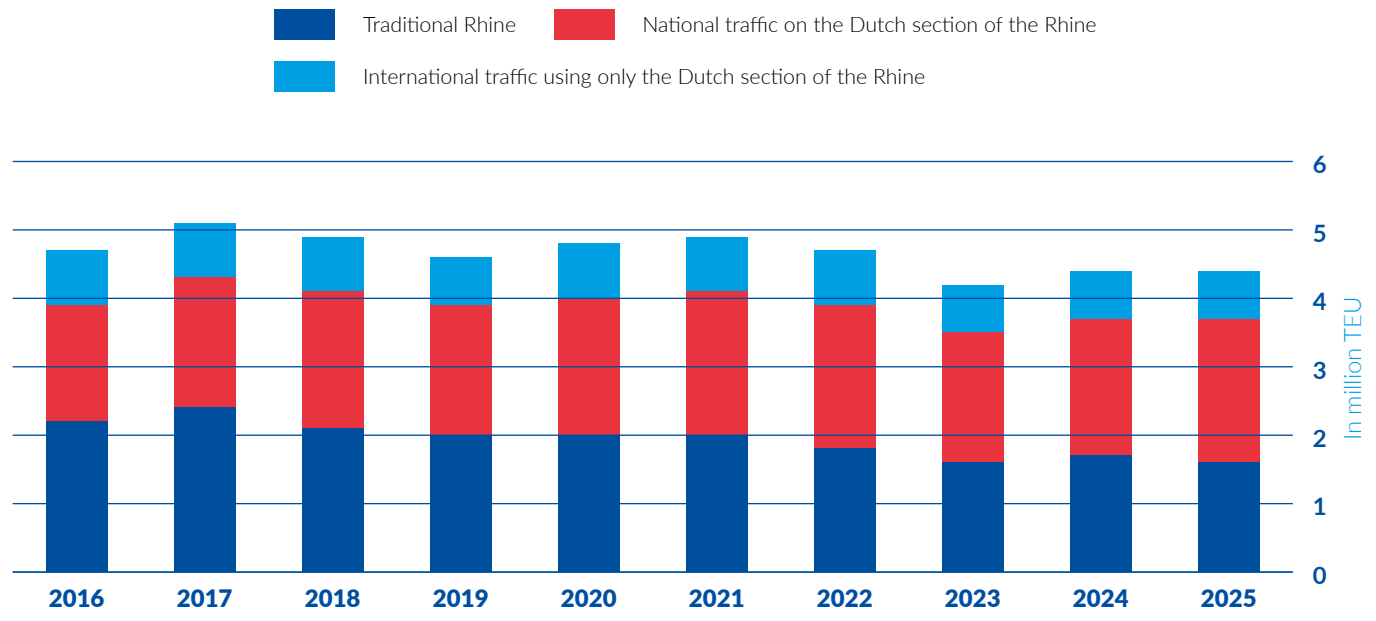
[9] Source: Eurostat [mar_qg_qm_pwhc], Gross weight of goods in containers handled in each port, available on the Eurostat website
[10] Source: R. Luman R. (ING), Scheepvaart ziet de stroom veranderen (article from 22.04.2026 and last consulted on 29.04.2026), available on the ING website

FIGURE 8: **CONTAINER TRANSPORT ON THE TRADITIONAL RHINE AND THE LOWER RHINE IN THE NETHERLANDS** (IN MILLION TONNES, NET WEIGHT OF GOODS IN CONTAINERS)**, 2014-2025 ***



Sources: CCNR analysis based on Destatis, VNF and Rijkswaterstaat
** Traditional Rhine = Rhine from Rheinfelden (CH) to the German-Dutch border; Dutch section of the Rhine = Rhine from the German-Dutch border to the North Sea (including link to Antwerp via the Rhine-Scheldt link)*
Note that the traditional Rhine data capture all cargo transport on the Rhine in Germany, as well as more refined data for the parts of the upper Rhine, which reflect traffic between French Rhine ports and between Swiss and French Rhine ports.

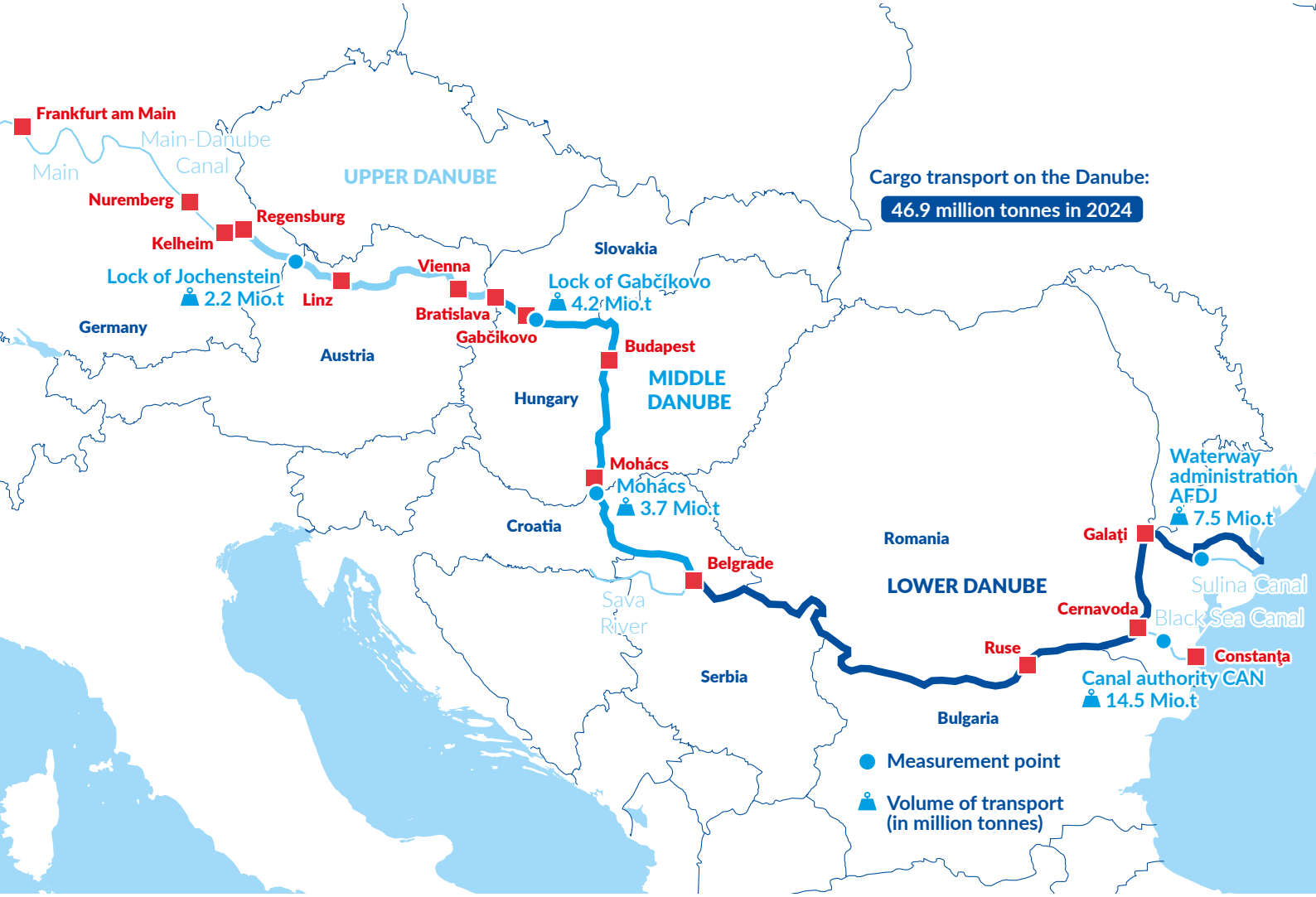
FIGURE 9: **CONTAINER TRANSPORT ON THE TRADITIONAL RHINE AND THE LOWER RHINE IN THE NETHERLANDS** (IN MILLION TEU)**, 2014-2025 ***



Sources: CCNR analysis based on Destatis, VNF (only for the period 2020-2024) and Rijkswaterstaat
** Traditional Rhine = Rhine from Rheinfelden (CH) to the German-Dutch border; Dutch section of the Rhine = Rhine from the German-Dutch border to the North Sea (including link to Antwerp via the Rhine-Scheldt link)*



DANUBE BASIN

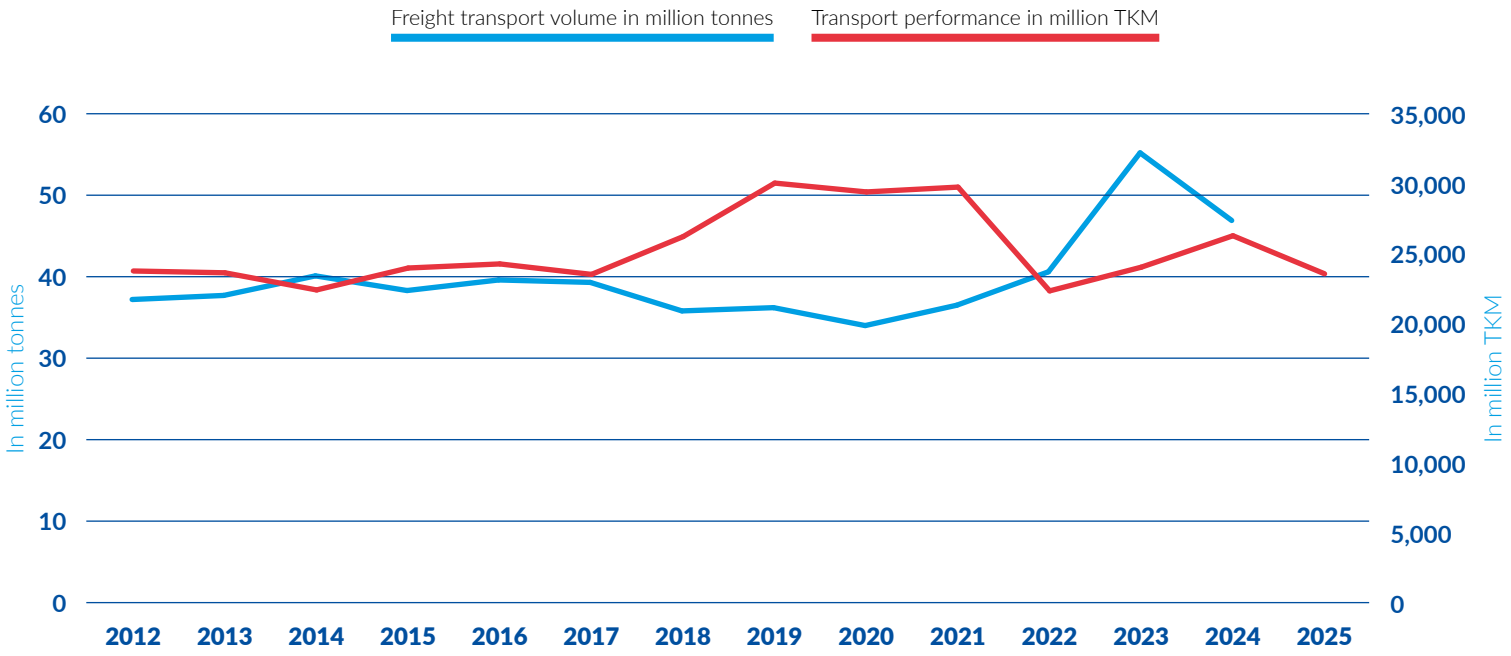


Source: Danube Commission market observation report

Transport volume and transport performance on the Danube

Cargo transport on the entire navigable Danube between Kelheim (Germany) and the Black Sea via the Danube-Black Sea Canal and the Sulina Canal has been increasing since 2020 to reach 55.2 million tonnes in 2023. This increase was mainly driven by the exceptional growth in IWT volumes recorded in Ukraine, especially exports via Ukrainian Danube ports. In 2024, a -15% decrease was observed compared to 2023, reaching 46.9 million tonnes. This decrease is mainly linked with the resumption of activities in Ukrainian ports. Transport performance on the Danube (EU Danube countries plus Serbia) reached 23.6 billion TKM in 2025, a decrease of -10.4% compared to 2024.

FIGURE 10: **FREIGHT TRANSPORT VOLUME** (IN MILLION TONNES) **AND TRANSPORT PERFORMANCE** (IN MILLION TKM) **ON THE DANUBE ***



Sources: for transport volumes - viadonau, Annual reports on Danube navigation; for transport performance - Eurostat [iww_go_atygo] and [iww_go_qnave] (Serbia)
** Transport performance in IWT in all EU Danube countries.*

In the year 2025, the Russian war of aggression against Ukraine continued to have an influence on goods and passenger transport on the Danube. Throughout 2025, Russia intensified its systematic attacks on Ukrainian port infrastructure along the Danube and the neighbouring regions. Since January, when the first attack on the region around the Port of Izmail took place, Russia has carried out air strikes every month on Ukrainian port infrastructure along the Danube and adjacent facilities. These attacks resulted in the destruction of transhipment facilities, energy and transport infrastructure, grain silos, warehouses and administrative buildings. Furthermore, various ships flying foreign flags sustained damage whilst loading and unloading.

The air and mine attacks carried out by Russia have posed direct threats not only to Ukraine's port infrastructure on the Danube, but also to the entire shipping system on the lower Danube, including the safety of ship crews and personnel.

The critical situation in the lower Danube region, resulting from Russia's full-scale aggression against Ukraine, continued to be the determining factor in the dynamics and final market indicators for Danube navigation. Consequently, the Danube navigation market faced serious challenges, primarily regarding the safety of navigation and additional risks which, in turn, led to a partial reorientation of the market and distortions in certain sectors of traditional shipping on the Danube.

Against the backdrop of the situation described above, the Danube Commission will actively continue its efforts to comprehensively promote the export of Ukrainian agricultural products and the import of goods required by Ukraine, within the framework of the 'Danube Solidarity Lanes EU-Ukraine' initiative adopted in May 2022 to support the European Union's solidarity measures for Ukraine. The focus was on stabilising freight transport logistics chains using the Danube ports in Ukraine, the Republic of Moldova and Romania, as well as the Danube-Black Sea Canal link.

Danube transport at specific measurement points

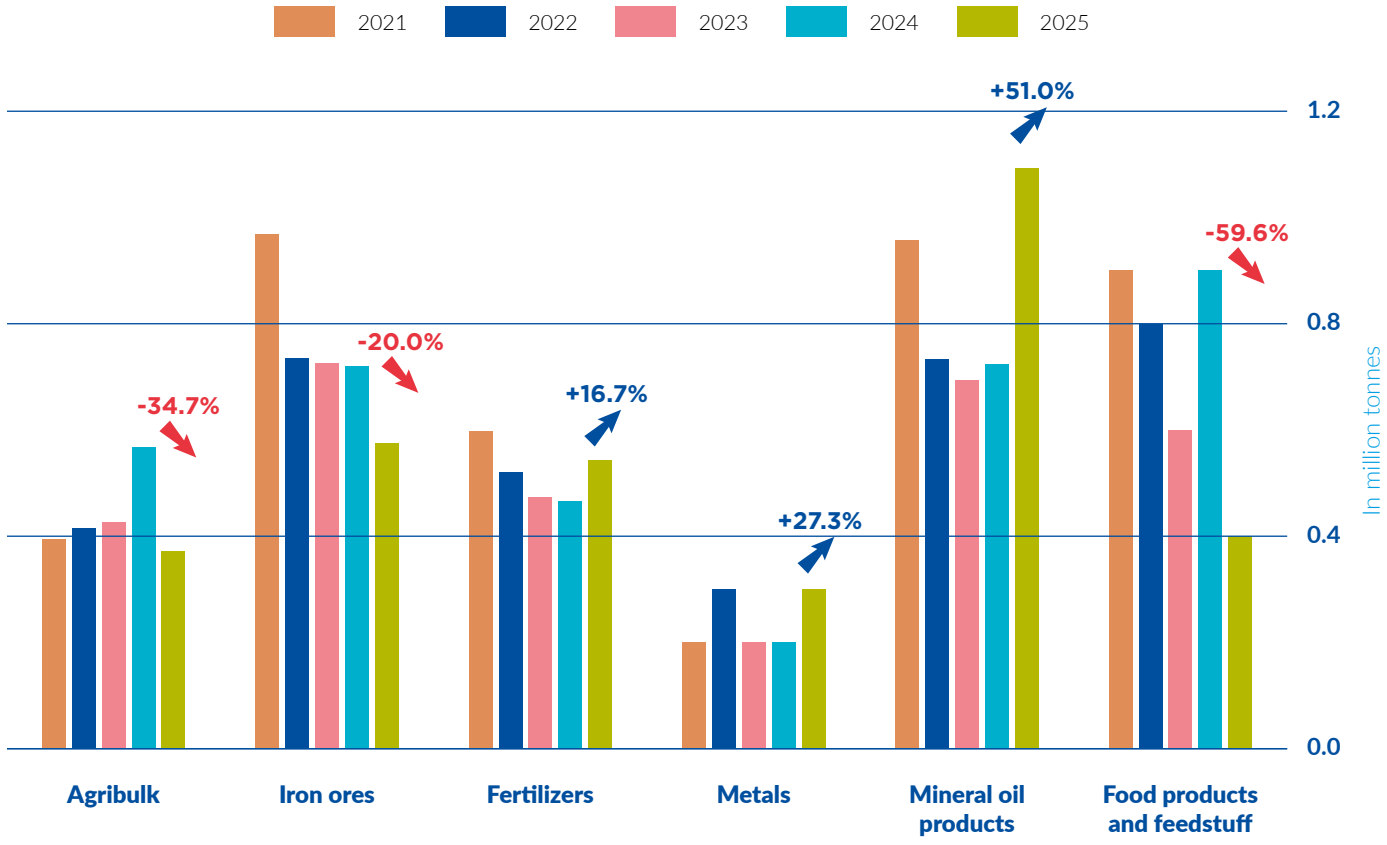
In 2025, there was a sharp decline in cargo transport on the Danube at all available measurement points. This can be explained by weak economic framework conditions, unfavourable water conditions (see chapter 3) and the ongoing Russian war of aggression against Ukraine.

At the most representative measurement point, Gabčíkovo at the Slovakian-Hungarian border, the transport of food products and foodstuff in particular declined strongly. Also, iron ore transport was lower than in 2024. The goods segments with an increase were mineral oil products, metals and fertilisers.

Danube transport by cargo segment

The following figure illustrates the development of cargo transport by goods segment on the upper Danube.

FIGURE 11: **GOODS TRANSPORT ON THE UPPER DANUBE** (IN MILLION TONNES) *



Source: Danube Commission market observation report
** At Gabčíkovo (border Slovakia-Hungary)*

CONTAINER TRANSPORT
PER COUNTRY IN EUROPE

THE WHOLE EUROPEAN AND GEOGRAPHICAL STRUCTURE

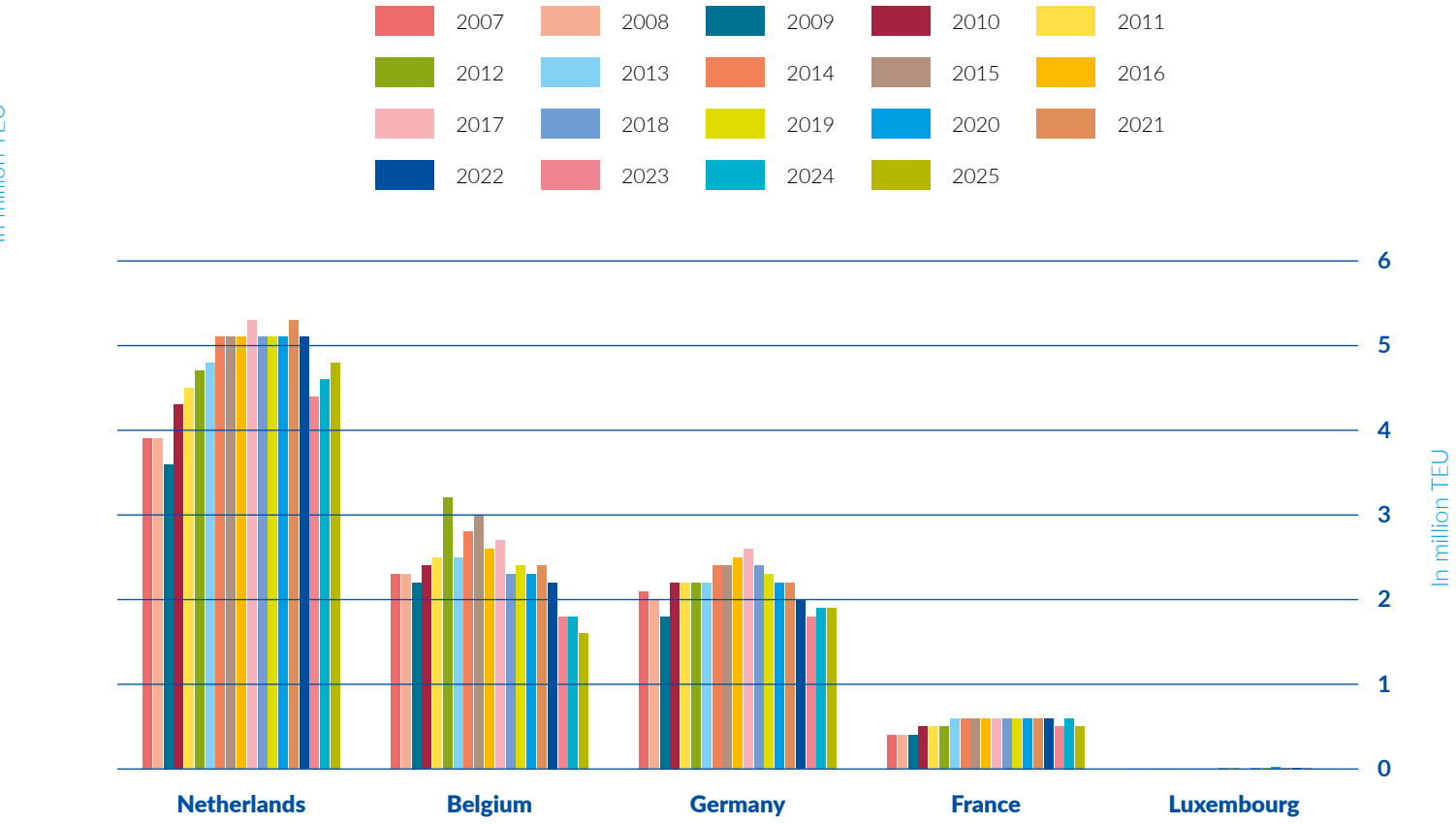
In 2025, with 11.1 billion TKM (-1.9%), more than 5.7 million TEU (+0.4%) and 46.4 million tonnes of cargo in containers (-1.1%), container transport on EU inland waterways (EU-27) represented 9.4% of the total IWW transport performance of approximately 118.0 billion TKM in the EU. Moreover, more than 99% of the container transport performance (TKM) took place in Rhine countries (the Netherlands, Belgium, Germany, France, Switzerland, Luxembourg). Container transport on the Danube accounted for 0.1%.

RHINE COUNTRIES

In 2025, container transport measured in TEU increased by +5.0% in the Netherlands only. It remained stable in Germany and regressed by -8.7% in France, and by -7.8% in Belgium. In the Netherlands, 41.8 million tonnes of cargo were transported in containers (+2.1%) corresponding to 4.8 million TEU (+5.0%), making this country by far the frontrunner in inland waterway container transport in Europe. The Netherlands experienced growth in both domestic and international container transport, whether assessed in TEU or TKM. Germany presented a mixed picture, with domestic container transport expanding while international movements contracted across both metrics. By contrast, Belgium recorded declines in both domestic and international container transport, measured either in TEU or TKM.



FIGURE 12: **IWW CONTAINER TRANSPORT PER RHINE COUNTRY** (IN MILLION TEU) *



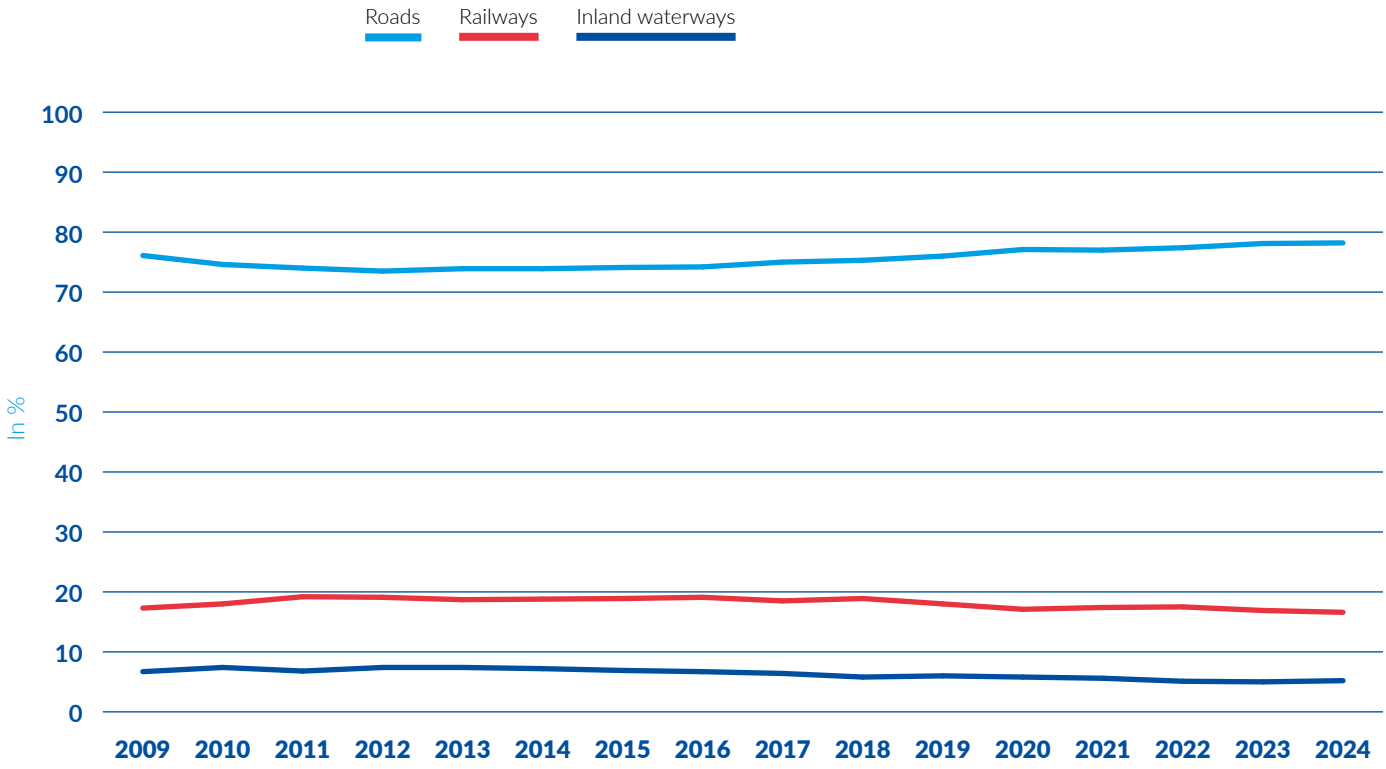
Source: Eurostat [iww_go_actygo] and [iww_go_qcnave]
** In Luxembourg, 9,995; 10,750; 8,518 and 4,624 TEU were recorded for 2022, 2023, 2024 and 2025 respectively.*

DANUBE COUNTRIES

The two Danube countries with the highest container transport are currently Romania and Hungary. In 2025, 276 TEU (+91.8%) were transported on Hungarian inland waterways. In Romania, container transport amounted to 4,544 TEU in 2025 (-77.9%). Considering the weight of cargo, container transport on Hungarian waterways represented 8,000 tonnes in 2025 (+60.0%). In Romania, 66,000 tonnes of cargo were transported in containers (-72.2%). These values illustrate the immense gap in relation to Rhine countries.

INLAND NAVIGATION
AND OTHER MODES OF TRANSPORT

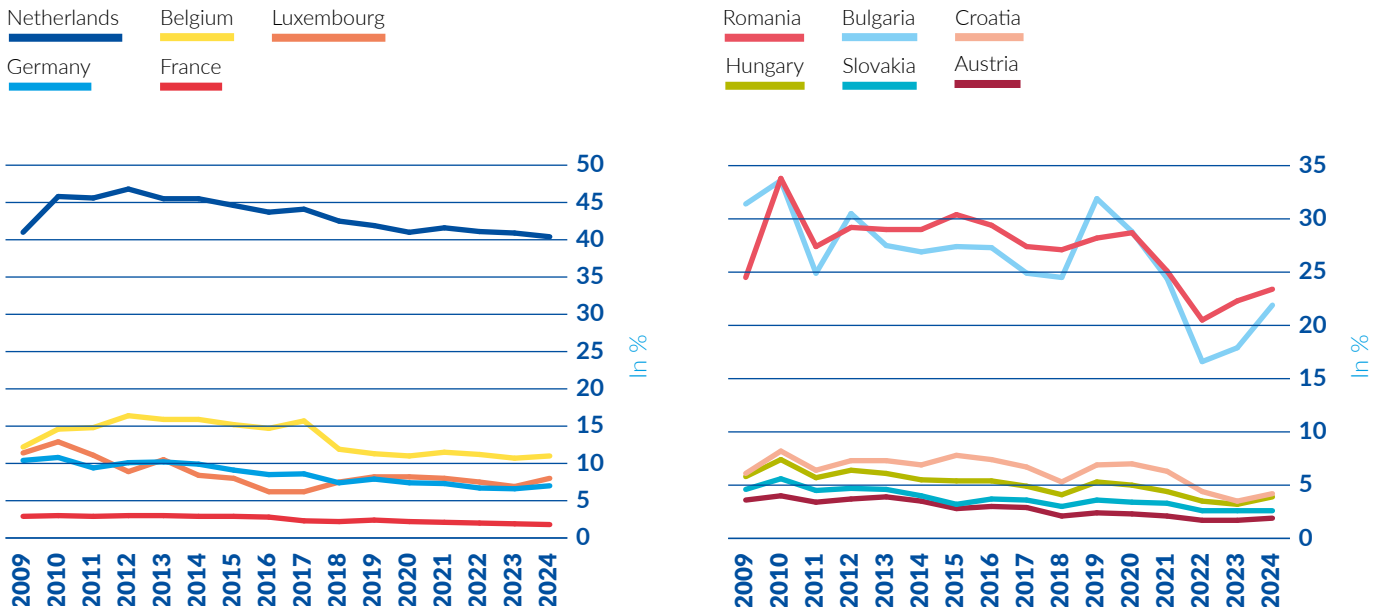
FIGURE 13: **MODAL SPLIT SHARE OF INLAND TRANSPORT MODES IN THE EU-27** (IN %) **2009-2024**



Source: Eurostat [tran_hv_frmod]

Over the past decade, the modal share of inland waterway transport (IWT) and rail has declined at EU-27 level, while road transport has gained ground. IWT accounted for 5.2% in 2024 (-2 percentage points over ten years), although this was its first year on year increase since 2019. Despite this improvement, IWT remains far behind road transport, which accounted for 78.2% in 2024 (+4 percentage points over ten years), and rail transport, with a 16.6% share (-2 percentage points). As many EU Member States have no inland waterways, the EU level modal split is not a suitable performance indicator for IWT. Modal split figures should therefore be assessed at national level.

FIGURES 14 AND 15: **IWW MODAL SPLIT EVOLUTION IN RHINE AND DANUBE COUNTRIES** (IN %, BASED ON TONNE-KILOMETRES) *



Source: Eurostat [tran_hv_frmod]
** Share of inland waterway transport performance in total (IWT + Road + Rail) inland freight transport performance*

Over the past decade, the modal share of inland waterway transport (IWT) has declined in all main IWT countries. In the Netherlands, IWT peaked at 46.8% in 2012 before falling to 40.4% in 2024. Long term declines were also observed in Germany, Belgium, Luxembourg and France. In Germany, the IWT share dropped below 7.0% in 2022 and 2023, before rising back to 7.0% in 2024 for the first time since 2019. Belgium and Luxembourg followed a comparable pattern, with a sustained decline after 2019 and a recovery in 2024.

In Danube countries, Romania and Bulgaria recorded higher IWT shares (above 28.0%) before 2020, followed by sharp decreases in 2021–2022. Since then, both countries have partially recovered, with gains of around 3 percentage points in Romania and 5 percentage points in Bulgaria between 2022 and 2024. The remaining Danube countries also saw an increase in IWT modal share in 2024, their first year on year rise since 2019.

Overall, despite the widespread rebound in 2024, all countries analysed still report lower IWT modal shares than ten years ago (around -5 percentage points in the Netherlands, Belgium and Hungary; -3 in Germany; and -6 in Romania). The long-term decline can be attributed to a combination of factors such as:

- structural advantages of road transport,
- changes in industrial structure (decline in heavy bulk industries, growth sectors relying less on IWT),
- logistical patterns leading to a reduced demand for IWT across most countries (just-in-time delivery),
- limitations relating to network coverage and reliability, delays in maintenance and renovation of locks and bridges, insufficient investment in inland waterway infrastructure.

The IWT modal share increase observed in 2024 therefore appears to reflect a rebound from lower levels in previous years and renewed demand for bulk transport following the energy and raw materials shocks, rather than a reversal of the underlying downward trend.







03

WATER LEVELS AND FREIGHT RATES

- Navigation conditions on the Rhine in 2025 were less favourable than in 2024, with more periods of restricted available draught, particularly during the spring. Nevertheless, water levels remained better than during the severe low-water years of 2018 and 2022. On a regional level, the conditions were especially difficult at the upper Rhine (Basel and Maxau). On all the Danube stretches, there were significantly more low water days in 2025.
- Nominal freight rates increased in response to lower water levels, higher operational constraints and cost pressures. Still, the estimation of a cost index for Rhine navigation shows an increase of +88% of total costs in tanker barging since 2004. There was an acceleration of this cost increase since 2020. Therefore, on average, the real revenue from IWT has either stagnated (in tanker barging) or declined (in dry cargo transport).
- Adjusting the long run freight rate increase for rising costs shows that the rise in nominal freight rates disappears, indicating that real income evolution in Rhine navigation was characterised by very weak profit margins.

WATER LEVELS, AVAILABLE DRAUGHTS AND NAVIGATION CONDITIONS

The overall performance of inland waterway transport is linked to - among other factors - water levels, which determine the amount of cargo that a vessel can load and transport under safe navigation conditions. High water depths and the resulting high load factors lead to lower fuel consumption per unit of output. Indeed, the more water there is under the keel, the lower the required power and the lower the fuel consumption. The less water there is under the keel, the faster the required power and the higher the fuel consumption.

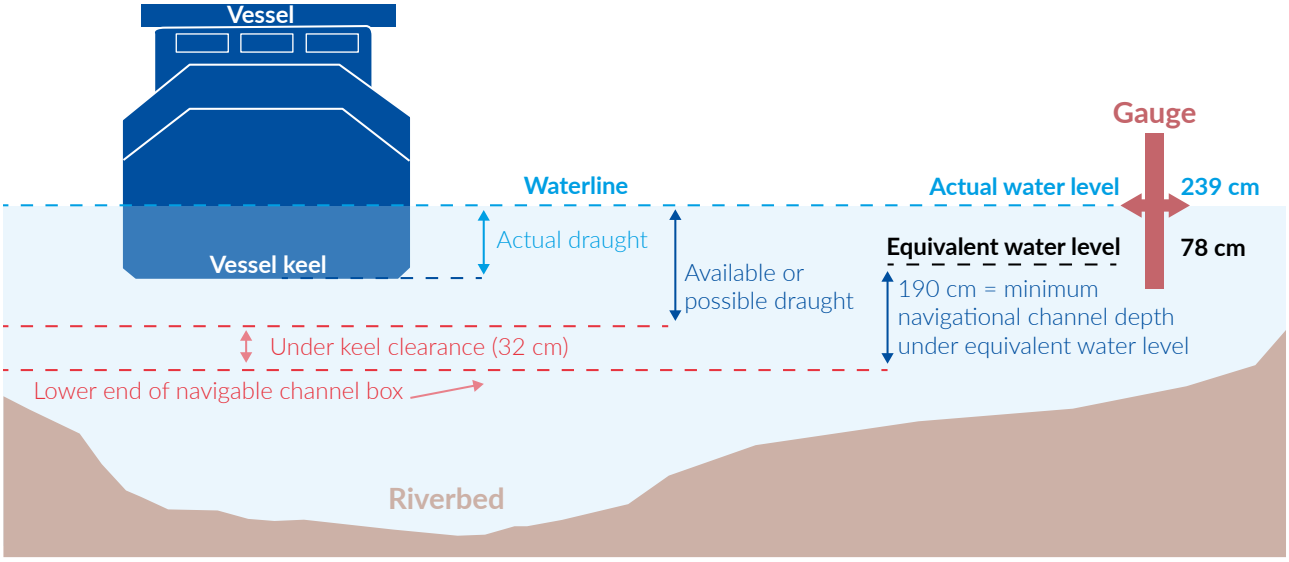
Although the reduction of the load factor during a low water period could be compensated by putting more vessels into operation, there are obvious limitations to this[11]. In addition, other reasons besides vessel availability play an important role. For instance, higher costs during such periods lead to some operators delaying the transport of some of their cargo, especially the less urgent or less profitable ones. In addition, some clients also look for other modal alternatives where available. An example is the low water period experienced in both autumn 2018 and summer 2022 on the Rhine. These two periods inflicted a reduction of the entire cargo transport. Hence, the lower load factors per vessel could not be compensated by putting more vessels into operation.

The amount of cargo that a vessel can load at a certain water level is determined by the available draught, as can be seen in the next figure.

[11] The fleet of inland vessels is limited in size. It is also not possible to keep a large number of vessels 'on hold', as this would incur fixed costs (insurance, maintenance, etc.), while there would be no revenue at all from the particular vessel.



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



Sources: CCNR based on 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. For a sailing vessel, the actual draught also contains the squat effect. The latter results from hydrodynamic effects and leads to a higher draught compared to a vessel at rest. The squat effect is stronger the less water present under the keel, and the faster the vessel is sailing.*

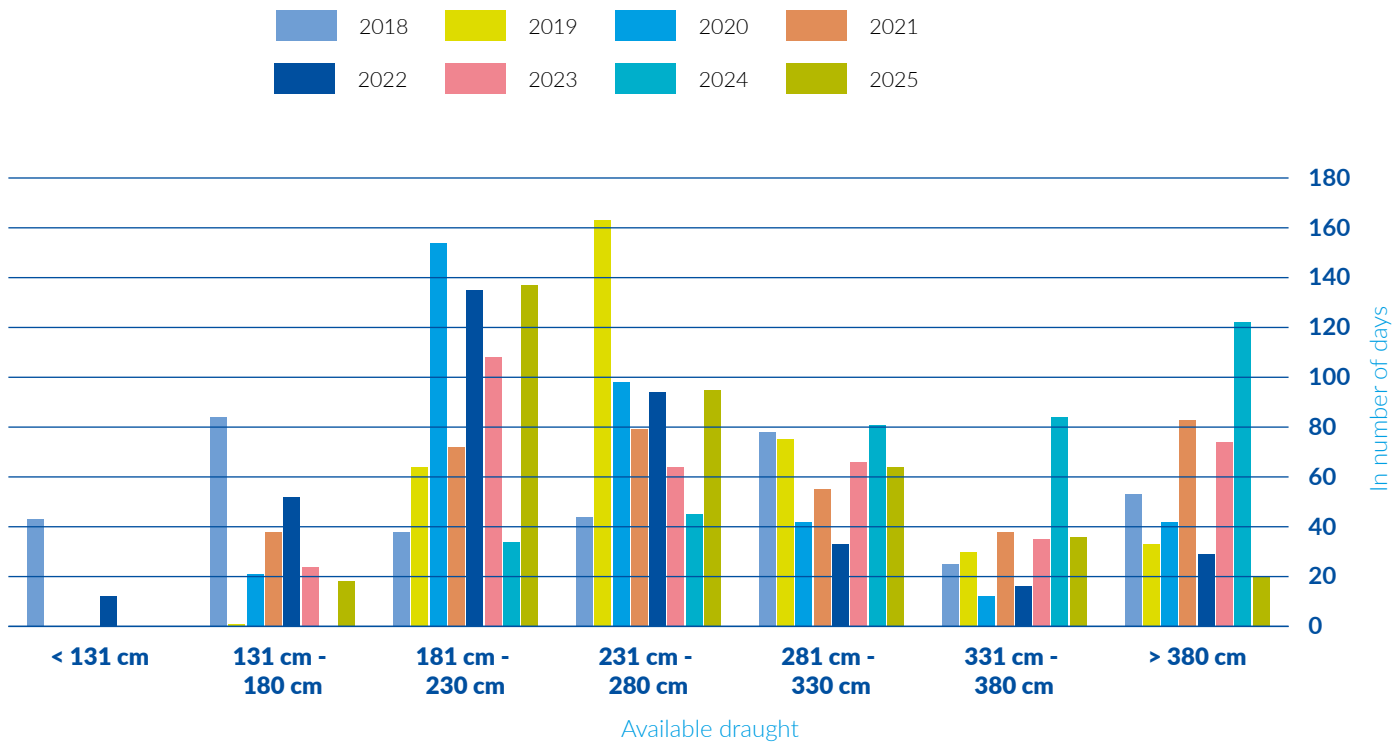
One way of observing hydraulicity and navigating conditions is to calculate available draught figures based on water levels. The available draught is the depth by which a vessel can sink into the water under safe conditions. This depth is calculated based on water levels and parameters such as the equivalent water level and the minimum navigational channel depth[12].

The following figure shows the number of days during which a certain available draught was present for the gauge station of Kaub. It shows that the year 2025 was characterised by navigating conditions that were less favourable than in 2024. For example, on 18 days of the year, the available draught was between 1.31 m and 1.80 m at Kaub, compared to 0 days in 2024. In 2018, this category counted 84 days, 52 days in 2022 and 24 days in 2023. However, unlike the year 2018 and 2022, the available draught never dropped below the value of 1.31 m at Kaub in 2025.

The year 2024 had been a year with some high water which was not the case in 2025.

[12] The waterway administrations recommend calculating the available draught on the basis of the actual water level and certain waterway parameters (shown in the drawing).
Actual water level
- Equivalent water level
+ Minimum navigational channel depth
= Actual fairway depth
- Under keel clearance
= Available or possible draught of vessel

FIGURE 2: **NUMBER OF DAYS PER YEAR FOR AVAILABLE DRAUGHT INTERVALS AT KAUB**



Sources: CCNR calculation based on data from WSV, provided by BfG



NUMBER OF CRITICAL
LOW WATER DAYS FOR RHINE AND DANUBE GAUGE STATIONS

RHINE GAUGE STATIONS

Another method for assessing the quality of navigating conditions over an entire year is based on the concept of counting the number of days when water levels are below a certain reference low water level, known as Equivalent Water Level (EWL) for the free-flowing sections of the Rhine and Low Navigable Water Level (LNWL) for the Danube. If water levels drop below this reference low-water level, this indicates a critically low navigation situation.

The EWL is determined by the CCNR for several gauge stations along the Rhine. The values are adapted every ten years, to take account of natural and anthropogenic changes.

The equivalent water level 2012 came into force in 2014 and remained valid until the end of 2022. A new equivalent water level was introduced on 1 January 2023 (known as EWL 2022) and will be applicable until the end of 2031.

Although the equivalent water level is measured in centimetres, the starting point of its determination is a flow concept. Indeed, equivalent flow values (indicated in the unit m^3/s) measured against the benchmark levels are recalculated every ten years as flows within a 100-year time series. The equivalent flow values are then used to recalculate the corresponding equivalent water level (EWL) values against the benchmark levels every ten years. The EWL consequently includes the following definition: “The equivalent water level (EWL) is the water level occurring along the Rhine at an equivalent water flow falling below the long-term average for 20 days [per year] without ice”.



TABLE 1: **HYDRAULIC PARAMETERS FOR IMPORTANT RHINE GAUGE STATIONS ***

Gauge station	Guaranteed navigation channel depth	Equivalent water level 2022
Tiel (Waal, NL)	280 cm	255 cm
Nijmegen (Waal, NL)	280 cm	516 cm
IJsselkop (Nederrijn, NL)	280 cm	683 cm
Lobith (lower Rhine, NL)	280 cm	733 cm
Emmerich (lower Rhine, DE)	280 cm	74 cm
Duisburg-Ruhrort (lower Rhine, DE)	280 cm	227 cm
Cologne (lower Rhine, DE)	250 cm	139 cm
Kaub (middle Rhine, DE)	190 cm	77 cm
Oestrich (middle Rhine, DE)	190 cm	92 cm
Maxau (upper Rhine, DE)	210 cm	372 cm
Basel (upper Rhine, CH)	300 cm	501 cm

Sources: WSV, Rijkswaterstaat
** Waal and Nederrijn are two branches of the Rhine delta in the Netherlands.*



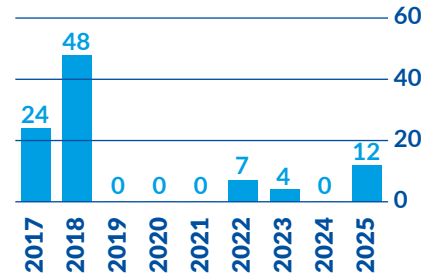
For these 11 Rhine gauges, daily water level data were collected and analysed.



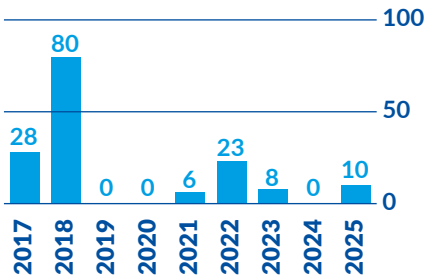
The following figures show the number of days below the equivalent water level for the above-mentioned gauge stations.

NUMBER OF DAYS BELOW THE EQUIVALENT WATER LEVEL (EWL)

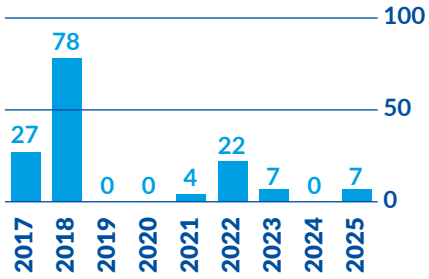
Basel



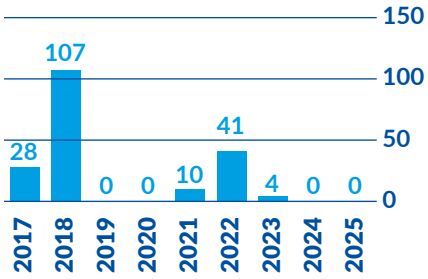
Maxau



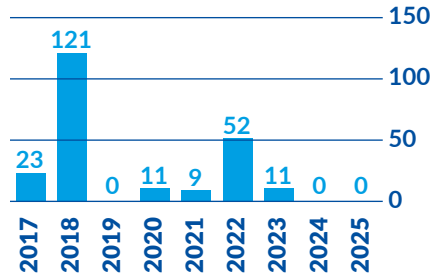
Oestrich



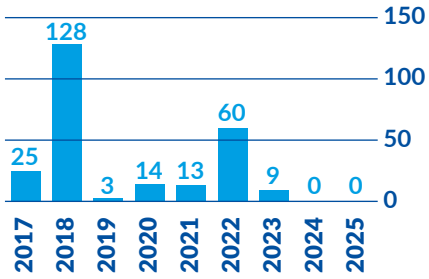
Kaub



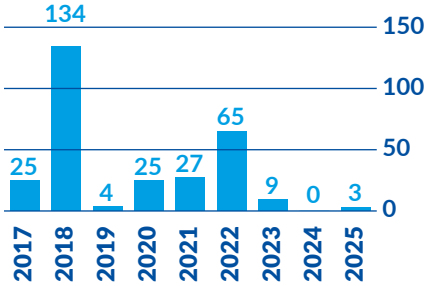
Cologne



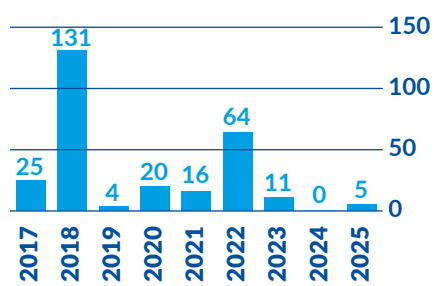
Duisburg-Ruhrort



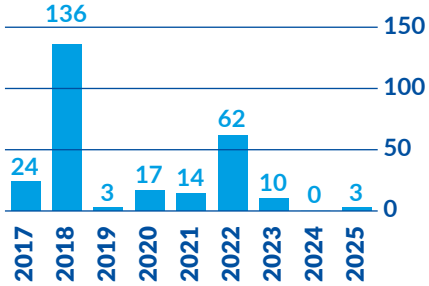
Emmerich



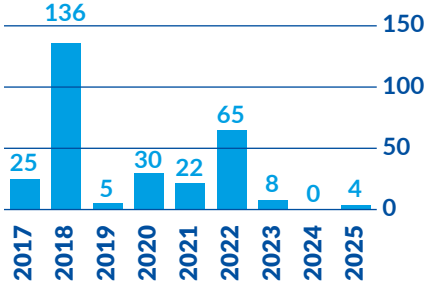
Lobith



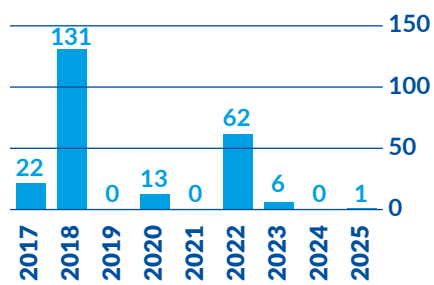
Nijmegen



IJsselkop



Tiel



Sources: CCNR calculation based on data from WSV, provided by BfG, and from Rijkswaterstaat

As the figures for the available draught for Kaub have already shown, there were temporary low water periods in 2025, in particular in the spring. Regionally, the conditions were especially difficult at the upper Rhine (Basel and Maxau) and at Oestrich on the middle Rhine. But there were slightly more low water days (days with water levels below the equivalent water level) also at the lower Rhine (Emmerich, Lobith, IJsselkop, Nijmegen) than in 2024.

The continued efforts to strengthen the resilience and reliability of IWT to low water periods remain necessary. Indeed, under the influence of climate change, longer periods of drought and more extreme events are expected.



DANUBE GAUGE STATIONS

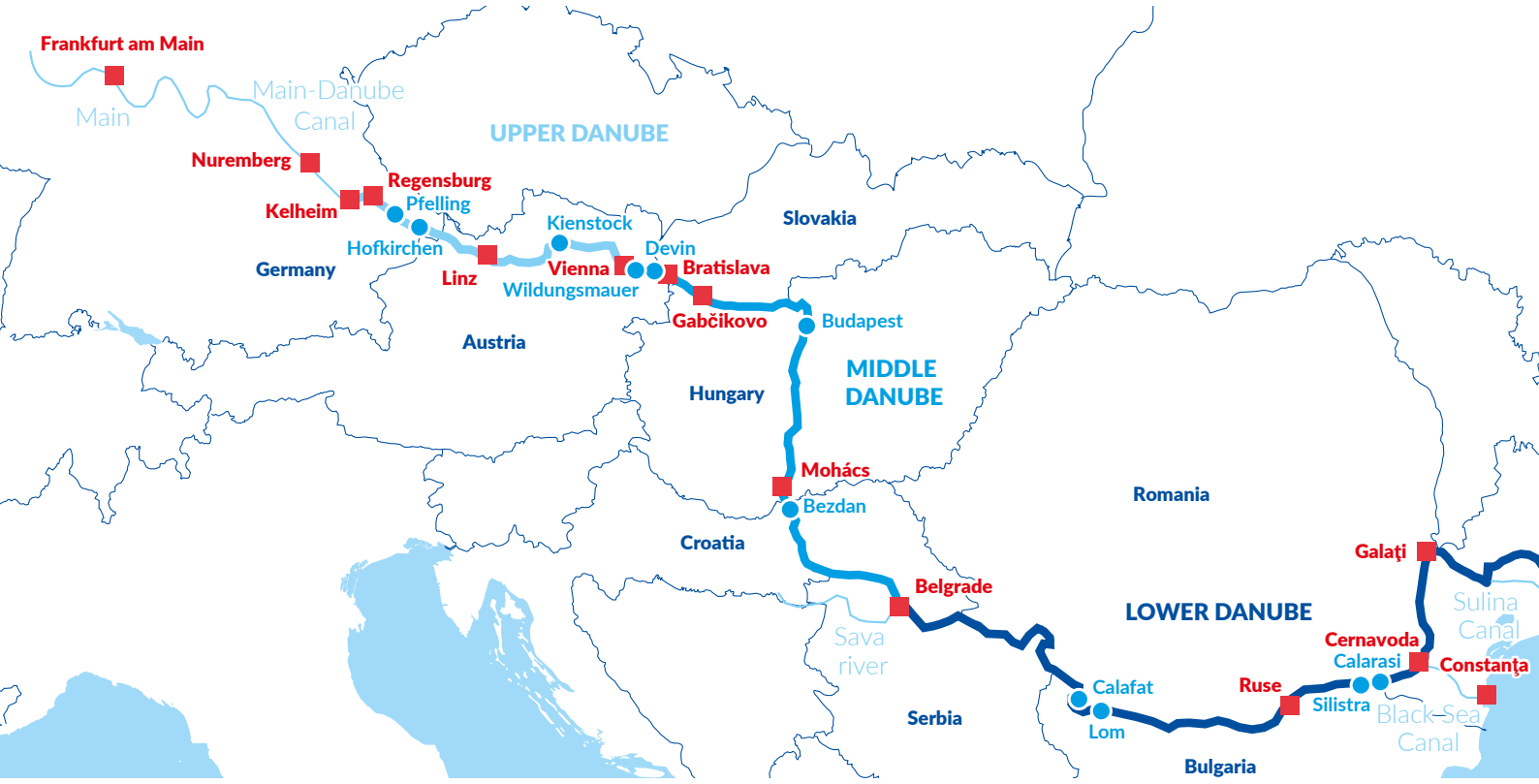
The reference low water level of the Danube is known as 'Low Navigable Water Level (LNWL)'. It is defined as the water level exceeded on 94.0% of days in a year (i.e. on 343 days) during ice-free periods over a reference of several decades[13].

Based on this definition, the number of days below the Low Navigable Water Level (LNWL) can be calculated for the Danube.

TABLE 2: **HYDRAULIC PARAMETERS FOR IMPORTANT DANUBE GAUGE STATIONS**

Gauge station	Minimum draught in cargo transport endeavoured by waterway administration	Low navigable water level
Pfelling (DE)	250 cm	290 cm
Hofkirchen (DE)	250 cm	207 cm
Kienstock (AUT)	250 cm	161 cm
Wildungsmauer (AUT)	250 cm	155 cm
Devin (SK)	250 cm	144 cm
Budapest (HU)	250 cm	102 cm
Bezdan (RS)	250 cm	-10 cm
Calafat (RO)	250 cm	-5 cm
Calarasi (RO)	250 cm	-32 cm
Lom (BG)	250 cm	144 cm
Silistra (BG)	250 cm	80 cm

Source: Danube Commission

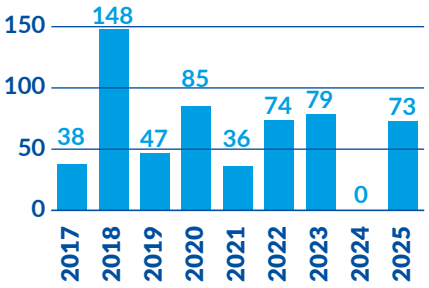


[13] *Source: viadonau*

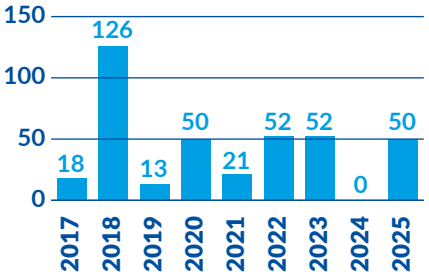
For 11 important gauge stations on the Danube, daily water level data were collected and analysed by the Danube Commission. The figures below show the number of days per year on which the actual water levels fell below the Low Navigable Water Level.

NUMBER OF DAYS BELOW THE LOW NAVIGABLE WATER LEVEL (LWL)

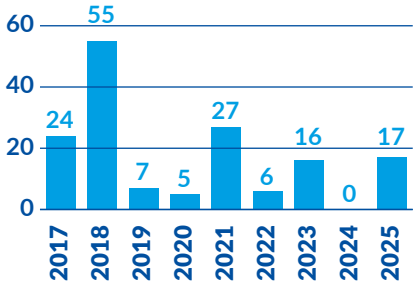
Pfelling, upper Danube (DE)



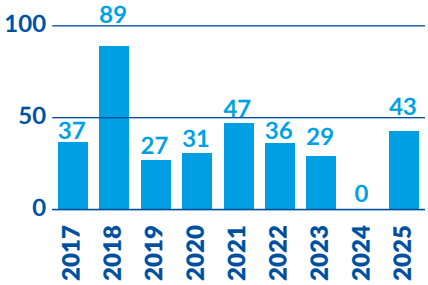
Hofkirchen, upper Danube (DE)



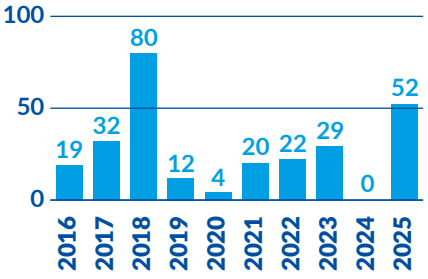
Kienstock, upper Danube (AT)



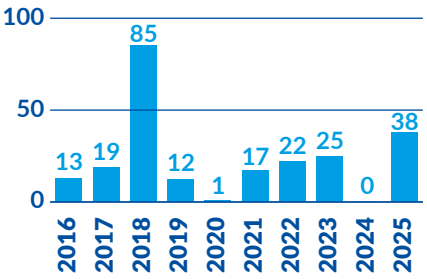
Wildungsmauer, upper Danube (AT)



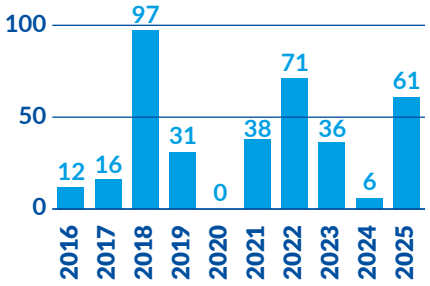
Devin, upper Danube (SK)



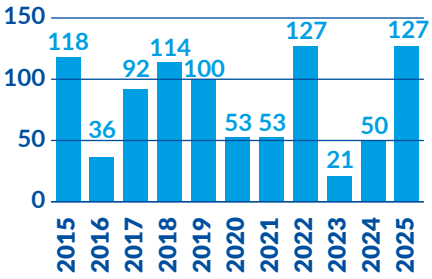
Budapest, middle Danube (HU)



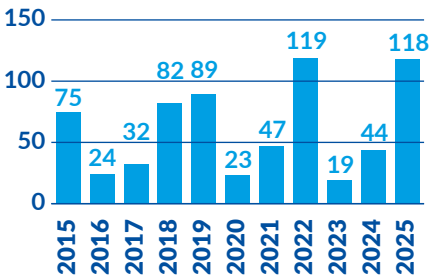
Bezdan, middle Danube (RS)



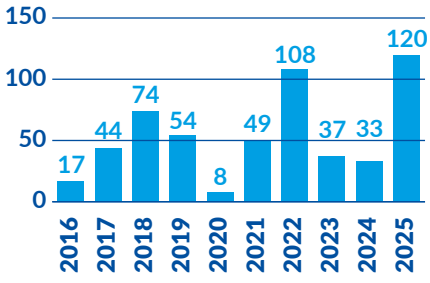
Calafat, lower Danube (RO)



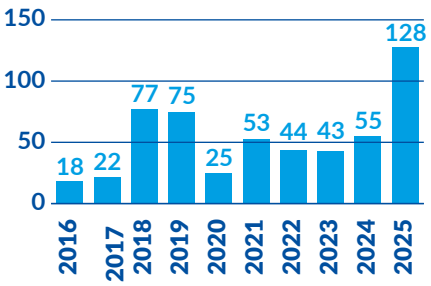
Calarasi, lower Danube (RO)



Lom (BG), lower Danube



Silistra (BG), lower Danube



Sources: CCNR calculation based on data from WSV, provided by BfG, data from the Federal State of Lower Austria and the Danube Commission

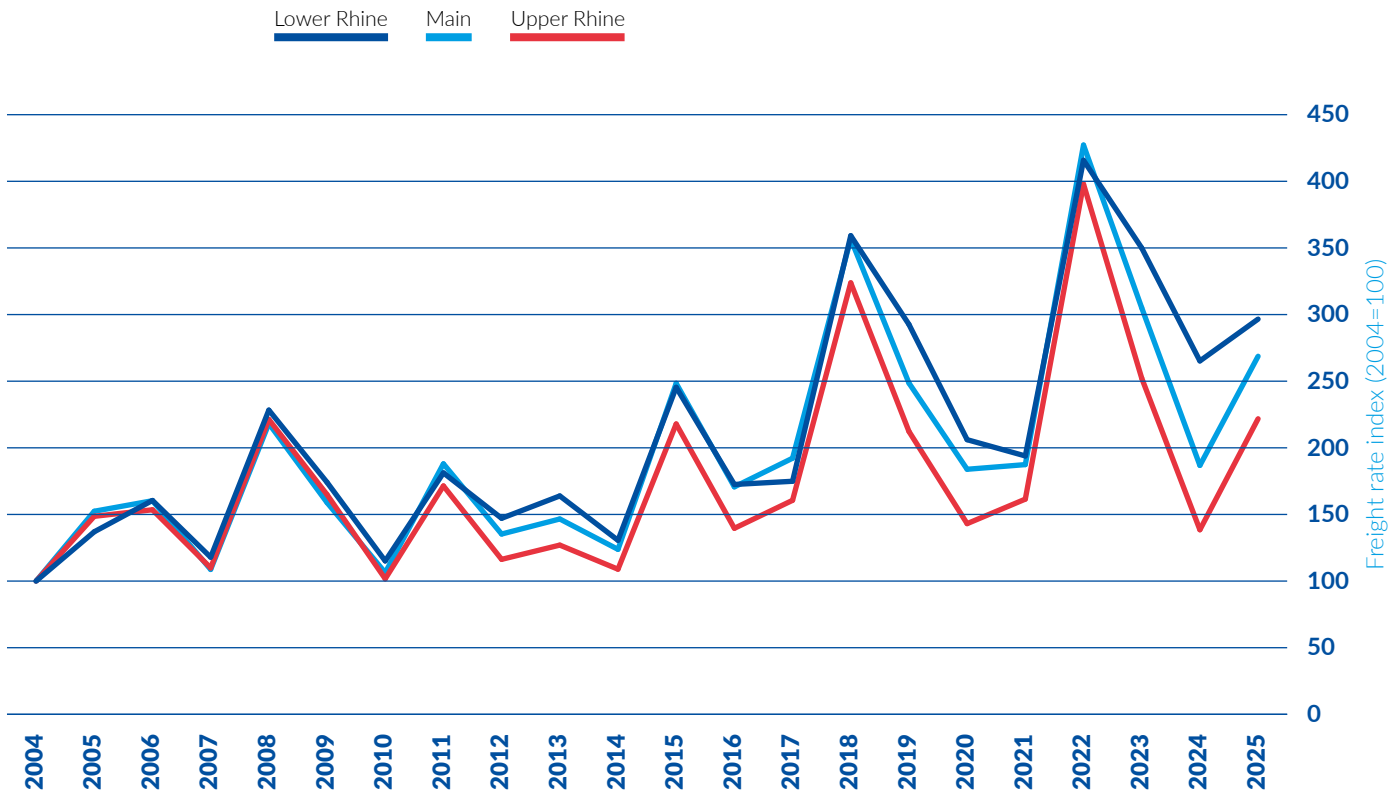
The data for the 11 Danube gauge stations indicate a serious deterioration of the quality of water level conditions in 2025 compared to previous years. This had a negative impact on cargo transport on the Danube in 2025.

FREIGHT RATES
IN THE RHINE REGION

LIQUID CARGO FREIGHT RATES IN THE RHINE REGION

Figure 3 illustrates the liquid cargo spot market freight rate index for gasoil within ARA-Rhine transport of liquid bulk (yearly averages), not adjusted for inflation or cost increase. It follows a rising trend. In addition, the strong low water periods, which occurred in 2015, 2018 and 2022, are clearly visible as positive peaks. The observed trends are almost identical for the three different geographical entities shown – two stretches of the Rhine (lower Rhine, upper Rhine) and the Main affluent.

FIGURE 3: **INSIGHTS GLOBAL FREIGHT RATE INDEX FOR LIQUID CARGO TRANSPORT** (GASOIL) **IN THE ARA-RHINE TRADE** (2004 = 100)**, NOT ADJUSTED FOR COST INCREASE**



Sources: CCNR calculation based on Insights Global.
Lower Rhine = average of the destinations Duisburg and Cologne; upper Rhine = Average of the destinations Karlsruhe and Basel; Main = Destination Frankfurt/Main.

But this overall rising trend largely reflects the effects of inflation or cost increase over time rather than improved market conditions.

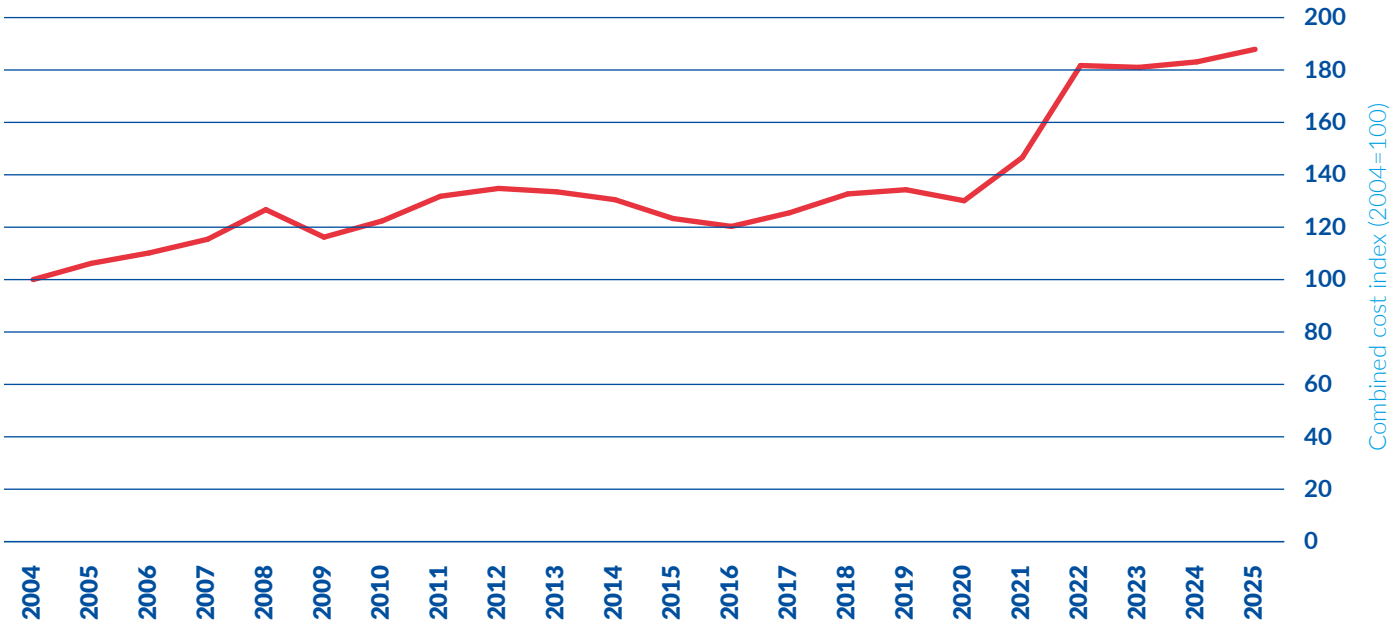
To 'deflate' the freight rate series, a cost index for tanker barging on the Rhine was estimated. For the cost index, it needs to be borne in mind that modern tankers (double-hull vessels) are more expensive than dry cargo vessels. This implies a higher share of capital costs. In addition, personnel costs are also higher in tanker shipping due to specialised crews.

TABLE 3: **STRUCTURE OF COST INDEX FOR TANKER BARGING ON THE RHINE**

Cost component	Share in total costs (weight within the index)	Reason for share	Source of data
Fuel (Gasoil)	**30%**	**High fuel consumption**	Destatis gasoil price index
Crew	**25%**	**Expensive crew, high technical level**	Panteia cost monitoring
Capital	**20%**	**High price of double hull tankers**	Long run interest rates for loans (according to data collected by the German Central Bank) plus risk premium (2.5%), shipbuilding and metal price index (Destatis) for amortisation
Repair and maintenance	**15%**	**High standards for tankers**	Panteia cost monitoring
Insurance	**6%**	**High environmental risks**	Panteia cost monitoring
Other costs	**4%**	**Administration, IT**	Panteia cost monitoring
Total costs	**100%**	**Entire costs**	

The following figure shows the combination of individual cost indices and their weight over time (called a combined cost index), as presented in table 3.

FIGURE 4: **COMBINED COST INDEX IN TANKER BARGING** (2004 = 100) *



Sources: CCNR calculation based on Panteia, Destatis, German Central Bank (Bundesbank)
** Combined cost index = 0.3 × Fuel costs + 0.25 × Crew costs + 0.20 × Capital costs + 0.15 × Repair and maintenance costs + 0.06 × Insurance costs + 0.04 × Other costs.*

The combined cost index confirms the steep cost increase since the Covid era, especially between the years 2020 and 2022. The reasons for the cost increase, driven in particular by fuel costs and repair and maintenance costs, are shown in the next table.



TABLE 4: **REASONS FOR THE COST INCREASE IN TANKER BARGING SINCE 2004**

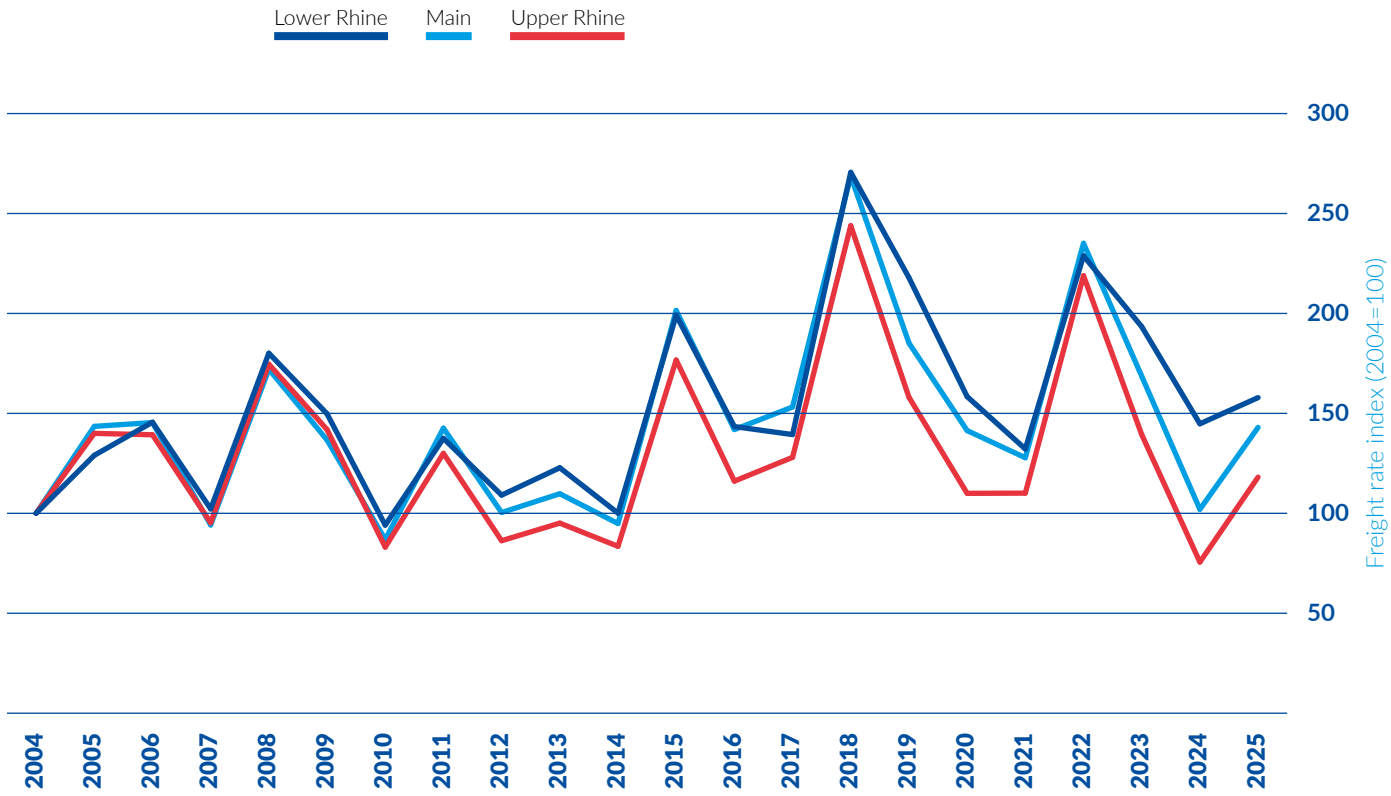
Cost component	Growth rate of costs since 2004	Reasons for increasing trend since 2004
Fuel (Gasoil)	**+82%**	Highly volatile; following the business cycle and external shocks (geopolitical tensions)
Crew	**+95%**	Steady rise due to a shortage of skilled labour, especially in tanker barging
Capital	**+51%**	Sharp increase due to double-hull investments (2012–2018), rising steel and shipyard prices and recent interest rate hikes
Repair and maintenance	**+136%**	Rising prices for steel and electricity, limited shipyard capacity
Insurance	**+100%**	Higher liability premiums for hazardous goods, increased vessel values (double-hull), and stricter environmental risk assessments
Other costs	**+68%**	Rising administrative burdens, costs for digitalisation, port and lock dues, and increased expenses for safety certifications
Total costs	**+88%**	The weighted aggregate of all sub-indices, reflecting a structural shift towards a high-cost environment in the European inland waterway sector

Sources: CCNR calculation based on Panteia, Destatis, German Central Bank (Bundesbank)

The adjusted nominal freight rates data for the cost increase in figure 5 (obtained by dividing the nominal freight rates from figure 3 by the combined cost index in figure 4), provide a completely different picture.

Overall, the analysis shows that the rising trend has virtually disappeared and has given way to a stagnating pattern over time, without a real rising or declining trend. In other words, the real price and real income from tanker barging have stagnated since 2004 and were only temporarily driven upwards by the effect of low waters in specific years, notably 2015, 2018 and 2022.

FIGURE 5: **INSIGHTS GLOBAL FREIGHT RATE INDEX FOR LIQUID CARGO** (GASOIL) **TRANSPORT IN THE ARA-RHINE TRADE** (2004 = 100)**, ADJUSTED FOR COST INCREASE**



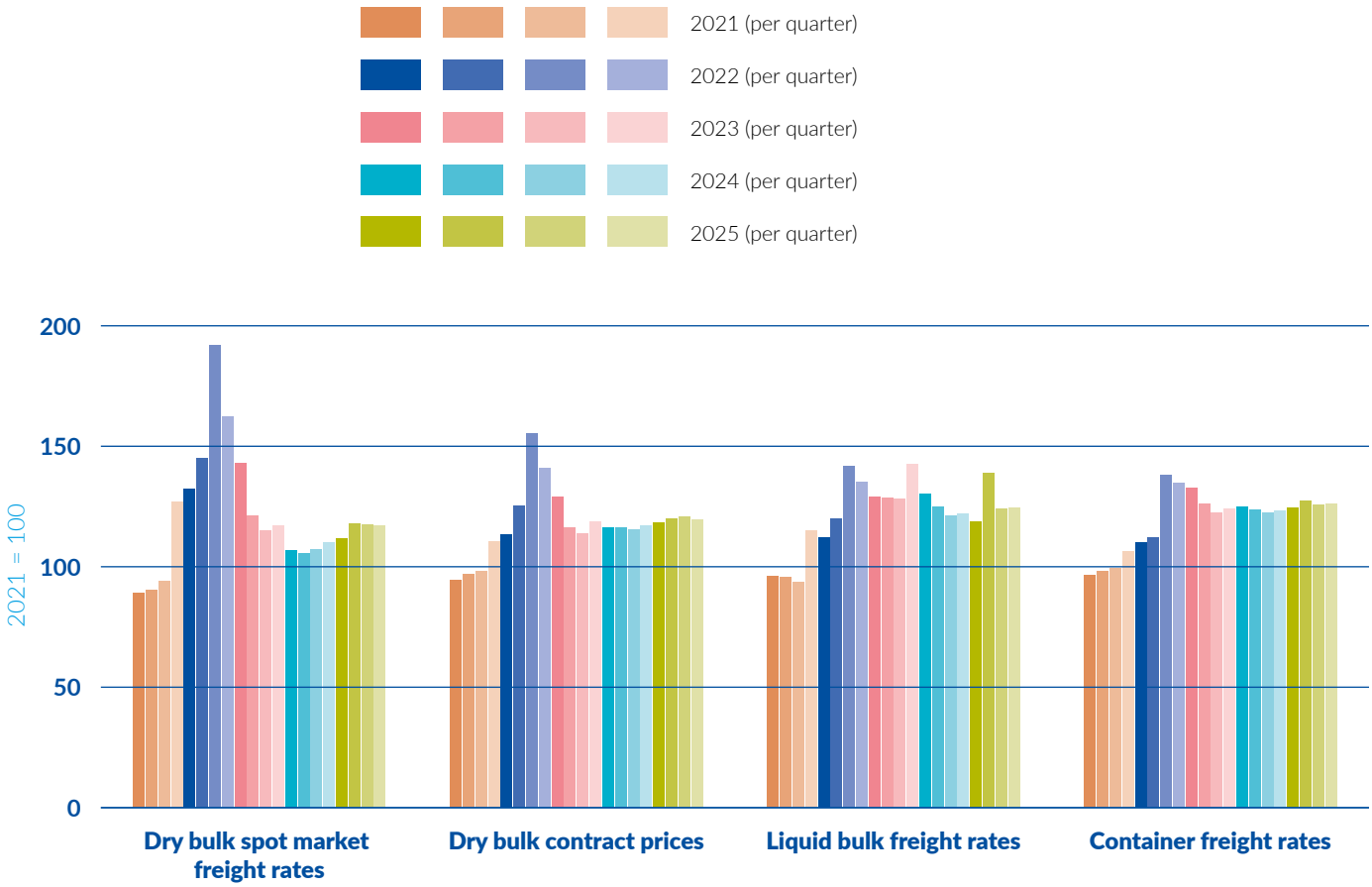
Sources: CCNR calculation based on Insights Global, Panteia, Destatis, German Central Bank (Bundesbank).
Lower Rhine = average of the destinations Duisburg and Cologne; upper Rhine = average of the destinations Karlsruhe and Basel; Main = destination Frankfurt/Main



CBS FREIGHT RATE INDEX FOR THE RHINE REGION

Statistics Netherlands (CBS) collects freight rate data from a panel of Dutch IWT companies. The price levels are based on fixed routes for which questionnaires are sent out twice a quarter. They comprise the sailing costs including fuel and low water surcharges and exclude cargo handling costs. Overall, a gradual and steady increase is observed for nominal freight rates, which temporarily spiked in 2022/23 due to low water occurrence. Yet, these nominal rates are not corrected for the cost increase.

FIGURE 6: **CBS FREIGHT RATE INDICES PER QUARTER** (2021 = 100)**, NOT ADJUSTED FOR COST INCREASE ***



Source: Statistical Office of the Netherlands (CBS) (Binnenvaartdiensten; prijsindex), Table 85817 2021=100

** The prices of established routes are observed twice a quarter and include fuel and low water surcharges but exclude loading and unloading. The time of observation is in the middle and at the end of the quarter. All prices are nominal prices.*

In order to deflate these nominal freight rate data, a cost index needs to be established, as it was done for liquid bulk transport.

TABLE 5: **STRUCTURE OF COST INDEX FOR DRY BULK AND CONTAINER TRANSPORT ON THE RHINE**

Cost component	Share in Dry bulk Transport (%)	Share in Container Transport (%)	Source of data
Fuel (Gasoil)	35%	28%	Destatis gasoil price index
Crew	25%	22%	Panteia cost monitoring
Capital	15%	22%	German Central Bank / Destatis Metal Index
Repair and maintenance	12%	10%	Panteia cost monitoring
Insurance	3%	5%	Panteia cost monitoring
Other costs	10%	13%	Panteia cost monitoring
Total	100%	100%	

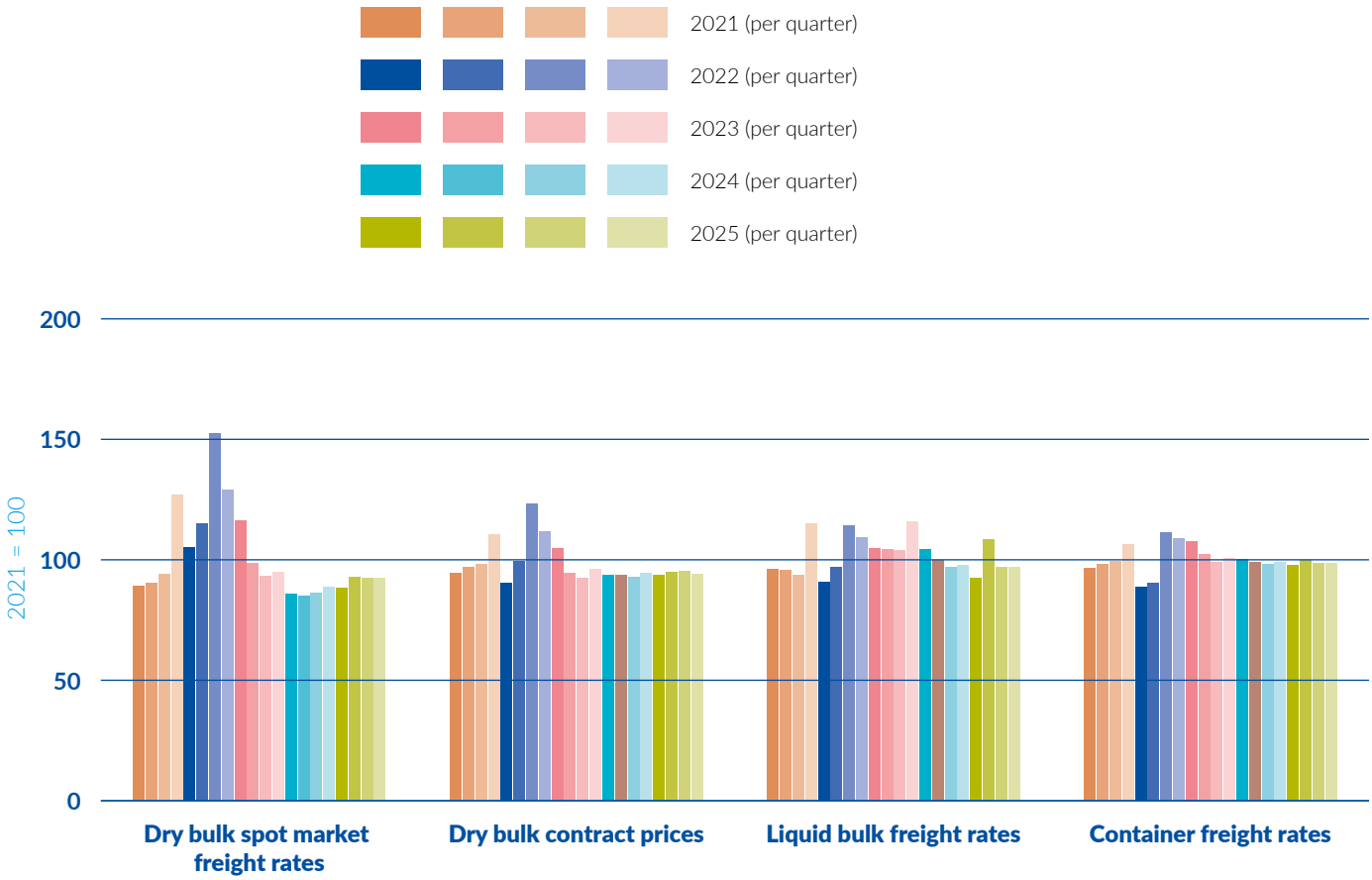
Reasons for these different shares:

- The share of fuel costs in dry bulk IWT is higher than in liquid bulk transport and in container transport since the shares of capital and insurance costs are lower.
- The capital costs and their share for container and for tanker vessels are higher as they are more expensive than dry cargo vessels.
- The higher value of the cargo in liquid cargo and container transport increases the cargo-related insurance premiums and therefore the share of insurance costs compared to dry cargo vessels.
- The other costs component has a higher share in container transport as the container liner schedules require more logistical administration and back-up service.

The graph showing the combined cost index for both market segments looks almost exactly the same as the cost increase for liquid cargo transport. The entire cost increase in dry cargo transport was +86% since 2004 and +43% since 2020. For container transport, the cost increase amounted to +83% (since 2004) and to +39% since 2020.

The adjustment of the nominal CBS freight rates for the cost increase is carried out by dividing the dry cargo rates by the dry cargo cost index (with base year 2021), and the container rates by the container cost index (with base year 2021). Likewise, the liquid cargo rates are divided by the liquid cargo cost index (with base year 2021).

FIGURE 7: **CBS FREIGHT RATE INDICES PER QUARTER** (2021 = 100)**, ADJUSTED FOR COST INCREASE**



Sources: CCNR analysis based on CBS (Binnenvaartdiensten; prijsindex), Table 85817 2021=100

The analysis reveals that cost-adjusted freight rates for the dry cargo spot market averaged 11% below the 100-point baseline during 2024 and 2025. This indicates that freight rate growth lagged behind cost increases by an average of 11% in this sector. A similar, though less pronounced, trend was seen in dry cargo contract prices, where the rate increase was 6% less than the cost rise. In contrast, liquid cargo and container transport remained relatively balanced, with rate adjustments nearly offsetting cost increases (maintaining a marginal 1% gap). Overall, this result suggests a better income evolution in liquid cargo and container transport compared to dry cargo transport but does not indicate any significant profit margins in any of these market segments.

CITBO LIQUID CARGO
FREIGHT RATE INDEX FOR THE FARAG REGION

Geography of the CITBO transport activity and product segment structure

For the liquid cargo transport within the extended ARA region, between Amsterdam, Antwerp, Flushing, Ghent, Rotterdam and Terneuzen, a dataset on spot market freight rates provided by the tanker barge cooperation CITBO[14] was analysed. The shares of the different product groups within cargo transported were as follows:

- **Gasoil and components:** share of 63% in 2025, 37% in 2024 (41% in 2023 and 38% in 2022)
- **Gasoline and components:** share of 31% in 2025, 37% in 2024 (37% in 2023 and 29% in 2022)
- **Biodiesel:** share of 2% in 2025, 13% in 2024 (18% in 2023 and 26% in 2022)
- **Chemicals:** share of 1% in 2025, 4% in 2024 (2% in 2023 and 6% in 2022)
- **Heavy products:** share of 2% in 2025, 8% in 2024 (0.2% in 2023 and 1% in 2022).

The segment of gasoil and components is by far the most important segment regarding the absolute transport volume. The share of this segment has increased strongly in 2025. Gasoil is also the core segment within mineral oil products transported on the Rhine. The share of chemicals is much lower than within the liquid cargo transport on the Rhine. The share of biodiesel declined strongly in recent years.

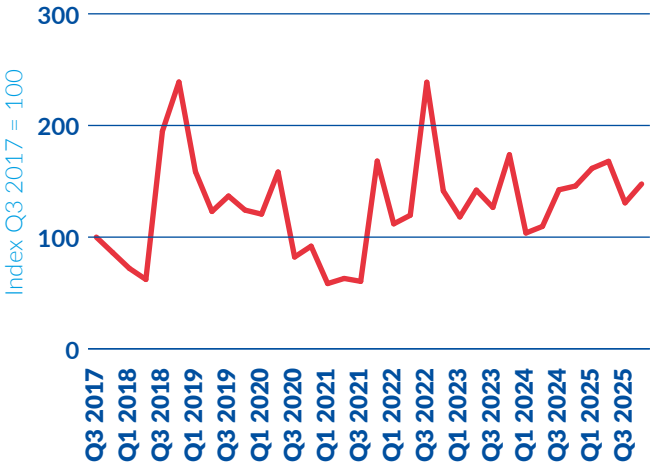
Results of the calculation of freight rate indices (spot market data)

A freight rate index was calculated for three product segments[15]. These nominal freight rate index values have been adjusted for the cost increase since the third quarter of 2017 (base period of the index). From the resulting deflated series, it can be observed that the evolution[16] shows different trends, depending on the product segment.

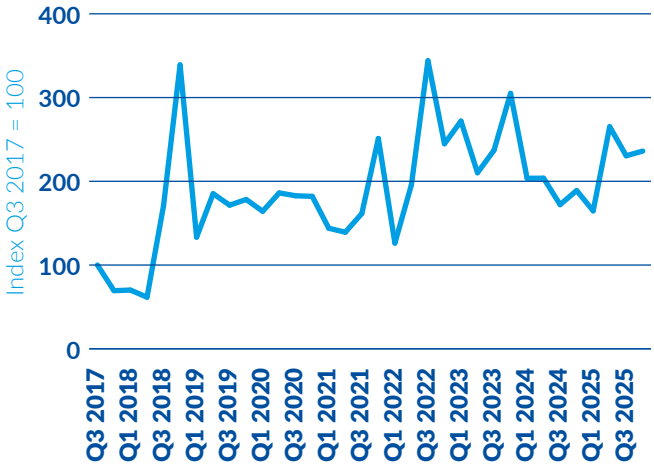
[14] Information available on the CITBO website
[15] The absolute spot market freight rate data (given in Euro per tonnes) were transformed into index figures with base period Q3 2017 = 100. For chemicals and for heavy and other products, no index could be calculated due to missing values in several financial quarters.
[16] For the cost adjustment or deflation, the cost index for liquid cargo was used which was introduced for the Insights Global freight rates data and the CBS liquid cargo freight rates data.

FIGURES 8, 9, AND 10: **CITBO FREIGHT RATE INDEX FOR LIQUID CARGO SEGMENTS** (INDEX Q3 2017 = 100)**, ADJUSTED FOR COST INCREASE ***

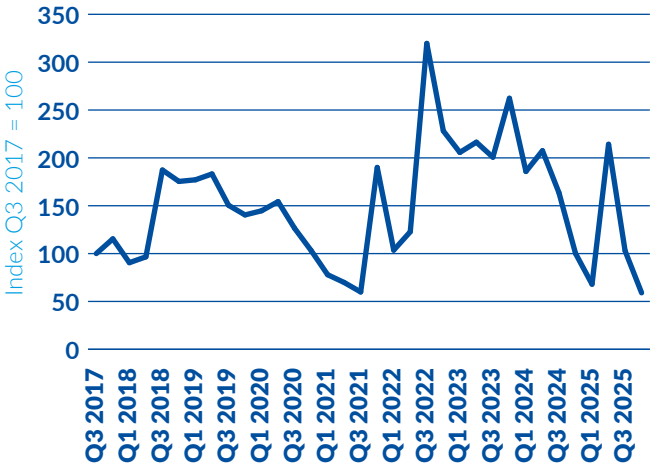
Gasoil and components



Gasoline and components



Biodiesel



Sources: CCNR analysis based on spot market data provided by CITBO and combined cost index for liquid cargo transport

Gasoline and component freight rates have followed an upward trend since the end of 2017, also in the case of cost adjusted data. For the gasoil and components freight rates, a more recent upward trend is seen as well. For biodiesel, a strong downward trend is observed.

Compared to the Rhine, the entire picture of CITBO freight rates shows less volatility during low waters. The FARAG region in the Netherlands and in Belgium, close to the North Sea, is certainly less affected by low waters than the Rhine in the hinterland.

Other influencing factors for cost adjusted freight rates are the transport demand which is linked to industry production and the overall economic situation together with the supply/demand relationship.


SAFETY FIRST
AUTOSERVIRE



04

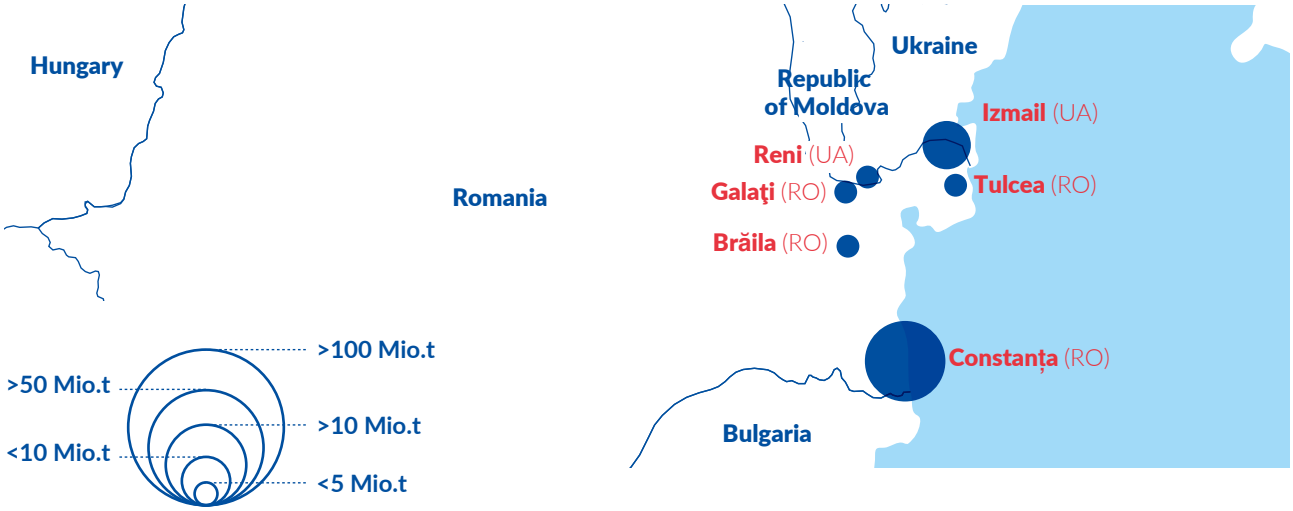
INLAND WATERWAY CARGO HANDLING IN PORTS

- **Inland waterway cargo handling in Europe's main seaports reflected the weaker economic environment in 2025. The Ports of Rotterdam, Antwerp-Bruges and North Sea Port remained the largest inland waterway hubs in Europe, but cargo handling trends diverged across ports.**
- **The Port of Rotterdam remained broadly stable, Antwerp-Bruges recorded a slight decline due to weaker liquid bulk and chemical traffic, while Hamburg recorded an increase in hinterland traffic, supported by stronger container-related activity.**
- **On the Danube corridor, the Port of Constanţa remained a key gateway for regional trade and Ukrainian exports. However, traffic continued to be influenced by changing export routes, with the reopening of the Ukrainian Black Sea seaports reducing some grain flows through the Danube and Constanţa.**

MAIN EUROPEAN SEAPORTS



Sources: ports' statistics, Destatis, CBS, Eurostat [iww_go_aport] and Danube Commission
Data from 2025.



Source: Romanian national Institute of Statistics

ROTTERDAM

In 2025, 93,680 inland vessels called at the Port of Rotterdam (91,356 in 2024).

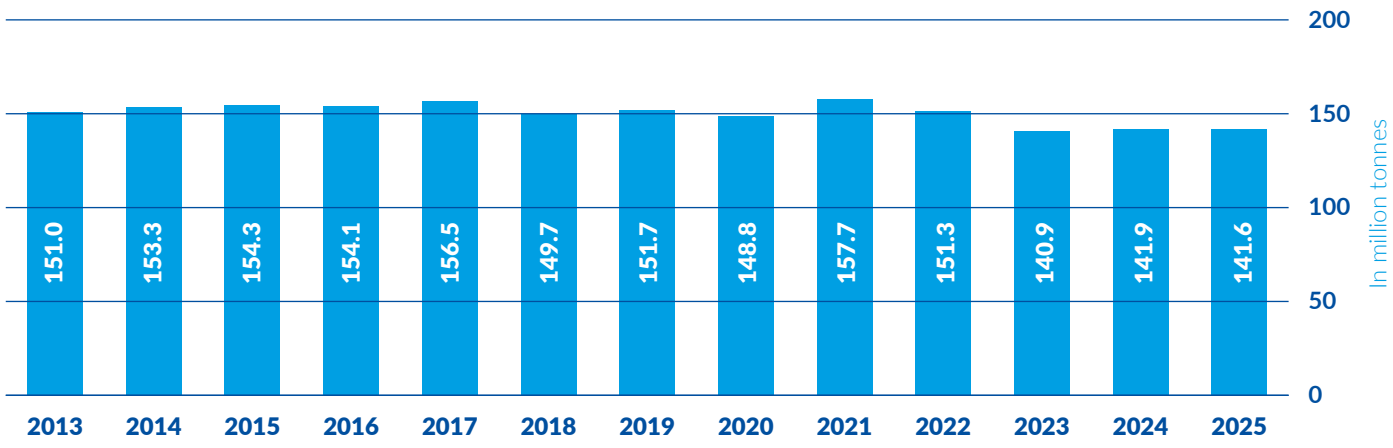
The volumes of inland waterway cargo handling at the Port of Rotterdam experienced a slight decrease of -0.2% to 141.6 million tonnes in 2025 (compared to 141.9 million tonnes in 2024). Whereas the dry bulk segment slightly increased (+0.2%), the liquid bulk segment experienced a -2.4% decline. In fact, the total maritime liquid bulk throughput was impacted by the decrease of mineral oil products and chemical products which also had consequences for IWT. This also reflects the situation observed for the transport of these two cargo segments on the Rhine (see section on the Rhine basin, chapter 2).

The container segment again showed positive results (+3.2%) in line with the upward trend observed for national container traffic in the Netherlands[17].

The IWW modal split within total throughput in 2024 was 37.1% at the Port of Rotterdam (behind pipeline (33.4%) and ahead of road (22.5%) and rail (7.1%)). The 2025 IWW modal split share within container transport to and from the hinterland was 29.8%[18] (behind road (61.2%) and ahead of rail (9.0%)).

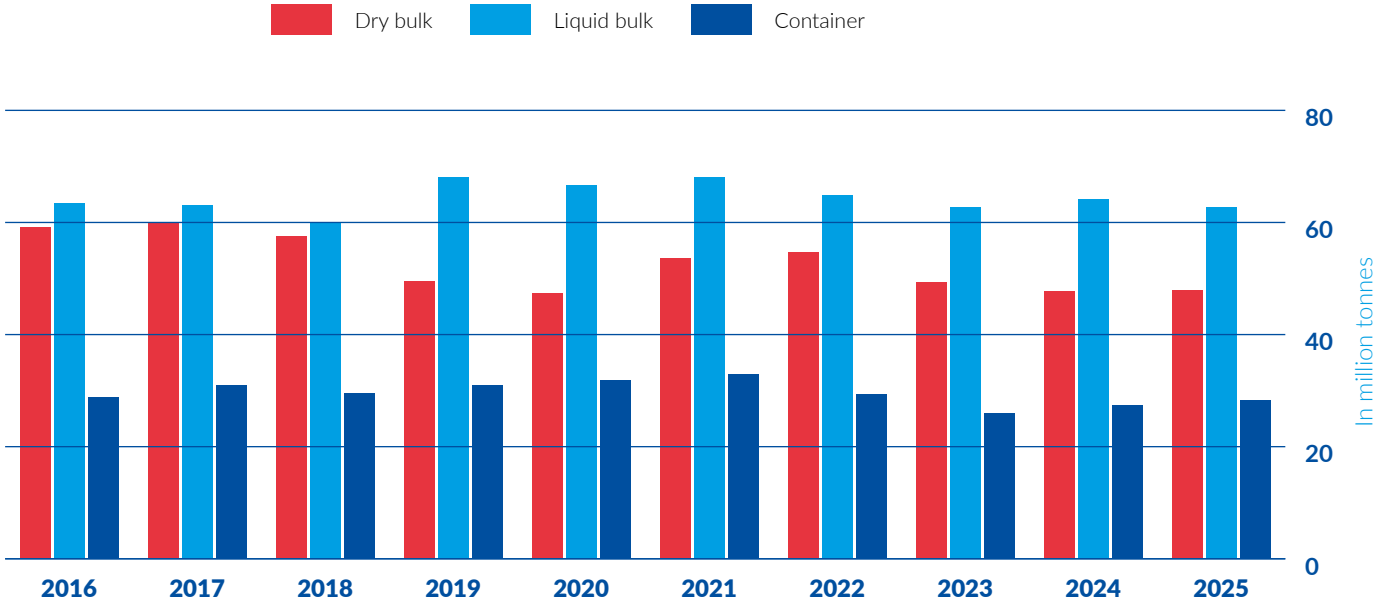
[17] Port of Rotterdam, Throughput in the port of Rotterdam shows a slight decline (26.02.2026), available on the Port of Rotterdam website
[18] - 0.5 percentage point compared to 2024

FIGURE 1: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF ROTTERDAM** (IN MILLION TONNES)



Source: CBS

FIGURE 2: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF ROTTERDAM PER TYPE OF CARGO** (IN MILLION TONNES) *



Source: CBS
** General cargo is not taken into account in these calculations. In 2025, the volume transported for general cargo amounted to 2.8 million tonnes.*

ANTWERP-BRUGES

In 2025, the number of inland vessels which called at the port decreased to 56,229 (compared to 57,223 in 2024).

Liquid bulk is the most important cargo type (approximately 60%), followed by containers (approximately 20%) and dry bulk (approximately 15%).

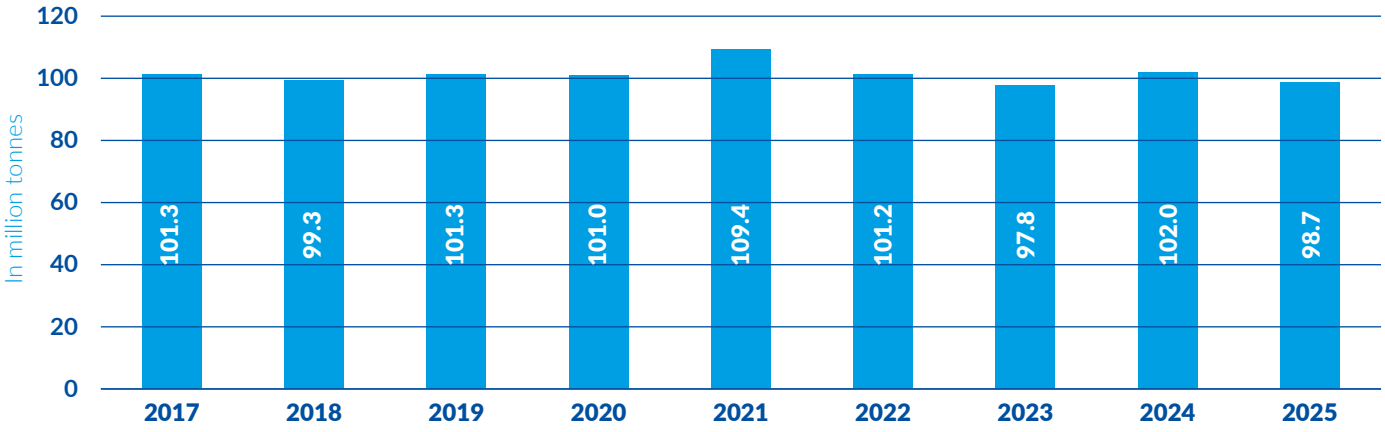
The current geopolitical tensions, economic uncertainty, and industrial action weighed on the activities of the Port of Antwerp-Bruges in 2025. The IWW cargo handling indeed slightly decreased in 2025 (-3.3% compared to 2024), reaching a volume of 98.7 million tonnes (compared to 102.0 in 2024). This result was driven by a decrease in the transport of liquid bulk (-4.8%), both for the transport of petroleum products and the transport of chemicals. In fact, gasoline exports to West Africa were lower and diesel imports were reduced on the maritime side, which negatively influenced volumes handled by inland waterways. Furthermore, the European chemicals sector has remained weak due to high energy costs in Europe, limited demand growth and reduced production.

The decrease of dry bulk (-3.0%) was mainly driven by the transhipment of agricultural products, petroleum products, crude minerals and building materials.

With regard to container transport, it remained stable between 2024 and 2025 (+0.7%).

The IWW modal split within total maritime throughput (excluding industrial traffic[19]) in 2025 was 53.4% at the Port of Antwerp (51% in 2024), the highest share since 2019. The IWW modal split share within container transport to and from the hinterland was 32.7% in 2025, ahead of rail (7.5%) and behind road (59.9%).

FIGURE 3: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF ANTWERP-BRUGES** (IN MILLION TONNES) *

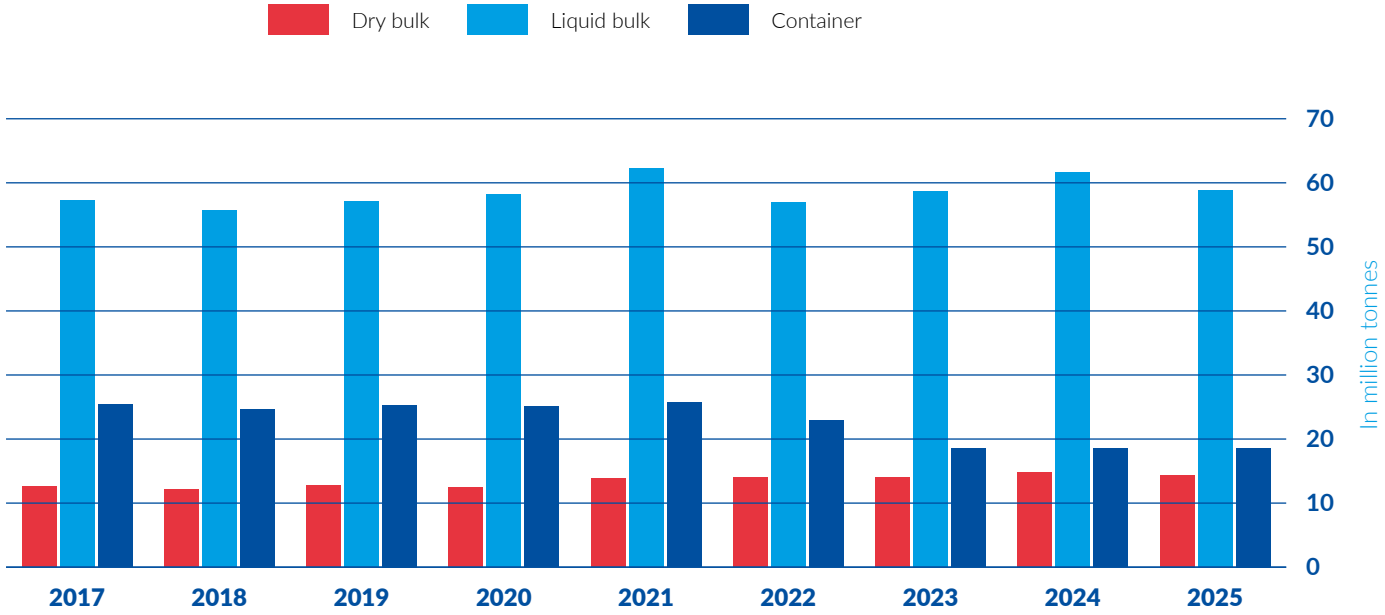


Source: Port of Antwerp-Bruges

** From 2021 onwards, figures are reported under Port of Antwerp Bruges, following the merger of the ports of Antwerp and Zeebrugge. Earlier data refer to the Port of Antwerp only.*

[19] *Industrial traffic refers to the traffic taking place directly between the industries located in the port area (such as BASF, AIR LIQUIDE, EUROCHEM...) and the hinterland.*

FIGURE 4: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF ANTWERP-BRUGES PER TYPE OF CARGO** (IN MILLION TONNES) *



Source: Port of Antwerp-Bruges
** Ro/ro, general and not assigned goods are not taken into account in these calculations (in 2025, the volume transported for these three cargo types amounted to 7.0 million tonnes mostly attributed to general goods).*
From 2021 onwards, figures for inland waterway cargo handling at the Port of Antwerp and Zeebrugge appear under the name "Port of Antwerp-Bruges".

NORTH SEA PORT

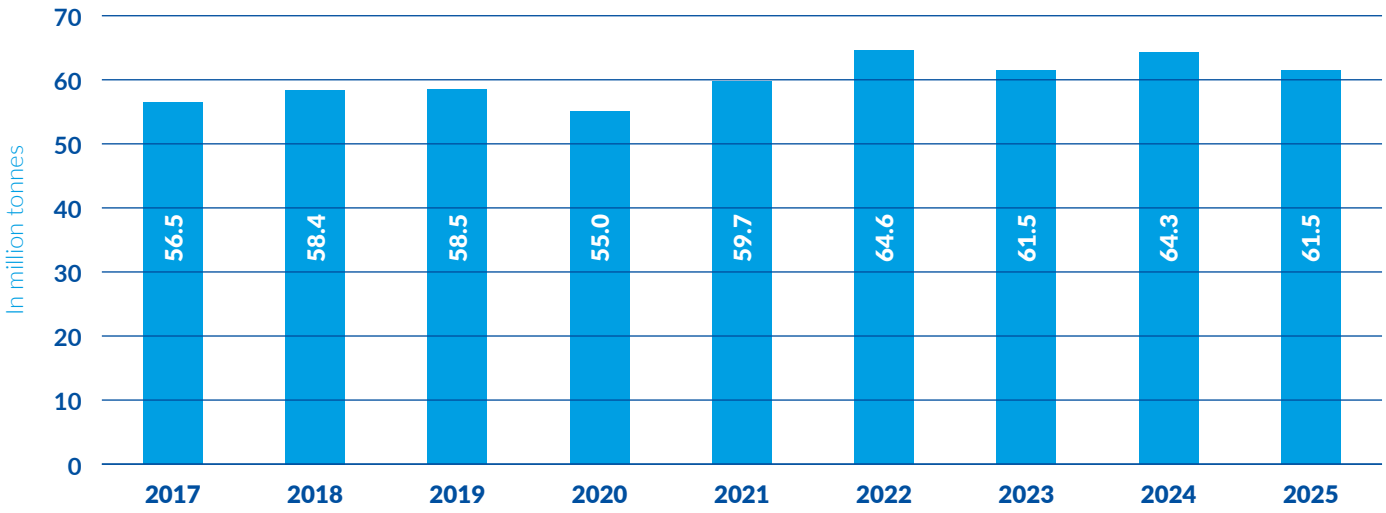
In 2025, 37,973 inland vessels called in at North Sea Port (Ghent, Terneuzen, Flushing), compared to 38,242 in 2024.

Despite a slight overall increase in maritime transhipment (67 million tonnes, +0.4%), inland waterway transhipment fell by -4.3% in 2025, reaching 61.5 million tonnes (after a strong +4.5% rise in 2024 to 64.3 million tonnes). The drop in 2025 can be partly interpreted as a catch up effect: the strong increase in 2024 created a high baseline, making a subsequent decline more likely, especially in a context of weaker macroeconomic conditions and lower industrial output.

Dry bulk experienced a sharp decrease (-8.7%, 21.3 million tonnes), driven by reduced transport of building materials (minerals, sand), iron ores and feed products. Liquid bulk also declined slightly (-0.6%, 34.3 million tonnes), reflecting lower industrial output and therefore reduced transport of chemical products. Container transport also fell (-3.2%, 2.2 million tonnes), in line with a decrease in traded manufactured goods.

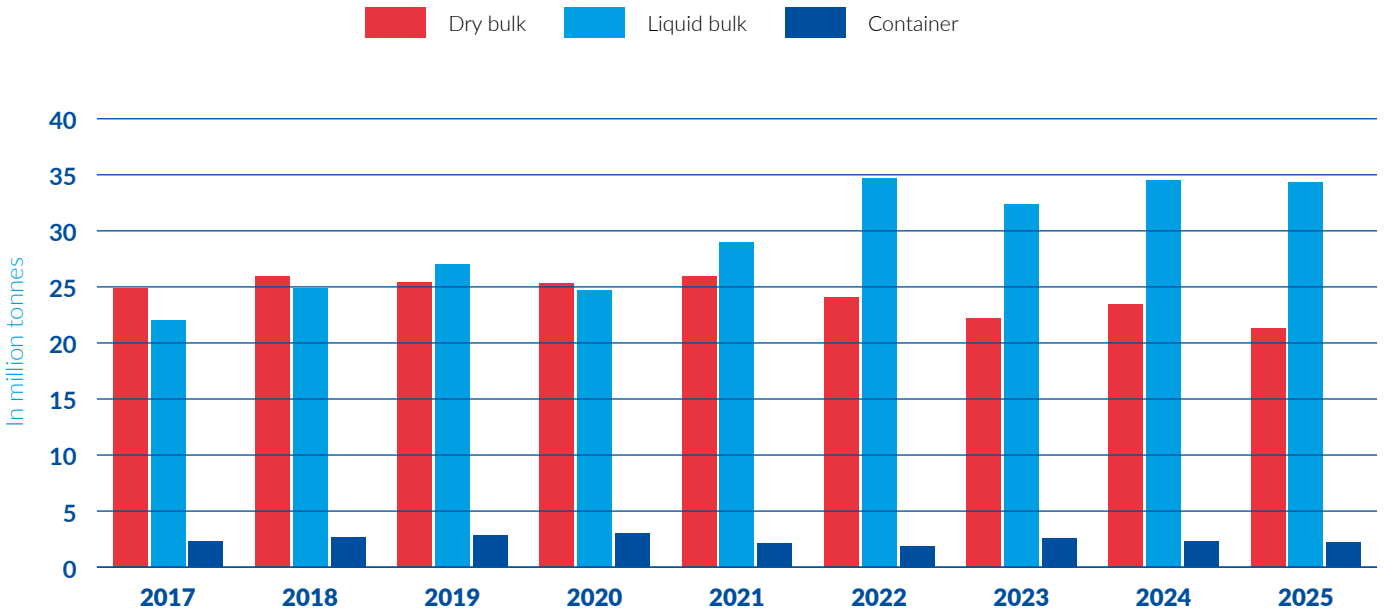
As for the modal split within hinterland transport (2024), inland navigation ranks first with a 62% share, followed by road (25%), rail (10%) and transhipment or feeder traffic (3%). Since 2018, inland waterway transport has gained 8 percentage points.

FIGURE 5: **INLAND WATERWAY CARGO HANDLING IN THE NORTH SEA PORT** (IN MILLION TONNES)



Source: North Sea Port

FIGURE 6: **INLAND WATERWAY CARGO HANDLING IN THE NORTH SEA PORT PER TYPE OF CARGO** (IN MILLION TONNES) *



Source: North Sea Port

** Ro/ro and conventional cargo are not taken into account in these calculations (in 2025, the volume transported for these two cargo types amounted to 0.1 million tonnes and 3.6 million tonnes respectively).*

CONSTANŢA

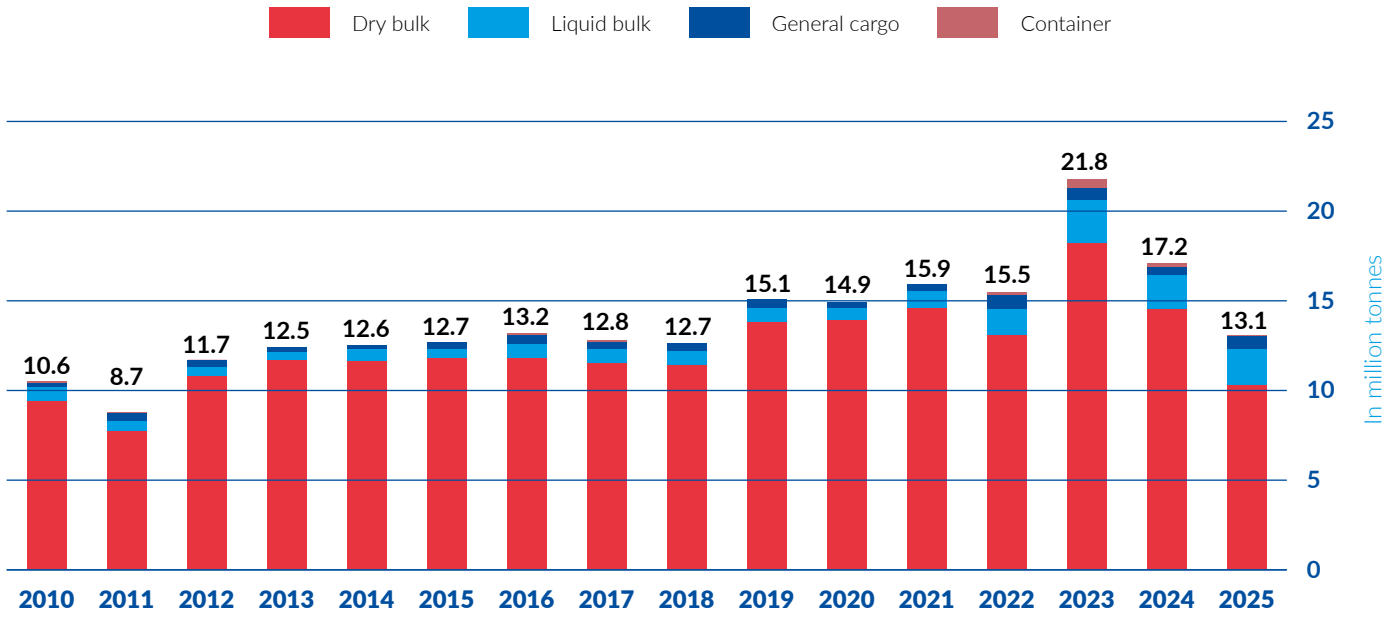
In Constanța, 9,343 inland vessels called at the port in 2025, compared with 11,085 in 2024, marking a significant reduction from the levels recorded in both 2023 and 2024. This decline mirrors the drop observed in maritime traffic and IWW traffic at the Port of Constanța. The main factor behind this trend is the resumption of activities in Ukrainian ports, which has ended the exceptional increase in transit flows through Constanța seen in 2023 and 2024 under the impulse of the EU-Ukraine Solidarity Lanes, particularly for cereal exports from Ukraine.

In 2025, IWW cargo traffic decreased by -23.8% compared with 2024, amounting to 13.1 million tonnes. This decline was driven primarily by a -38.4% drop in transit traffic, which has now returned to volumes comparable to those recorded before the start of the war.

Regarding cargo structure, dry bulk remains the dominant segment, accounting for nearly 80% of total IWT cargo handled at the port. In 2025, dry bulk volumes fell by -28.8% compared with 2024. By contrast, liquid bulk increased slightly by +0.6%. Container traffic and general cargo also declined but remain marginal segments compared with liquid bulk and dry bulk combined.

Overall, IWT traffic in Constanța continues to consist mainly of transit traffic and cabotage.

FIGURE 7: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF CONSTANŢA PER TYPE OF CARGO** (IN MILLION TONNES)



Source: Port of Constanța

HAMBURG

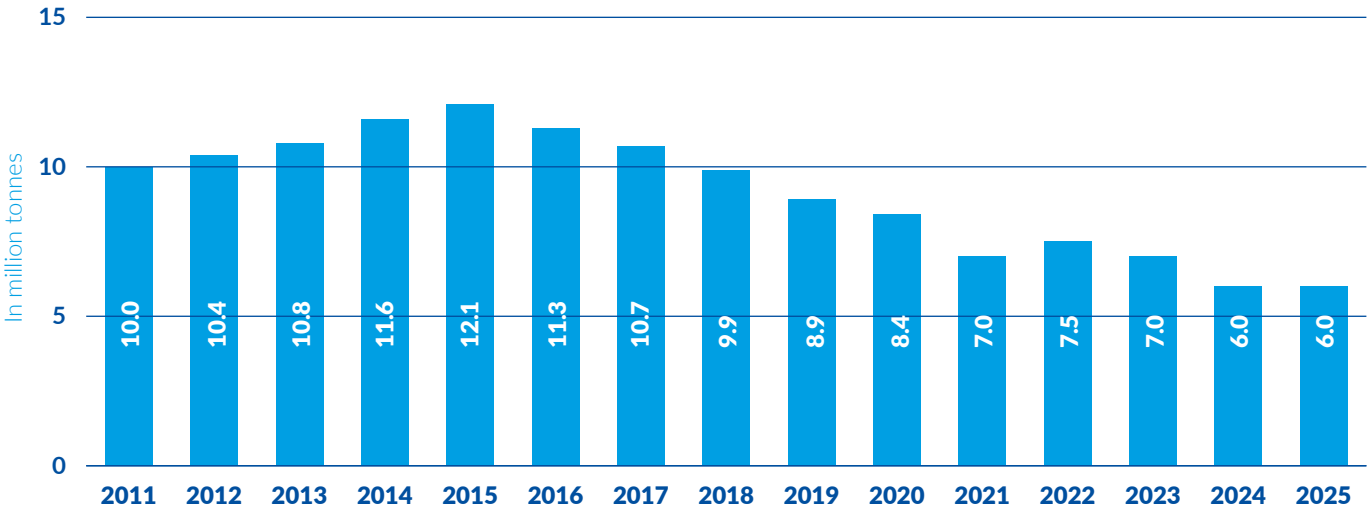
After two years of recession, the German economy recorded only marginal growth in 2025 and stabilised towards the end of the year. Nevertheless, several economic indicators showed improvements compared with 2024. In this context, IWT cargo handling increased slightly by +0.2%, reaching 6.0 million tonnes in 2025.

Overall, the Port of Hamburg recorded an increase in hinterland traffic, supported by the introduction of new liner services calling at Hamburg for the first time, including routes to Southern Europe, the Mediterranean region, and South America. These developments had a positive impact on container throughput. The inland navigation container segment benefited particularly, as reflected in a +14.8% increase between 2024 and 2025, following a continuous decline since 2021 driven by a challenging macroeconomic environment[20].

Among dry cargo, the segment of agricultural products decreased by -14.6% while the segment of sand, stones and gravel increased by +15.4% compared to 2024.

Concerning liquid cargo, despite the good results of the chemical products' segment (+37.3%), volumes declined by -4.5% between 2024 and 2025 and were mainly driven by a decline in the transport of mineral oil products (-7.6%).

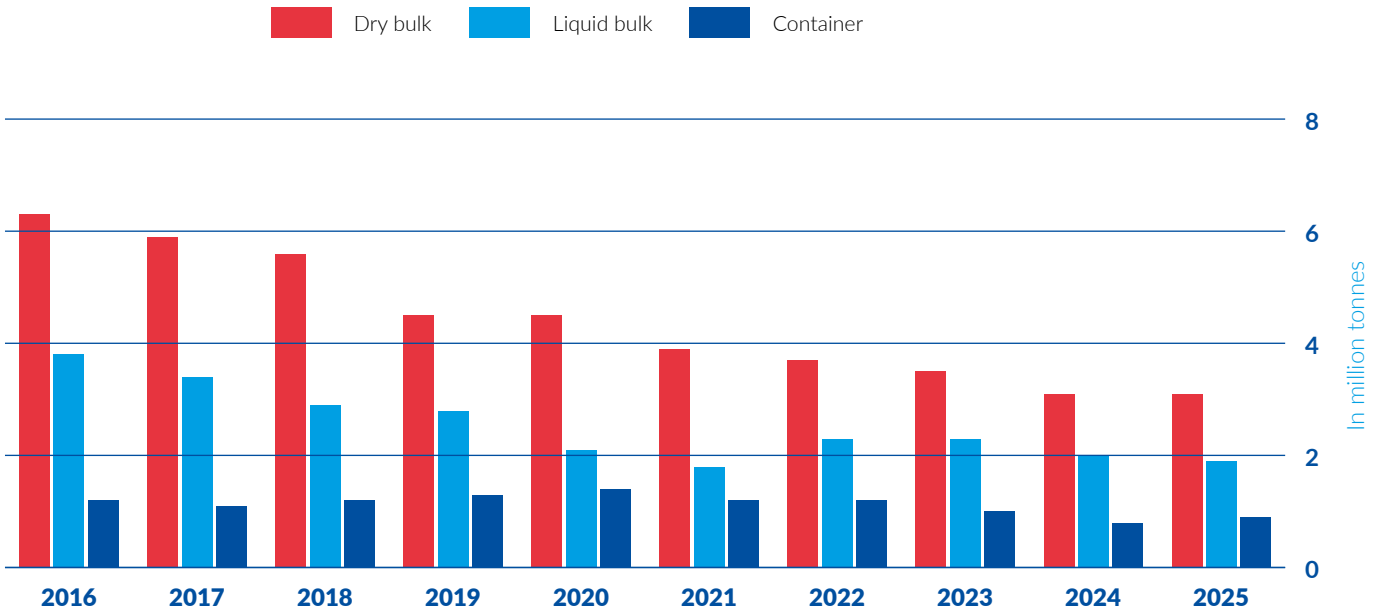
FIGURE 8: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF HAMBURG** (IN MILLION TONNES) *



Source: Statistical Office of Hamburg and Schleswig-Holstein
** General cargo is not taken into account in these calculations (in 2025, the volume transported for this cargo type amounted to 0.1 million tonnes).*

[20] *Binnenschifffahrt, Hamburger Hafen wächst robust: Hinterlandverkehr stabil (17.11.2025), available on the Binnenschifffahrt website*

FIGURE 9: **INLAND WATERWAY CARGO HANDLING IN THE SEAPORT OF HAMBURG PER TYPE OF CARGO** (IN MILLION TONNES) *****



Source: Statistical Office of Hamburg and Schleswig-Holstein

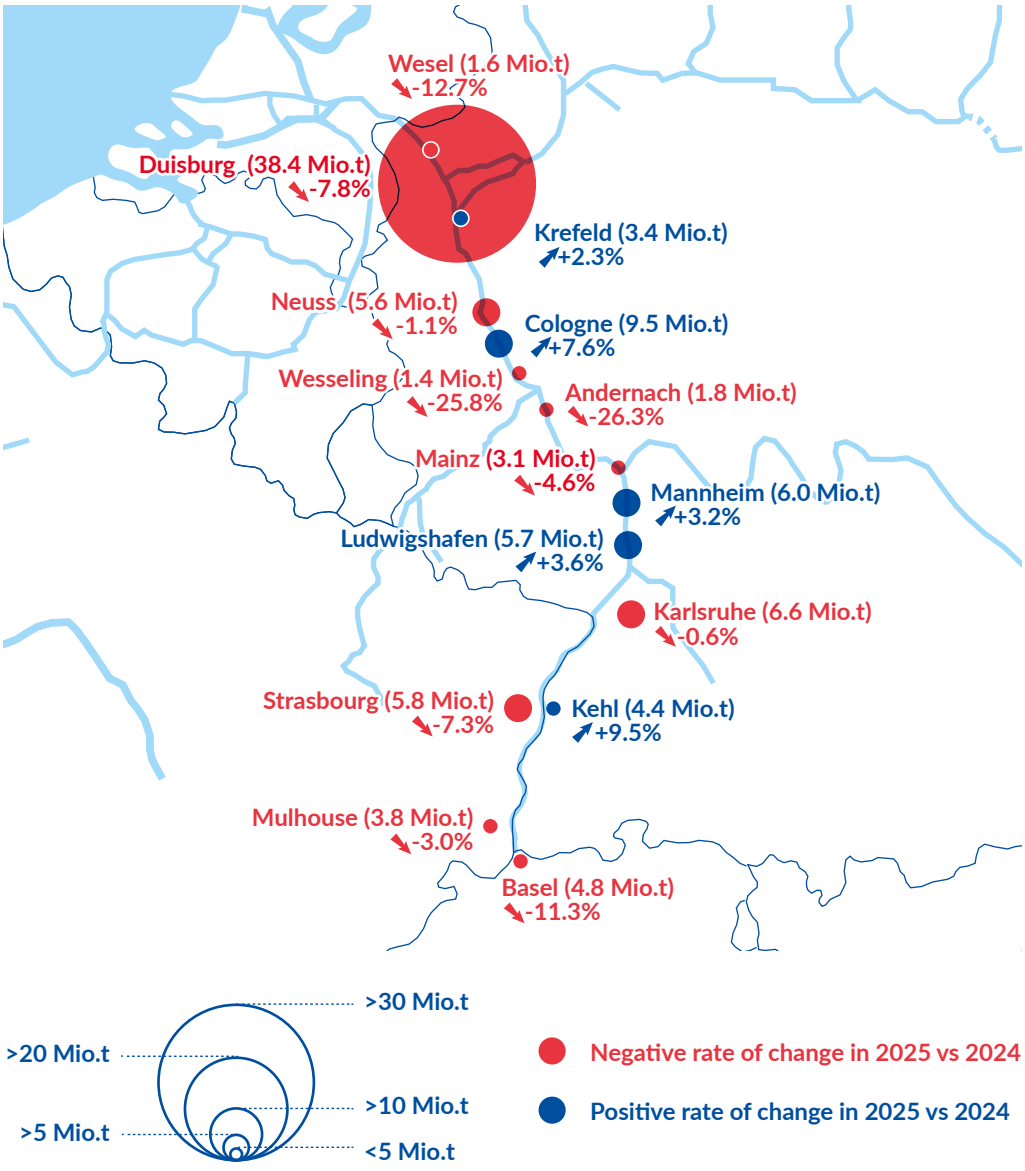
** General cargo is not taken into account in these calculations (in 2024, the volume transported for this cargo type amounted to almost 0.2 million tonnes).*

MAIN EUROPEAN
INLAND AND SEAPORTS BY REGION[21]

Data related to inland waterway cargo handling in major inland and seaports is available in the statistical annex.

TRADITIONAL RHINE PORTS

TOTAL YEARLY WATERSIDE TRAFFIC (IN MILLION TONNES) *



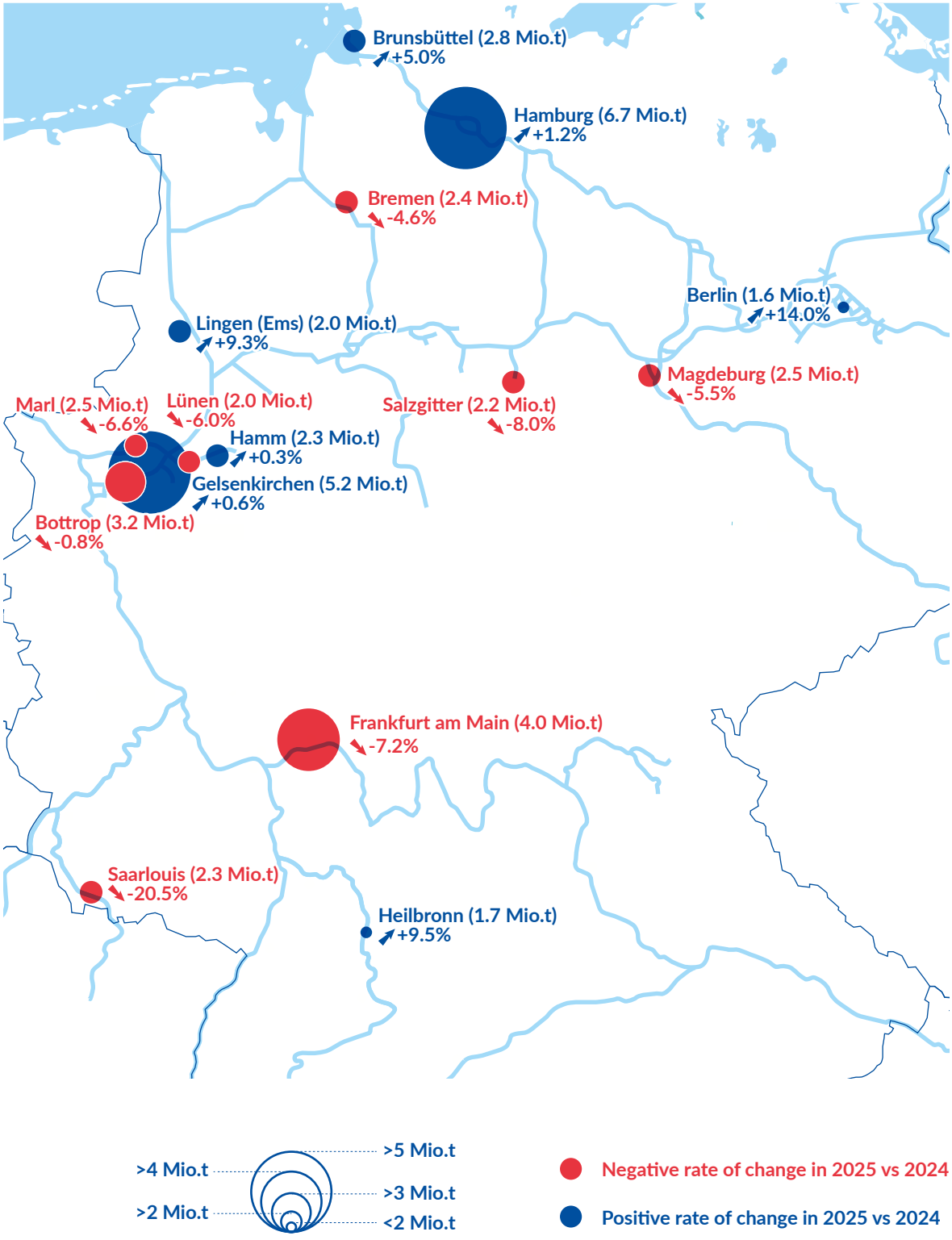
Sources: Destatis, Port of Strasbourg, Swiss Rhine ports, Port of Mulhouse

** Data on German ports are based on the geographical approach. which means that all cargo turnover within a city is taken into account. and not only the cargo handled in a specific port.*

[21] Selected according to their relevance to IWT

PORTS IN GERMANY OUTSIDE THE RHINE *

TOTAL YEARLY WATERSIDE TRAFFIC (IN MILLION TONNES)

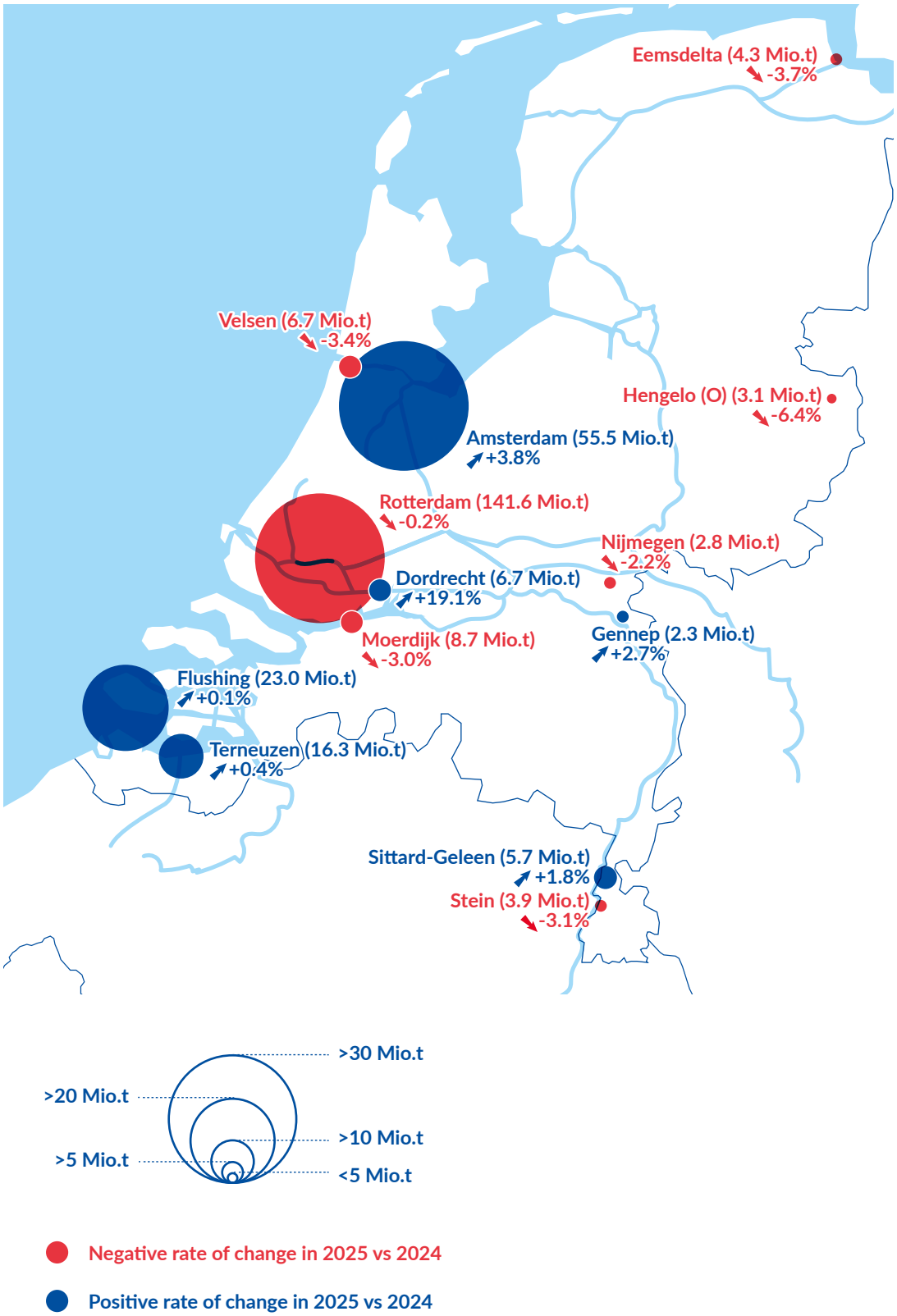


Source: Destatis

** Data on German ports are based on the geographical approach. which means that all cargo turnover within a city is taken into account. and not only the cargo handled in a specific port. For Hamburg. the figures in accordance with this approach are therefore higher than the figures of the Port of Hamburg. due to other transhipment places in the city.*

DUTCH PORTS

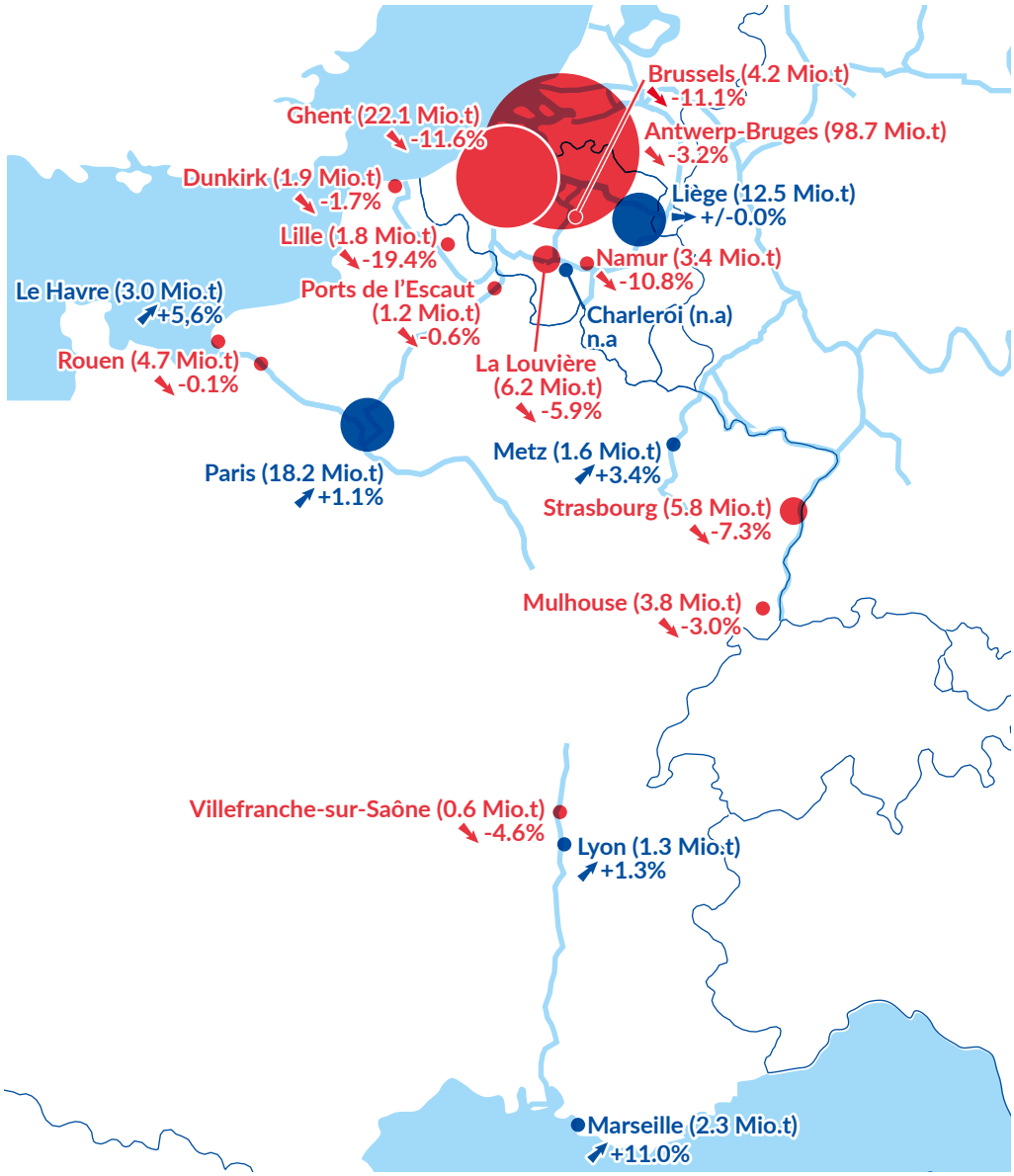
TOTAL YEARLY WATERSIDE TRAFFIC (IN MILLION TONNES)

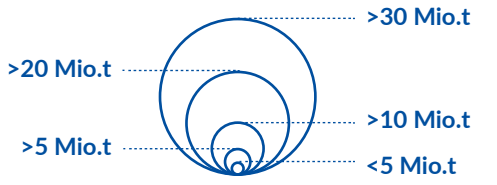


Source: CBS

FRENCH AND BELGIAN PORTS

TOTAL YEARLY WATERSIDE TRAFFIC (IN MILLION TONNES)





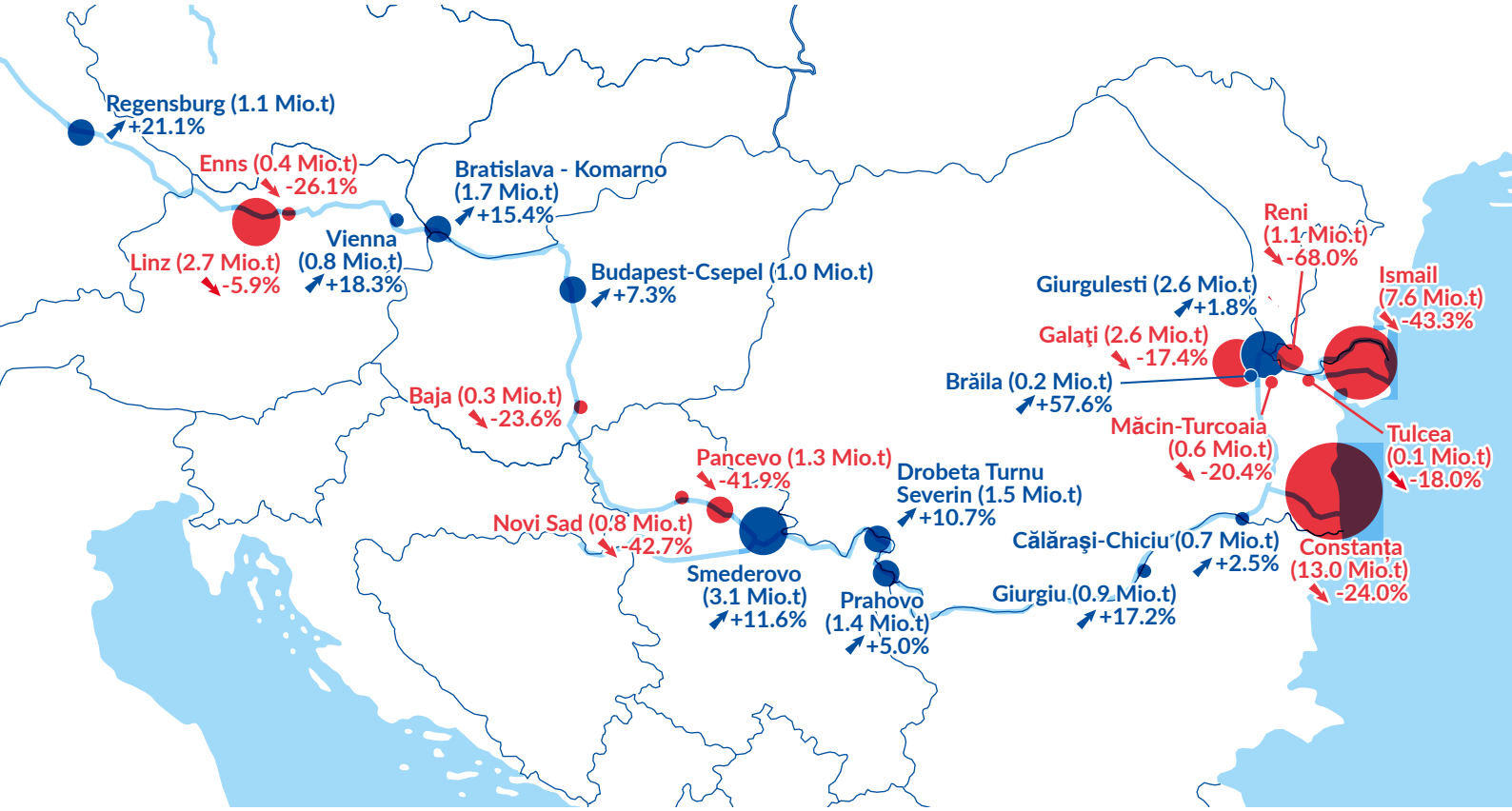
Negative rate of change in 2025 vs 2024

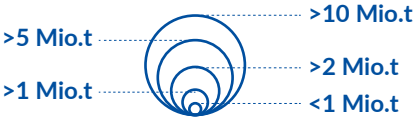
Positive rate of change in 2025 vs 2024

Sources: Voies Navigables de France (VNF), Ports of Paris, Port of Liège, Port Autonome du Centre et de l'Ouest, Port of Strasbourg, Port of Mulhouse, Port of Brussels, Port of Namur, Nouveau Port de Metz, Port of Lille, Port of Dunkirk, Port of Antwerp-Bruges, Association française des ports intérieurs (AFPI)

DANUBE PORTS

TOTAL YEARLY WATERSIDE TRAFFIC (IN MILLION TONNES)





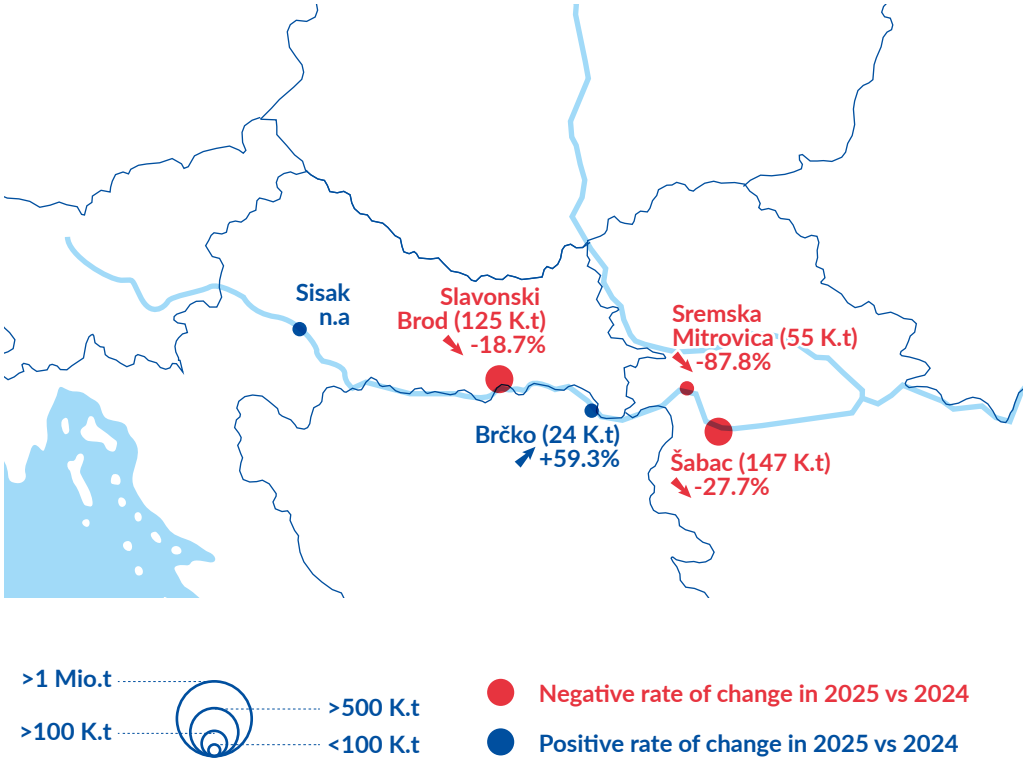
Negative rate of change in 2025 vs 2024

Positive rate of change in 2025 vs 2024

Sources: Danube Commission market observation report, Romanian National Institute of Statistics

SAVA PORTS

TOTAL YEARLY WATERSIDE TRAFFIC (IN 1,000 TONNES)



Source: International Sava River Basin Commission







05

CARGO FLEETS

- The European inland cargo fleet continued its long-term structural transformation, with larger vessels gaining importance while the number of smaller vessels continued to decline in the Rhine region.
- Newbuilding activity increased in 2025, with 87 new freight vessels entering the market. Most new dry cargo vessels were registered in the Netherlands, Germany and Belgium, while the Netherlands accounted for the majority of new tanker vessels.
- The average loading capacity of new tanker vessels increased from 5,326 tonnes in 2024 to 5,851 tonnes in 2025, confirming the trend towards larger vessels. By contrast, the average loading capacity of new dry cargo vessels fell from 4,230 tonnes in 2024 to 2,873 tonnes in 2025, with most new vessels belonging to the 2,000-3,000 tonnes category. In terms of age structure, around 80% of the dry cargo fleet was built in the 20th century, compared to only 38% of the tanker fleet, reflecting a considerably younger tanker fleet.

SIZE OF FLEETS
PER MACRO-REGION AND COUNTRY IN EUROPE

TABLE 1: **SIZE OF FLEETS** (NUMBER OF INLAND VESSELS BASED ON LATEST AVAILABLE YEARS) **PER MACRO-REGION AND VESSEL TYPE IN EUROPE**







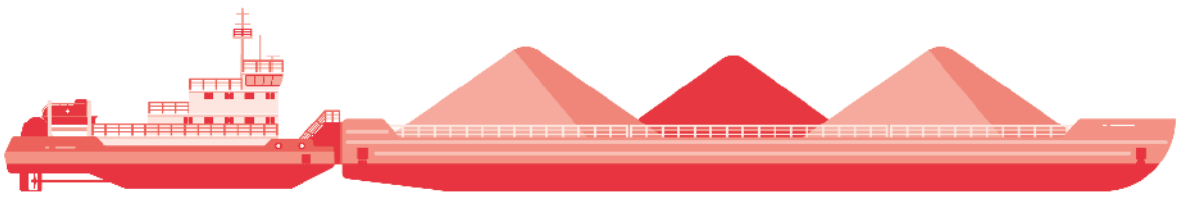
	Dry cargo vessels	Liquid cargo vessels	Push and tug boats	
RHINE FLEET	6,224	1,477	1,291	8,992
DANUBE FLEET	2,647	124	605	3,376
OTHER COUNTRIES *	786	0 #	261	1,047
	9,564 **	1,572 **	2,127 **	13,263 **

Sources: 1) Rhine countries: VNF (France), CBS/Rijkswaterstaat (The Netherlands), Institute for transport by skippers (ITB) (Belgium), WSV, Registration Duties, Estates and VAT authority of Luxembourg, Swiss Rhine ports. 2) Danube countries (German Danube fleet, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Moldova, Romania, Ukraine): Danube Commission and [iww_eq_age]. Other countries: Eurostat [iww_eq_loadcap], [iww_eq_age].

** Other countries = Poland, Czech Republic, Italy, Finland, Lithuania*

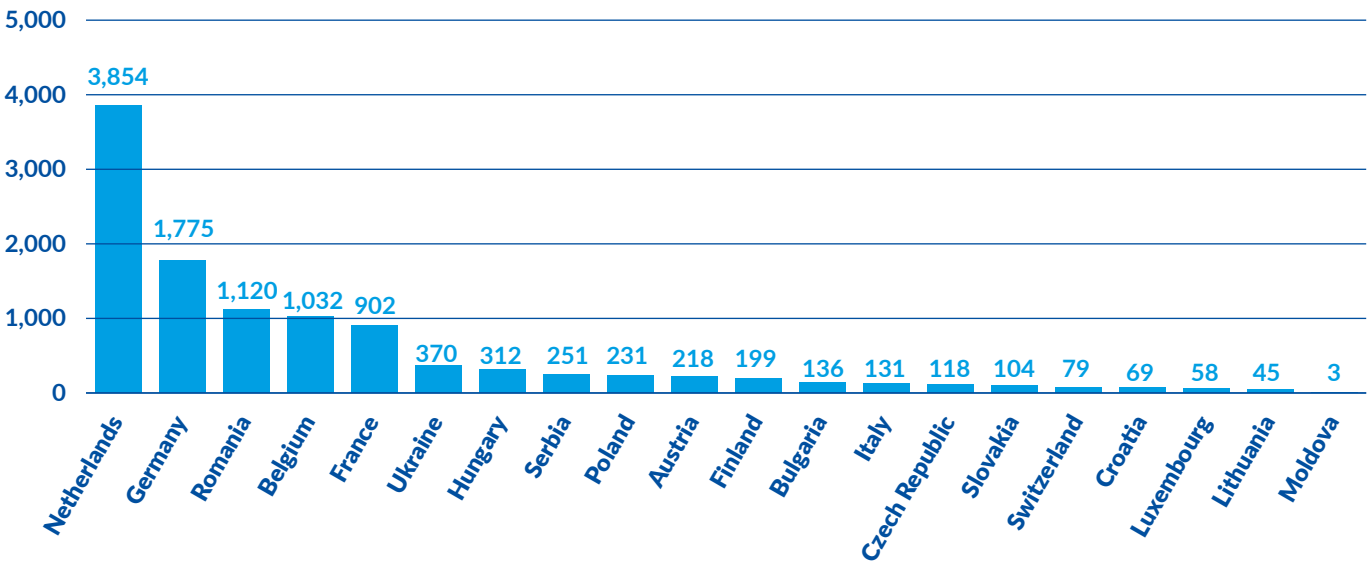
*** The figures for the total number of vessels exclude the German Danube fleet.*

Based on the existing statistics, it is not possible to identify liquid cargo vessels for other countries. The vessels in these countries were all categorised as dry cargo vessels.



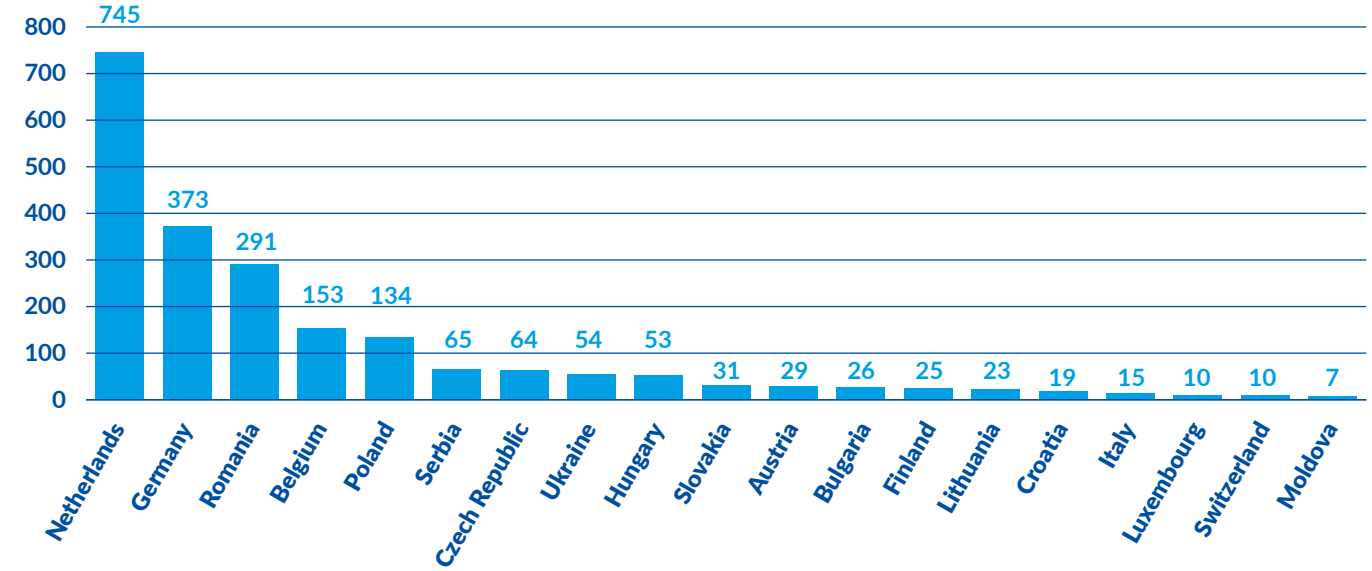
The following figures show the number of dry and liquid cargo vessels taken together (self-propelled vessels and barges) and the number of push and tug boats per country in Europe.

FIGURE 1: **NUMBER OF DRY AND LIQUID CARGO VESSELS PER COUNTRY IN EUROPE ***



Sources: Eurostat [iww_eq_loadcap], national sources for Rhine countries (Registration Duties, Estates and VAT authority of Luxembourg, Swiss Rhine ports, WSV, VNF, ITB, Rijkswaterstaat and CBS) and Danube Commission for Danube countries (Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Moldova, Romania, Ukraine)
** Rhine Data are for 2025 except Germany (2024), other countries (2024), Danube countries (2023)*

FIGURE 2: **NUMBER OF PUSH AND TUG BOATS PER COUNTRY IN EUROPE ***



Sources: Eurostat [iww_eq_age], Registration Duties, Estates and VAT authority of Luxembourg, and Danube Commission for Austria and Ukraine
** Data are from 2024, except for Italy (2017), Austria and Ukraine (2023) and Luxembourg (2025).*

EVOLUTION
OF THE RHINE FLEET

DRY CARGO FLEET IN RHINE COUNTRIES

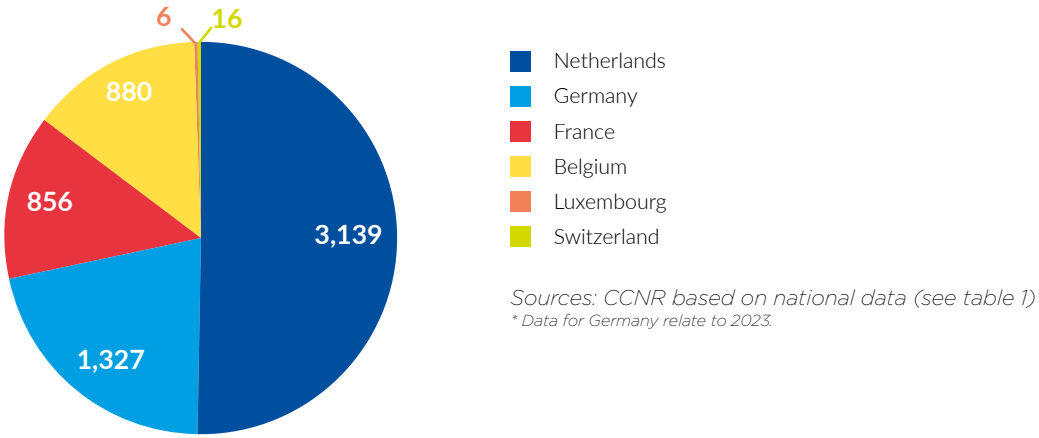
Fleet data used for this part are entirely based on national fleet data from waterway administrations. The reason for this is that a distinction between dry and liquid cargo vessels is only available in national fleet databases and in the IVR database, but not in the Eurostat databases.

Data for the Dutch fleet - which accounts for 50.0% of all dry cargo vessels in the Rhine region and for 48.0% of all tanker vessels - contain the inland vessels that are registered in the Netherlands, and which were active (in the Netherlands as well as abroad) in 2025[22].

The total number of dry cargo vessels registered in Rhine countries was, according to these sources, 6,224 in 2025, 6,337 in 2024 and 6,410 in 2023. There is a clear downward trend in the number of dry cargo vessels, according to the assembled data, at least since the year 2005. A further split of the fleet data per loading capacity category shows that this downward trend is caused by the decline in the number of small vessels (< 1,000 t of loading capacity).

Behind the Dutch fleet, which accounts for roughly half of all dry cargo vessels, the German fleet is on ranks second, with a share of 21.3%. Belgium follows (14.1%) and France in turn follows (13.8%) with similarly high shares. The fleets of Switzerland and Luxembourg together have a share of 4%.

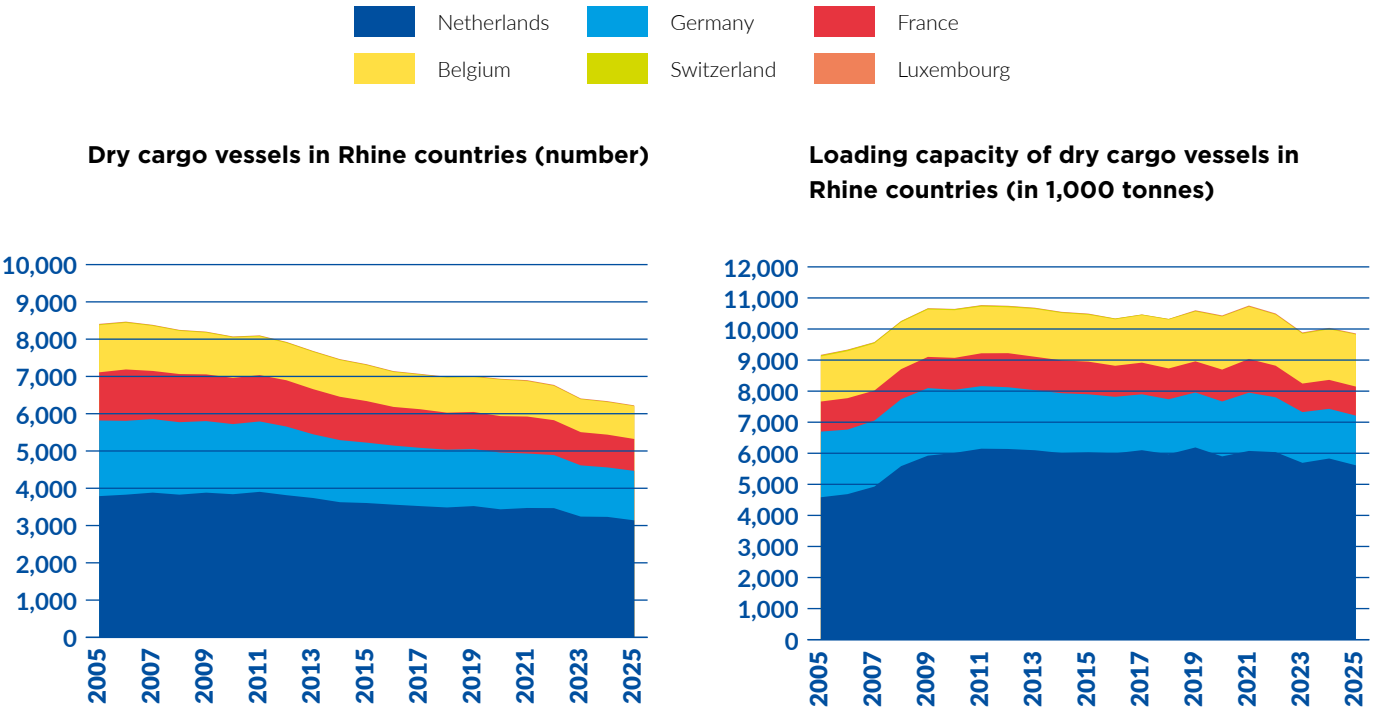
FIGURE 3: **NUMBER OF DRY CARGO VESSELS IN RHINE COUNTRIES IN 2025 ***



Sources: CCNR based on national data (see table 1)
** Data for Germany relate to 2023.*

[22] CBS receives raw data on the operative fleet in the Netherlands from the Waterway Administration (Rijkswaterstaat) and transmits them to the CCNR. These vessels are operative as they have passed measurement points in 2025 in the Netherlands.

FIGURES 4 AND 5: **DRY CARGO FLEET IN RHINE COUNTRIES ***



Sources: CCNR based on national data (see table 1)
** For Germany, data were not available for 2025, so 2024 data were used for this year.*

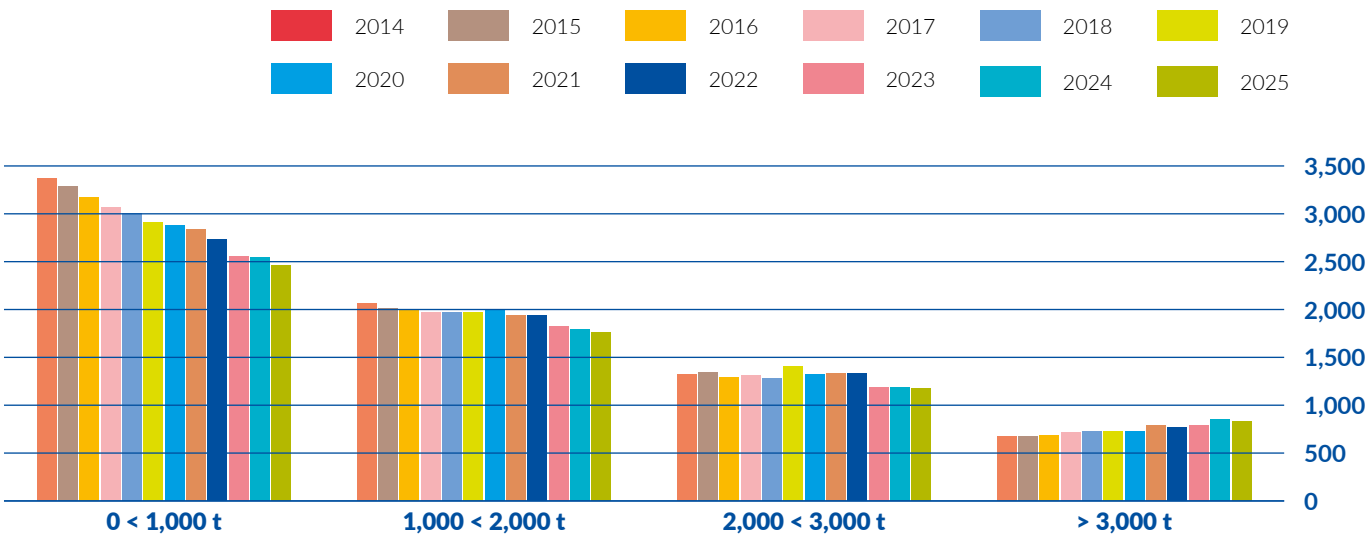
The total loading capacity of the dry cargo Rhine fleet has remained rather constant for a long time (2009-2020) but has declined in recent years (since 2021). It amounted to roughly 9.9 million tonnes in 2025. The average loading capacity per vessel was 1,584 tonnes in 2025. This parameter has followed a steady linear growth trend since the year 2005. This trend is caused by small vessels leaving the active fleet over the years, and larger vessels (though in smaller numbers) entering it.

As the graph for the number of vessels per loading capacity category shows, the small vessels are constantly losing ground in the Rhine market. From a logistical point of view, this aggravates the negative effects of climate change on Rhine navigation. Indeed, small vessels have a lower maximum draught and can still be used for cargo transport during low waters. The phasing out of small vessels is therefore increasing the vulnerability of the logistical Rhine navigation system towards low waters.

In the time period 2022-2025, vessels with a medium capacity have also reduced in numbers. This could be explained by the war in Ukraine, which induced many dry cargo vessels being sold which travelled from the Rhine to the Danube region, and which were used to export grain from the Ukraine.



FIGURE 6: **DRY CARGO FLEET IN RHINE COUNTRIES PER LOADING CAPACITY CATEGORY**

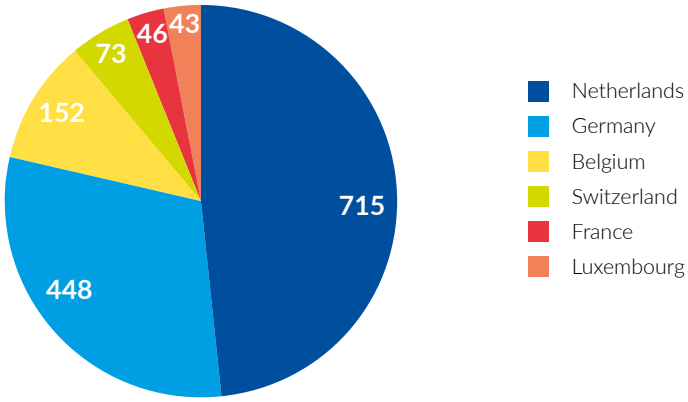


Sources: national administrations in Rhine countries, CCNR analysis

LIQUID CARGO FLEET IN RHINE COUNTRIES

The share of the Dutch fleet within all liquid cargo vessels in Rhine countries is 48%. Germany is ranked second with a share of 30%, followed by Belgium (10%), Switzerland (5%), France (3%) and Luxembourg (3%).

FIGURE 7: **NUMBER OF LIQUID CARGO VESSELS IN RHINE COUNTRIES IN 2025 ***



Sources: CCNR based on national data (see table 1)
** For Germany, data relate to 2024.*

Within the evolution of the total number of tanker vessels since 2005, three different phases can be distinguished:

1) An increasing trend up until 2010, due to the investment in new double hull vessels that were requested in the framework of the transition from single hull to double hull tankers.

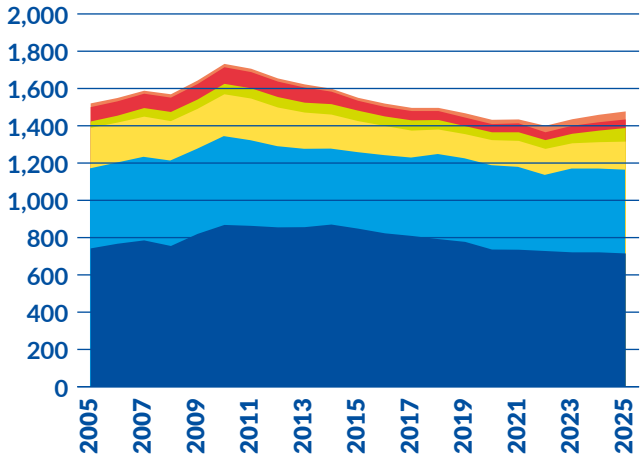
2) A declining trend between 2011 and 2022. This was caused by the phasing out of single hull tankers from the market, due to the transition rules.

3) Since 2022, the total number of tanker vessels has increased again. The market for newbuild picked up again, after the adjustment between 2010 and 2022, and promoted by banks' willingness to give loans to the large companies in tanker shipping.

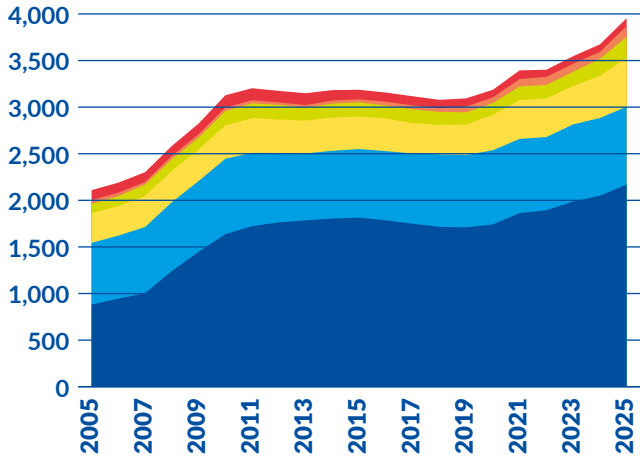
FIGURES 8 AND 9: **LIQUID CARGO FLEET IN RHINE COUNTRIES ***



Liquid cargo vessels in Rhine countries (number)



Loading capacity of liquid cargo vessels in Rhine countries (in 1,000 tonnes)



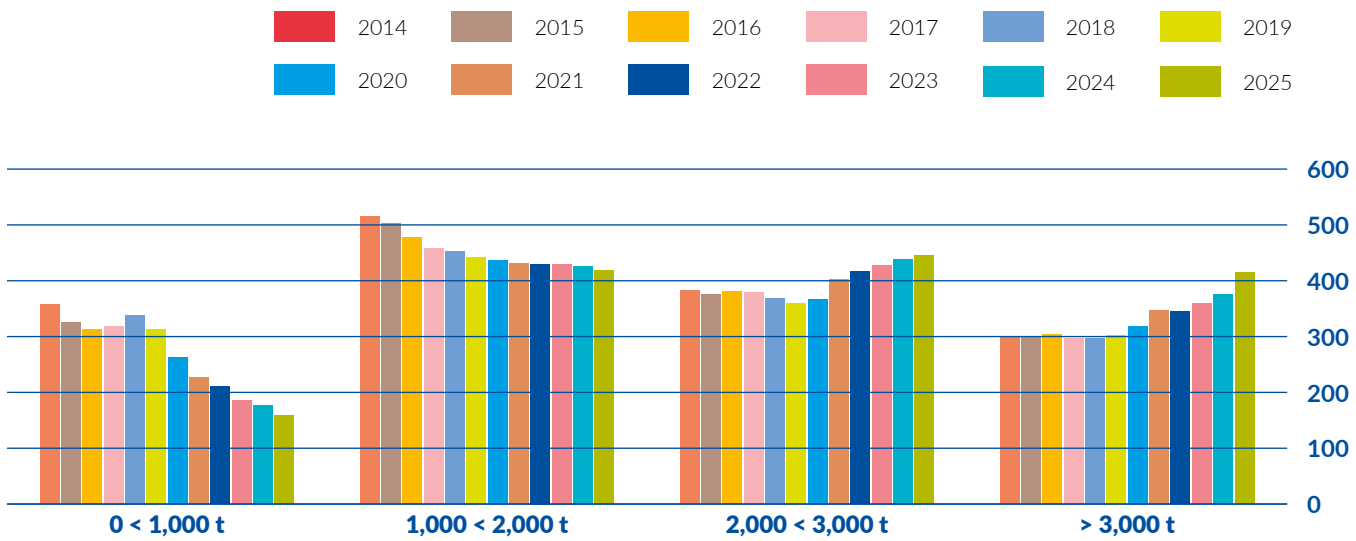
Sources: CCNR based on national data (see table 1)
** For Germany, data were not available for 2025, so 2024 data were used for this year.*

The number of liquid cargo vessels in Rhine countries was 1,477 in 2025, reflecting an increasing trend since 2022 (1,459 vessels in 2024, 1,435 in 2023, 1,400 in 2022).

The loading capacity of the entire tanker fleet has already increased since 2019, from 3.09 million tonnes of deadweight in 2019 to nearly 4.0 million tonnes in 2025 (+28%). This is a substantial increase within a short period of time.

As is the case for dry cargo vessels, the average loading capacity of liquid cargo vessels follows a linear growth trend. The average loading capacity of a tanker vessel in Rhine countries amounted to 2,677 tonnes in 2025, compared to 2,109 tonnes in 2019. Since the year 2005, the average capacity of a Rhine tanker has almost doubled (+93%).

FIGURE 10: **LIQUID CARGO FLEET IN RHINE COUNTRIES PER LOADING CAPACITY CATEGORY**



Sources: national administrations in Rhine countries, CCNR analysis



II EVOLUTION OF THE DANUBE FLEET[23]

According to statistics of the Danube Commission (DC) (with clarification based on surveys of shipping companies in its Member States), by the end of 2023, 77% of the Danube fleet was composed of dry cargo vessels (2,647), 20% push boats and tugs (682) and 3% were tanker vessels (124).

DRY CARGO FLEET IN THE DANUBE REGION

According to statistics of the Danube Commission (with clarification based on surveys of shipping companies in its Member States), by the end of 2023, 381 self-propelled dry cargo vessels were in operation, together with 2,119 dry cargo barges, with a total cargo capacity of around 3.2 million tonnes[24]. The Romanian dry cargo fleet is the largest in the Danube area with a share of around 42% of all dry cargo vessels.

Dry cargo shipping on the Danube is predominantly carried out by means of convoys (pushed convoys, coupled formations as well as pushed-coupled convoys), and only a small share by individual motor cargo vessels. In 2025, for the upper Danube at the lock of Gabčíkovo, 48% of all cargo was transported in pushed convoys. For the middle Danube at Mohács, the share of pushed convoys within total transport was 70%. For the lower Danube, the share of pushed convoys within total transport was even higher.

LIQUID CARGO FLEET IN THE DANUBE REGION

According to statistics of the Danube Commission (with clarification based on surveys of shipping companies in its Member States), by the end of 2023, 36 self-propelled tanker vessels were in operation, together with 72 tanker barges, with a total cargo capacity of around 0.16 million tonnes[25].

[23] Source: Danube Commission, Yearbook of statistics 2023. For the German fleet, only the German Danube fleet is considered within the Danube fleet data.
[24] Idem
[25] Idem

NEW VESSEL CONSTRUCTION

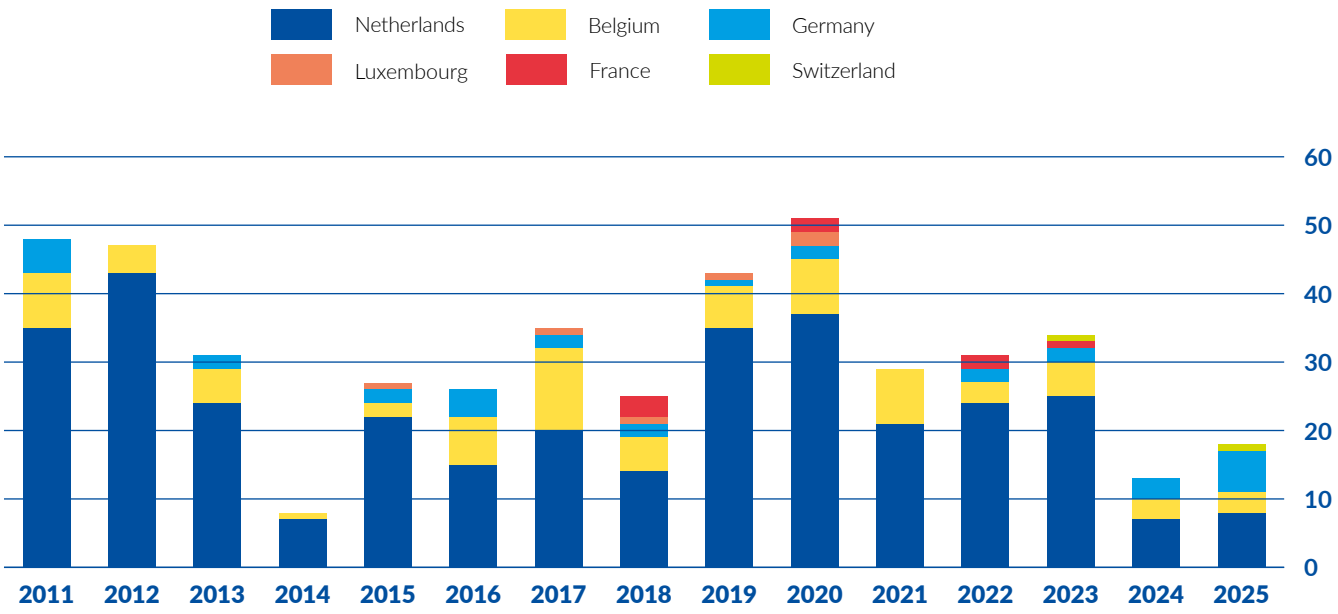
IN RHINE COUNTRIES[26]

In 2025, newbuilding activity has shown an increase compared to 2024, with a total of 87 newly built freight vessels. This was the case for dry cargo vessels (18 new dry cargo vessels in 2025 compared to 13 new dry cargo vessels in 2024) and tanker vessels (67 tanker vessels in 2025 compared to 38 tanker vessels in 2024). According to the IVR newbuilding data, two new push boats (registered in Belgium and the Netherlands) were delivered in 2025 (compared to 1 in 2024). The recovery in transport demand, along with the need for fleet modernisation, could be considered as reasons for the rebound in the newbuilding rate. It is also worth noting that vessels classified under the category "Other", such as patrol, floating equipment or service vessels, are not included in the graphs presented below[27].

Dry cargo

The majority of the new dry cargo vessels entering the market in 2025 are registered in the Netherlands (8 out of 18), followed by Germany (6 out of 18) and Belgium (3 out of 18).

FIGURE 11: **NEW DRY CARGO VESSELS COMING ON THE MARKET PER COUNTRY OF REGISTER** (NUMBERS, 2011-2025)



Source: IVR

[26] *The Netherlands, Germany, Belgium, France, Switzerland, Luxembourg*
[27] *In 2025, 3 new floating equipment and 1 service vessel were commissioned.*

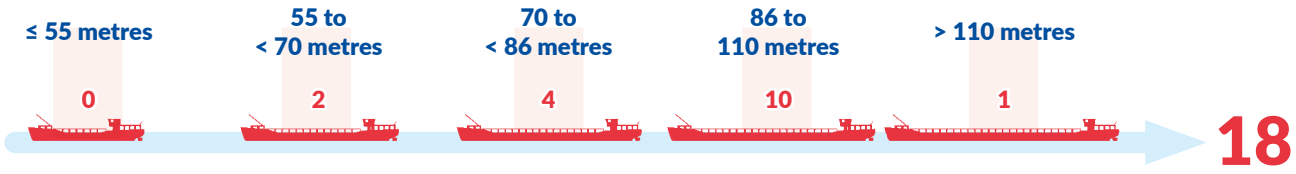
The most common loading capacity for newly built dry cargo vessels in 2025 was in the 2,000 < 3,000 tonnes range. The average loading capacity of new dry cargo vessels in 2025 amounted to 2,873 tonnes compared to 4,230 tonnes in 2024.

TABLE 2: **NEWLY BUILT DRY CARGO VESSELS ACCORDING TO LOADING CAPACITY**



Source: IVR
Estimations for deadweight tonnage value were made in the previous years. Total numbers contain vessels for which no deadweight tonnage value is known, which explains the possible differences between the overall totals and the sum of vessels sorted by their loading capacity in each column.

TABLE 3: **NEWLY BUILT DRY CARGO VESSELS IN 2025 BY LENGTH**

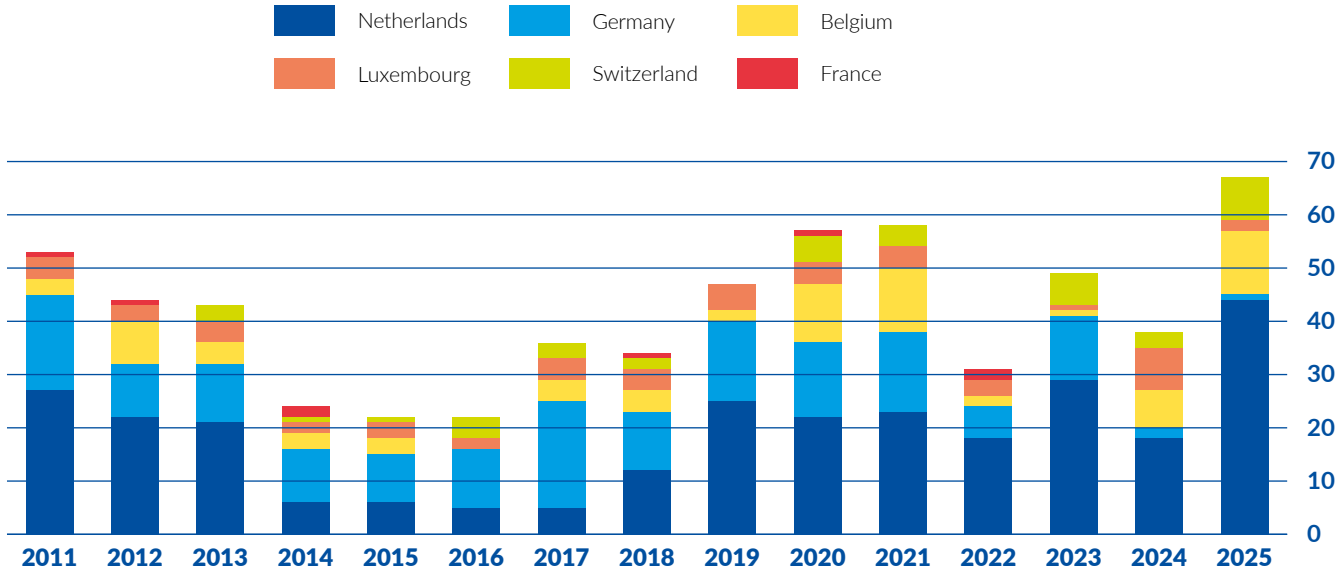


Sources: IVR, CCNR analysis
Total number contains 1 vessel for which no value for length is known, which explains the difference between the overall total and the sum of vessels sorted by length in each column.

Liquid cargo

According to the IVR database, 67 new tanker vessels entered the market in 2025, an increase compared to 2024, when 38 were delivered. The majority of the new vessels are registered in the Netherlands (44), followed by Belgium (12), Switzerland (8), Luxembourg (2) and Germany (1). Together with the increase in the number of vessels, the new loading capacity was also higher in 2025 than in 2024 (see text further below).

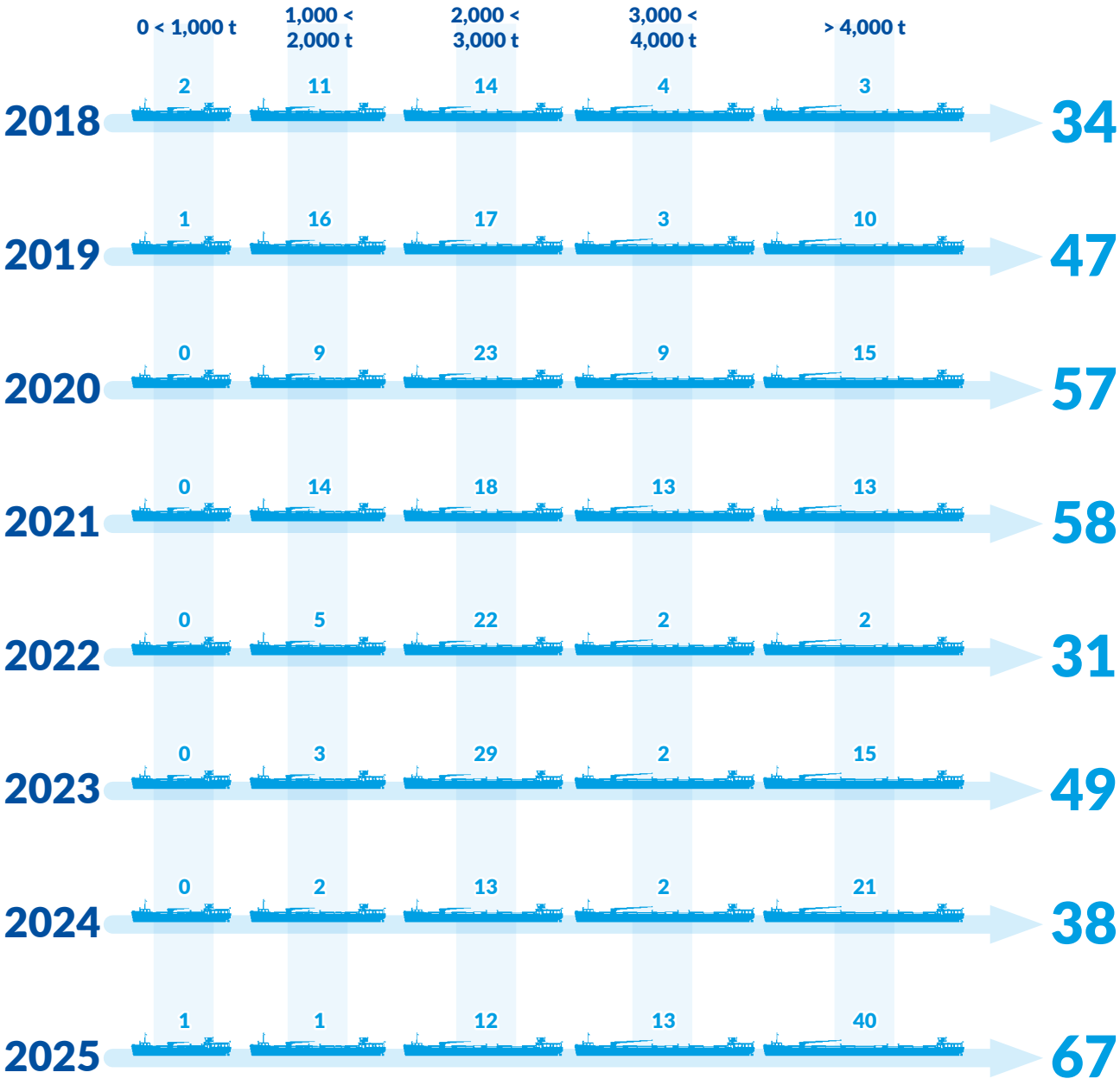
FIGURE 12: **NEW LIQUID CARGO VESSELS COMING ON THE MARKET PER COUNTRY OF REGISTER** (NUMBERS, 2011-2025)



Source: IVR

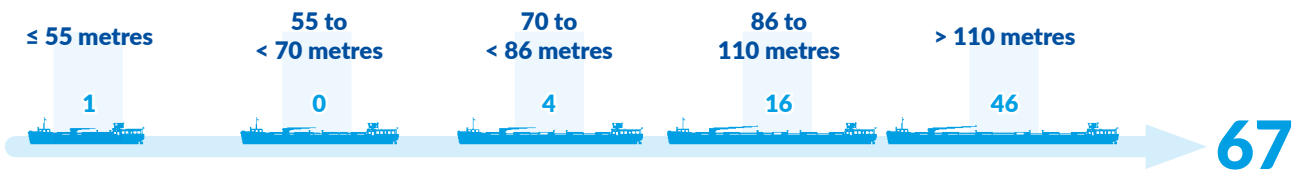
The most common loading capacity of the new tanker vessels is in the category "> 4,000 tonnes," with 40 new tanker vessels in 2025. The overall estimated average loading capacity increased from 5,326 tonnes in 2024 to 5,851 tonnes in 2025. This is solely explained by the high number of newbuilt vessels in the > 4,000 tonnes category in 2025 (40) compared to 2024 when 21 such vessels were built. In general, an increasing number of vessels are built to have a loading capacity exceeding 4,000 tonnes, often exceeding this threshold by several thousand tonnes, confirming the trend towards larger vessels being built in the liquid cargo segment observed in recent years.

TABLE 4: **NEWLY BUILT LIQUID CARGO VESSELS ACCORDING TO LOADING CAPACITY**



Sources: IVR, CCNR analysis
Note that in 2025, for 18 newly built vessels, the deadweight was partly estimated due to initially missing values. Estimations were also made in the previous years. Total numbers contain vessels for which no deadweight tonnage value is known, which explains the possible differences between the overall totals and the sum of vessels sorted by their loading capacity in each column.

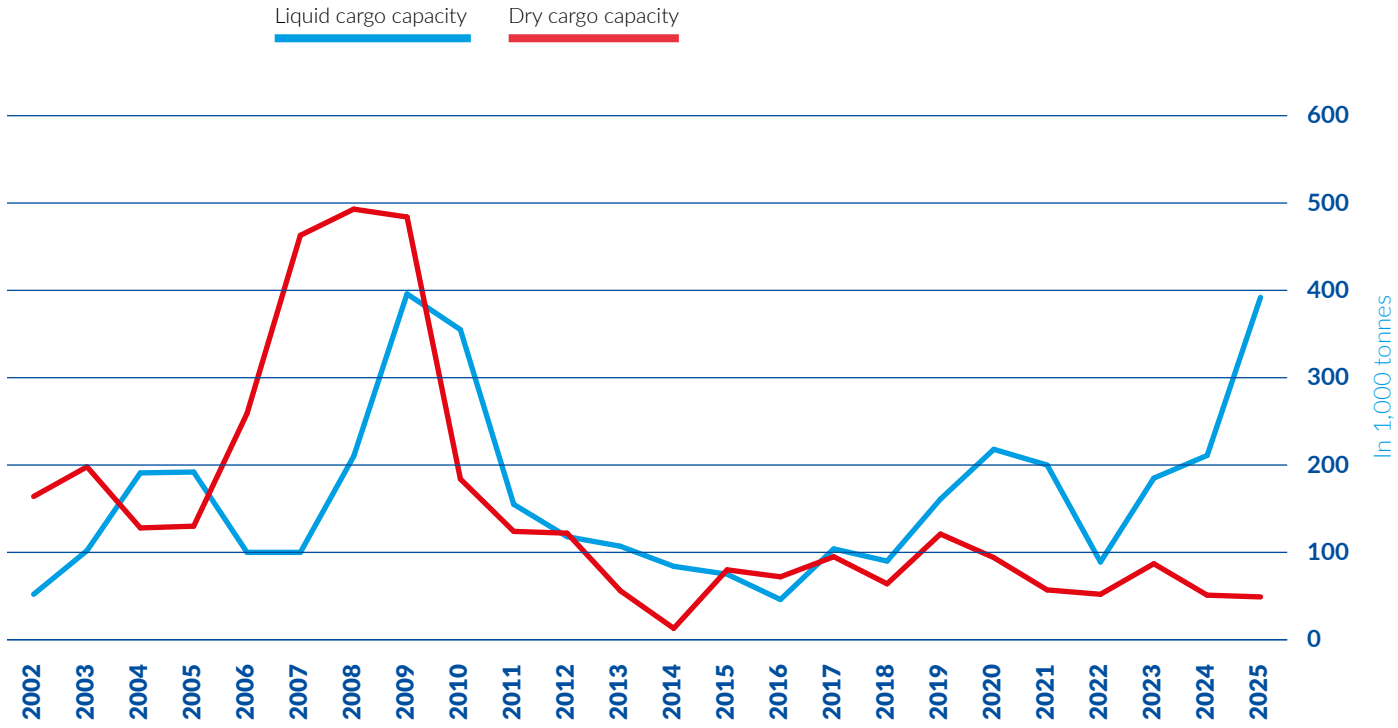
TABLE 5: **NEWLY BUILT TANKER VESSELS IN 2025 BY LENGTH**



Sources: IVR, CCNR analysis

Figure 13 illustrates the new loading capacity for dry and liquid cargo vessels entering the market by year. Following a prolonged post-financial crisis slump, recent years have witnessed a resurgence in new capacity for liquid cargo vessels. For dry cargo vessels, the curve does not show a clear recovery. As was mentioned earlier, the development of transport demand in the dry cargo sector was very weak in recent years, which might have caused the prolonged slump in newbuilding rates and related capacities entering the market.

FIGURE 13: **NEW CAPACITY COMING ON THE MARKET FOR DRY AND LIQUID CARGO** (LOADING CAPACITY IN 1,000 TONNES)



Source: IVR
In 2025, for 18 newly built vessels, the deadweight was partly estimated due to initially missing values. Estimations were also made in the previous years.

IN DANUBE COUNTRIES[28]

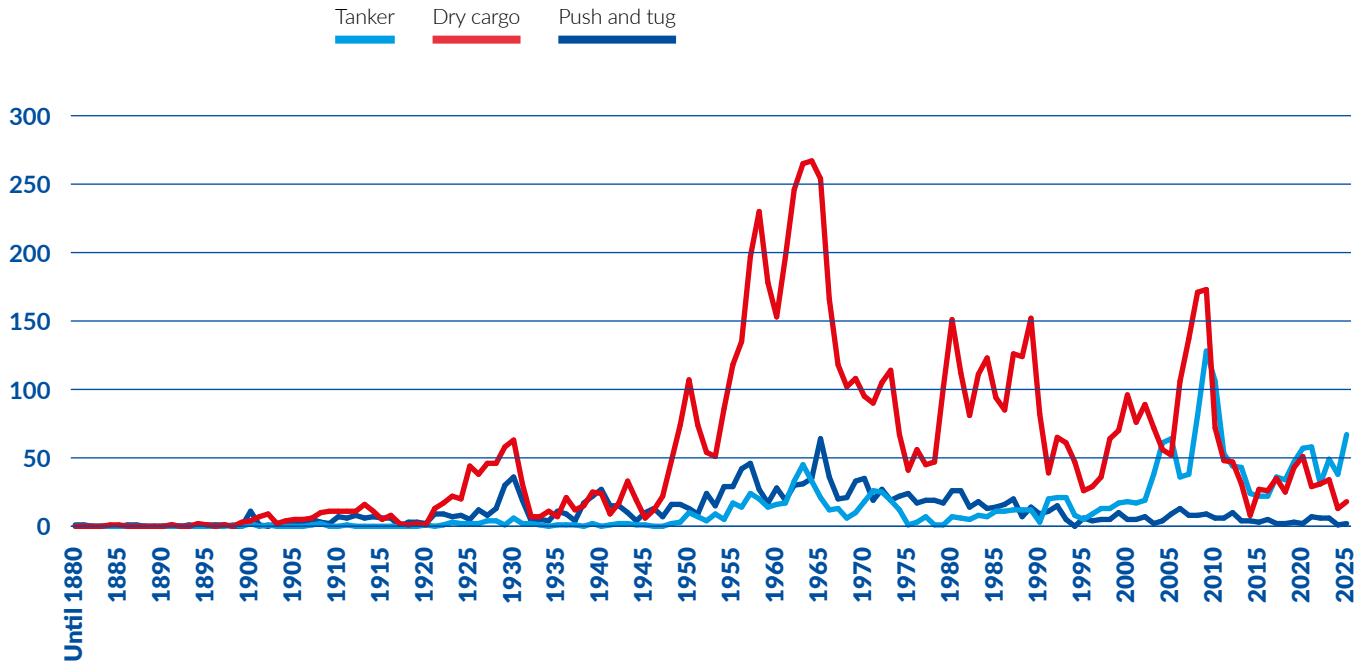
Newbuilding activity in Danube countries is less intense than in Rhine countries. According to the IVR database, in the last 10 years, new freight vessels were registered in Romania (6), Croatia (1), Austria (1) and Slovakia (1). Those figures do not take into account the German Danube fleet.

[28] *The Netherlands, Germany, Belgium, France, Switzerland, Luxembourg*

AGE STRUCTURE
OF THE RHINE AND DANUBE CARGO FLEET

According to the vessel database of the IVR[29], around 80% of the dry cargo fleet was constructed in the 20th century, whereas this share amounts to 38% for the tanker fleet. According to this same database, the Netherlands holds the largest number of vessels within the Rhine fleet in almost every vessel category, followed by Germany.

FIGURE 14: **COMMISSIONING YEARS FOR THE RHINE FLEET OVER TIME** (NUMBER OF INLAND VESSELS)

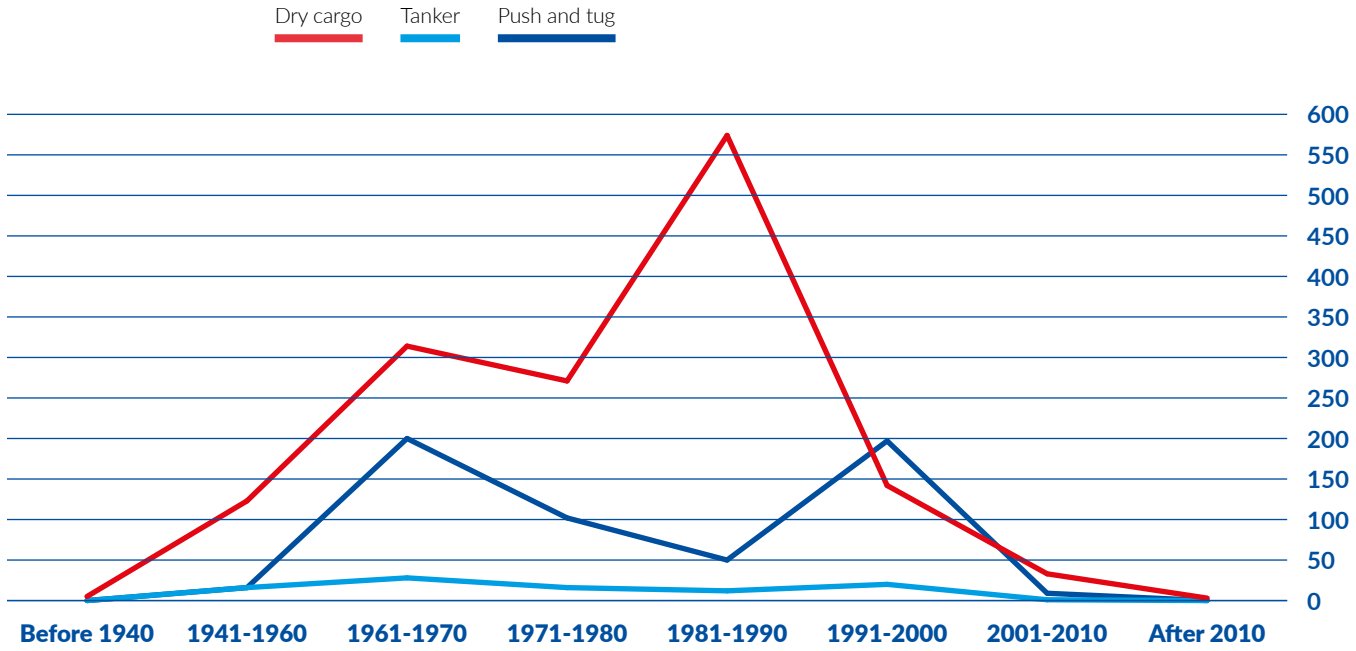


Sources: IVR, CCNR analysis
Note that six dry cargo vessels and four push and tug boats have an unknown year of construction. Furthermore, 248 additional tanker vessels, 1,918 dry cargo vessels and 486 push and tug boats are recorded in the IVR database as being registered in countries other than Rhine countries.

[29] *The IVR database accounts for active vessels but might also include some inactive vessels, in particular those commissioned in earlier years.*

According to the Danube Commission data, which do not consider the German Danube fleet, most of the dry cargo fleet was built during the 1961-1970 and 1981-1990 periods. For the push and tugboat category, most vessels were built in the 1961-1970 and 1991-2000 periods. According to this same source, Romania holds the largest number of vessels within the Danubian fleet in every vessel category, followed by Hungary and Serbia. The German Danube fleet in 2022 was composed of 95 dry cargo vessels, 30 liquid cargo vessels, and 30 push and tug vessels.

FIGURE 15: **COMMISSIONING YEARS FOR THE DANUBE FLEET OVER TIME** (NUMBER OF INLAND VESSELS) *



Sources: 2023 Danube Commission yearbook of statistics, CCNR analysis
** Without German Danube fleet*
Commissioning year is unknown for several vessels. This can explain the differences between the numbers for each fleet type in this graph compared to the total number of vessels registered in the Danubian fleet.



CAPACITY
MONITORING

DRY CARGO VESSELS

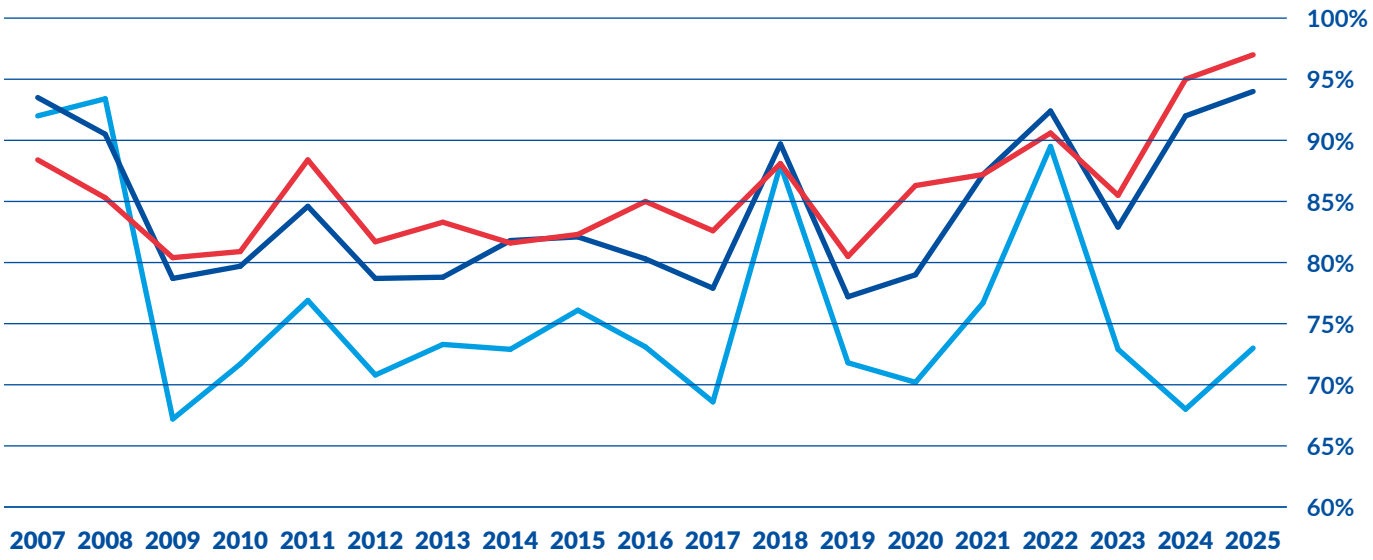
Compared to 2024, goods transport on inland waterways has declined in 2025, mostly driven by the decrease in transports of iron ore and construction materials. In turn, other segments have grown, notably coal transport. Nevertheless, the overarching trend since 2020 goes downward.

Regarding the evolution of the fleet, the decrease in the number of ships with a capacity below 1,000 t went on as capacity is shifting towards larger vessels. Although smaller ships offer flexibility during low water levels, they suffer from the shortage of skippers and benefit less from economies of scale than large vessels.

Regarding water levels, 2025 has been globally favourable in comparison with the last decade as there were only a few days below the equivalent water level on most parts of the Rhine. Only the stretches upstream from Kaub faced more than a week of low water levels. This still represents more days than in 2024, but way less than the extremes of 2018 or 2022. For the vessels with a capacity above 2,000 t, low waters lifted the capacity use above the levels in 2024, at the same level as in 2023. For vessels of a capacity below 2,000 t, the continuous shrinking of the fleet combined drove the capacity usage upwards.

The most important structural trend remains the energy transition. The coal rebound in 2025 is an outlier, and the decline will continue as power generation and industry are decarbonising. Moreover, the industrial transformation of Europe may change cargo composition with different flows of scrap and project cargo. It is expected that low water episodes will increase due to climate change. Therefore, the sector should concentrate its efforts in developing a fleet adapted to the energy transition and climate change.

FIGURE 16: **DEGREE OF CAPACITY UTILISATION OF DRY CARGO VESSELS IN THE RHINE AREA**



Sources: Panteia calculation based on data provided by the CCNR.

LIQUID CARGO VESSELS

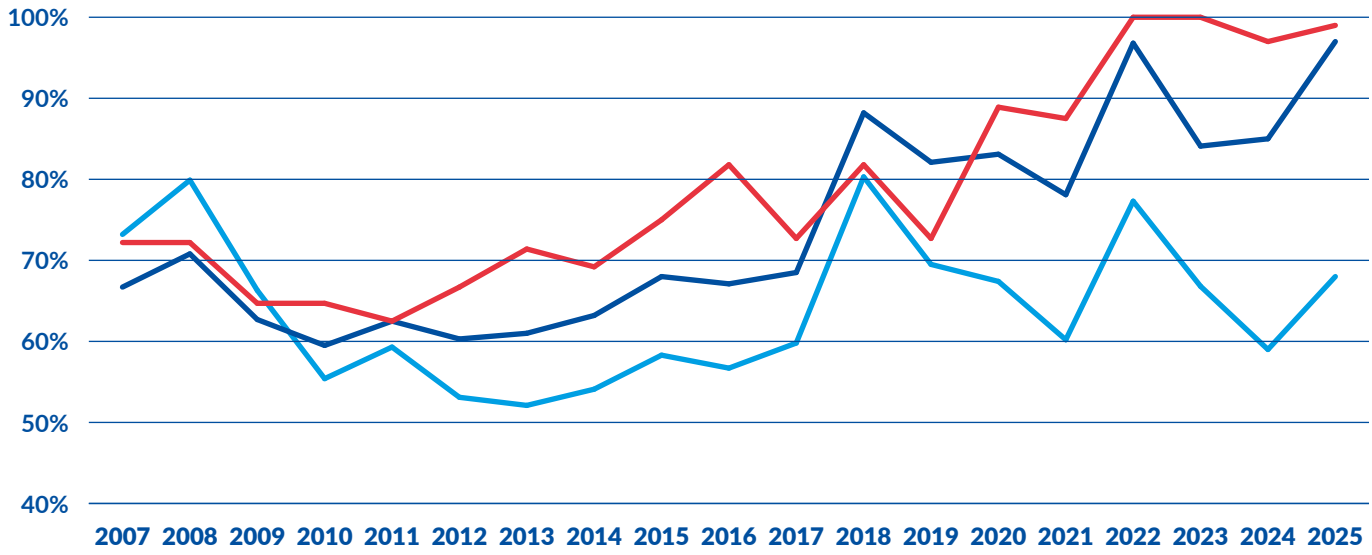
The liquid cargo transport experienced a decline compared to 2024. This was caused by the relatively mild winter, which reduced heating oil demand compared to previous years. The lower industrial competitiveness of the chemical sector played another role.

Regarding the fleet, the number of vessels with a capacity below 2,000 t is decreasing at a similar rate as for dry cargo vessels. On the other hand, the number of large vessels is growing. Although they reduce unit costs, larger vessels are more vulnerable to low water periods for which liquid cargo is more sensitive.

The overall transition in the fleet composition greatly reduces the available capacity for vessels below 2,000 t. This results in an increased capacity usage for the smaller tankers. For vessels above 2,000 t, the capacity use is at the level of 2023, which faced similar hydrological conditions. As a result, the average capacity utilisation rate of the total fleet is slightly higher than in 2023 due to the continued decrease of smaller tankers but it remains way below the dry years of 2022 and 2018.

The apparent spare capacity of the liquid cargo segment will nevertheless be useful to absorb the impact in case of prolonged low water levels. Regarding the demand, the electrification and decarbonisation trends will decrease the mineral oil transport. At the same time, the energy transition will create alternative liquid and gas transport. This may not fully offset the decline in fossil fuels in the short run, but it changes the composition of liquid cargo transport demand. Finally, it is expected that geopolitical disruptions will become more frequent and will have a significant impact on liquid cargo flows particularly.

FIGURE 17: **DEGREE OF CAPACITY UTILISATION OF LIQUID CARGO VESSELS IN THE RHINE AREA**



Sources: Panteia calculation based on data provided by the CCNR.



INNOVATIVE

DEVELOPMENTS IN THE INLAND NAVIGATION FLEET CONTRIBUTING TO REDUCING EMISSIONS

In accordance with the mandate given by the Mannheim Ministerial Declaration of 17 October 2018, the CCNR adopted in December 2021 a roadmap for reducing emissions from inland navigation[30], which called for the creation of a database on innovative vessels.

In order to develop such a database, available data on innovative inland navigation vessels was compiled within the framework of the Inspection Regulation Committee of the CCNR, with the following scope:

- innovative vessels understood as being designed to emit less air pollutants or greenhouse gases than a conventional diesel vessel;
- freight and passenger vessels with a Rhine Vessel Inspection Certificate or a Union certificate[31];
- vessels planned, under construction, in service or cancelled projects.

Even if biofuels contribute to reducing - under certain conditions - greenhouse gas emissions, vessels running on biofuels were not considered in the analysis, as switching to biofuels does not call for a specific design or technical adaptation at the level of the vessel. Also, diesel electric vessels are not considered innovative vessels.

For the purpose of this analysis, 78 vessels were considered: 56 freight vessels, 19 day-trip passenger vessels, 1 cabin vessel, and 2 training vessels[32]. The vast majority of the innovative vessels sail with a Rhine Vessel Inspection Certificate. They are mainly new-built vessels (around 85%) but also retrofitted vessels (around 15%).

The number of innovative vessels in service represents less than 0.2% of the entire inland navigation fleet in Europe, the majority of which were built, retrofitted or planned from 2021 onwards. Three came into service in 2025 and one is in the shipyard. Overall, 11 are still considered as projects (both newbuilt and retrofit).

Several projects were foreseen to be built in 2025 and 2026 but suffered some delays. Indeed, such innovative projects involve complex technologies which are often applied for the first time on inland navigation vessels, making the risk of delay quite likely. Delays are generally linked to the manufacturers of such technologies being unfamiliar with maritime/inland navigation legislation, underestimation of complexity, lack of overall project management and financial issues.

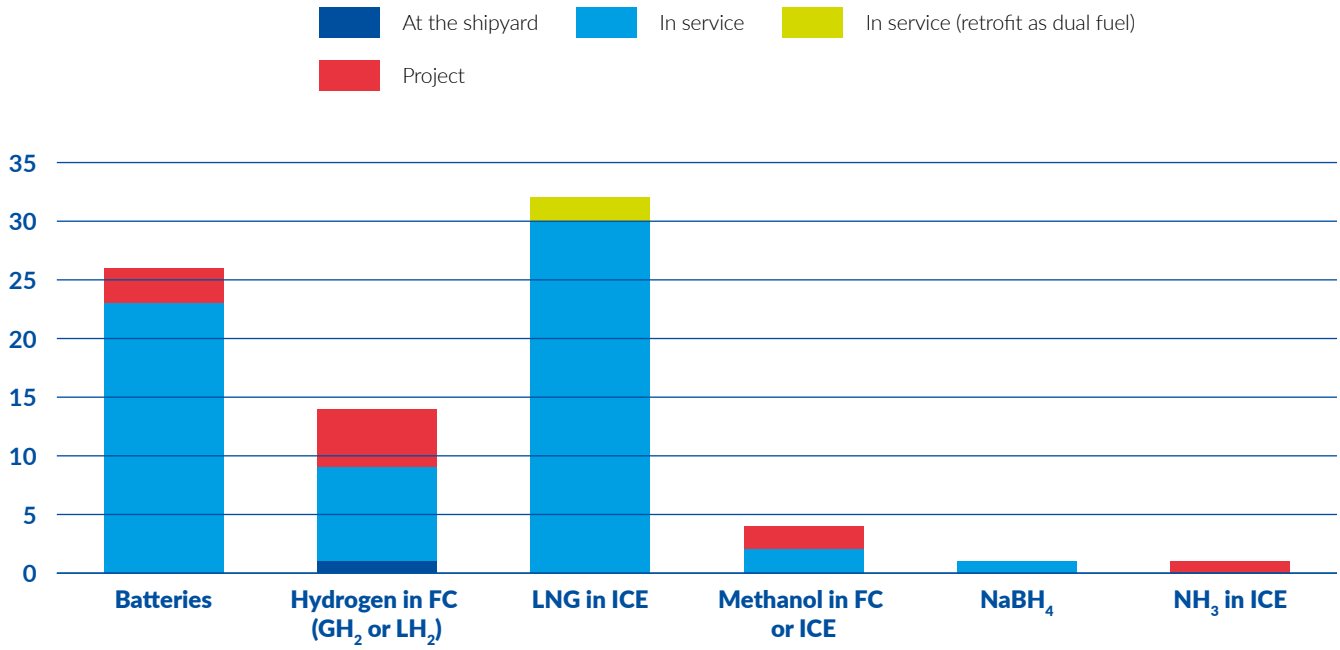
[30] See Central Commission for the Navigation of the Rhine (CCNR), Roadmap for reducing inland navigation emissions, available on the CCNR website
[31] This excludes vessels with a strictly national certificate or vessels below the thresholds of the Rhine Vessel Inspection Regulations (RVIR) and the directive (EU) 2016/1629.
[32] The floating equipments were not taken into account for the purpose of this analysis but are included in the database.

Several projects were also cancelled before being finalised[33]. The reasons behind the cancellation of a project could be of different natures, such as economic (not enough demand, lack of subsidies), organisational (withdrawal of a partner) or even technical (safety or operational issues). Most of the projects cancelled were LNG propelled vessels. Indeed, fossil LNG is no longer considered as a long-term option, notably for reducing carbon emissions in inland navigation. The other vessels which were cancelled or removed from service were hydrogen or methanol propelled vessels. In addition, two in-service vessels using fuel cells were retrofitted back to use either diesel/battery, or primarily diesel.

This analysis does not consider the evolution of the number of innovative vessels outside the scope of this database.

These innovative vessels run or are expected to run on - as the primary energy carrier[34] - batteries, liquefied natural gas (LNG), methanol, compressed hydrogen (GH_2) mainly in combination with batteries, liquefied hydrogen (LH_2), sodium borohydride with batteries ($NaBH_4$) or ammonia (NH_3). The mandate relating to battery-powered vessels was revised in 2025 - only vessels that operate entirely on batteries during normal use are counted, although emergency generators are permitted. The change in terms excludes six hybrid electric/diesel vessels previously included in the list.

FIGURE 18: **NUMBER OF VESSELS USING ALTERNATIVE ENERGIES AS ONE OF THE MAIN ENERGY CARRIERS ***



Source: CCNR database

** The category "Hydrogen" includes vessels that use or are likely to use fuel cells for propulsion. The category "Methanol" includes three vessels operating with a combustion engine and one foreseen to operate with a fuel cell system. The category "Batteries" includes vessels sailing solely on batteries. ICE = Internal Combustion Engine; FC = Fuel Cells.*

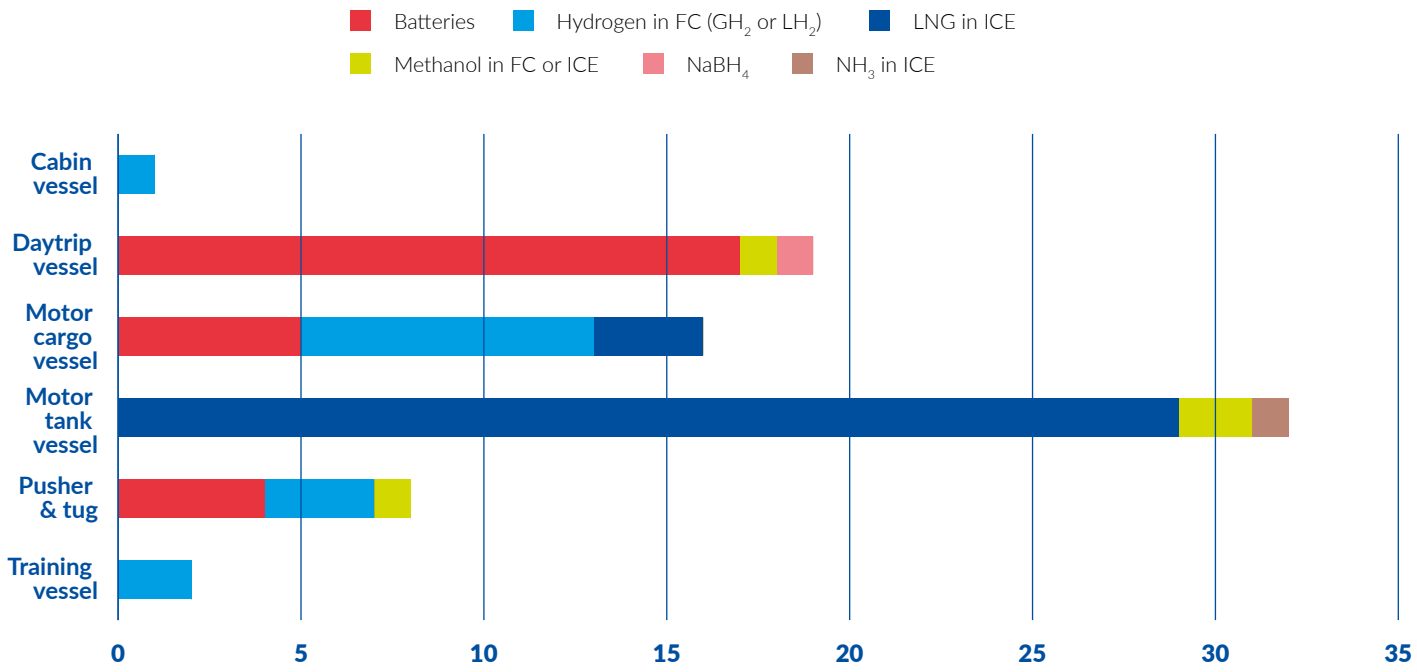
[33] *These are not taken into account in the 78 vessels considered in this analysis.*
[34] *The primary energy carrier is the most commonly used for vessel propulsion, while secondary and tertiary energy carriers are used to a lesser extent.*

Figure 18 above reflects the alternative energies used as one of the main energy carriers (for vessel propulsion). It often comes with other energy carriers onboard, notably diesel engines for redundancy purposes or as an emergency power source. The majority of the vessels that run or plan to run on hydrogen usually use hydrogen in compressed form (GH_2) as it is cheaper than the liquefied form. Among those using GH_2, only one aims at employing it as the sole energy carrier, while the remaining 12 also have battery and/or diesel drivetrains. In other words, it is anticipated that different (modular) options for zero-emission powertrains, using mixes of energy sources/fuels, will play a role in achieving the ambitious emission reduction objectives set at the international level. This is confirmed by the profile of the innovative vessels (in service, under construction or project), the majority of which use multiple energy carriers (approximately 65%).

Moreover, there is no "one-size-fits-all" solution for achieving energy transition. The choice of an appropriate emission reduction technology depends on several factors, which include the sailing profile of the vessels, their type, the market segment in which they operate, but also the related technical constraints.

This is reflected in the following figure, showing how innovative applications find their way into the inland navigation sector.

FIGURE 19: **DISTRIBUTION OF INNOVATIONS PER VESSEL TYPE AND PRIMARY ENERGY CARRIER**[35]



[35] *Projects cancelled or out of service excluded.*

Most of these innovative vessels are equipped with a combustion engine as their main energy converter (40), of which 29 are also equipped with an electric motor. This is a positive evolution which should facilitate a modular system approach. Indeed, the integration of batteries or fuel cell systems in existing vessels requires a vessel to be equipped with an electric motor in the first place. Twenty-six vessels operate solely with battery electric propulsion systems or can rely on batteries alone for propulsion and 16 operate with fuel cell systems. It should be highlighted that three vessels are designed to use swappable battery containers.







06

PASSENGER TRANSPORT

- The European river cruise sector continued to expand in 2025, supported by growing demand and renewed investment. The active fleet reached 420 vessels in 2025, compared to 408 in 2024. Fourteen new river cruise vessels entered the market during the year, adding 2,182 beds, while a further 17 vessels are expected in 2026, and 25 in 2027, based on current order books.
- River cruise demand continued to grow in 2025, with 1.5 million passengers travelling on European rivers (+8.0% compared to 2024) and generating 3.7 billion euro in gross ticket sales (+5.0%). The Rhine and Danube accounted for around 80% of all destination choices in 2025. Passenger numbers reached almost 823,000 at Lobith, lower Rhine (+2.1%) and 503,000 at Gambsheim, upper Rhine (+9.8%), while on the upper Danube 650,354 passengers were recorded at Jochenstein (+35.9%).
- River cruise vessel movements on the Rhine were still below the pre-pandemic level, in contrast to passenger numbers. On the Danube, vessel movements were far above the pre-pandemic levels. This exceptional boom was also influenced by a relocation of the starting point of cruise vessels from Engelhartszell (downstream of Jochenstein) to Passau (upstream of Jochenstein). On the Moselle, they were slightly higher than in 2019. Data for capacity utilisation are available for the upper Danube and indicate a rate of 74.0% in 2025, the highest level since 2019.

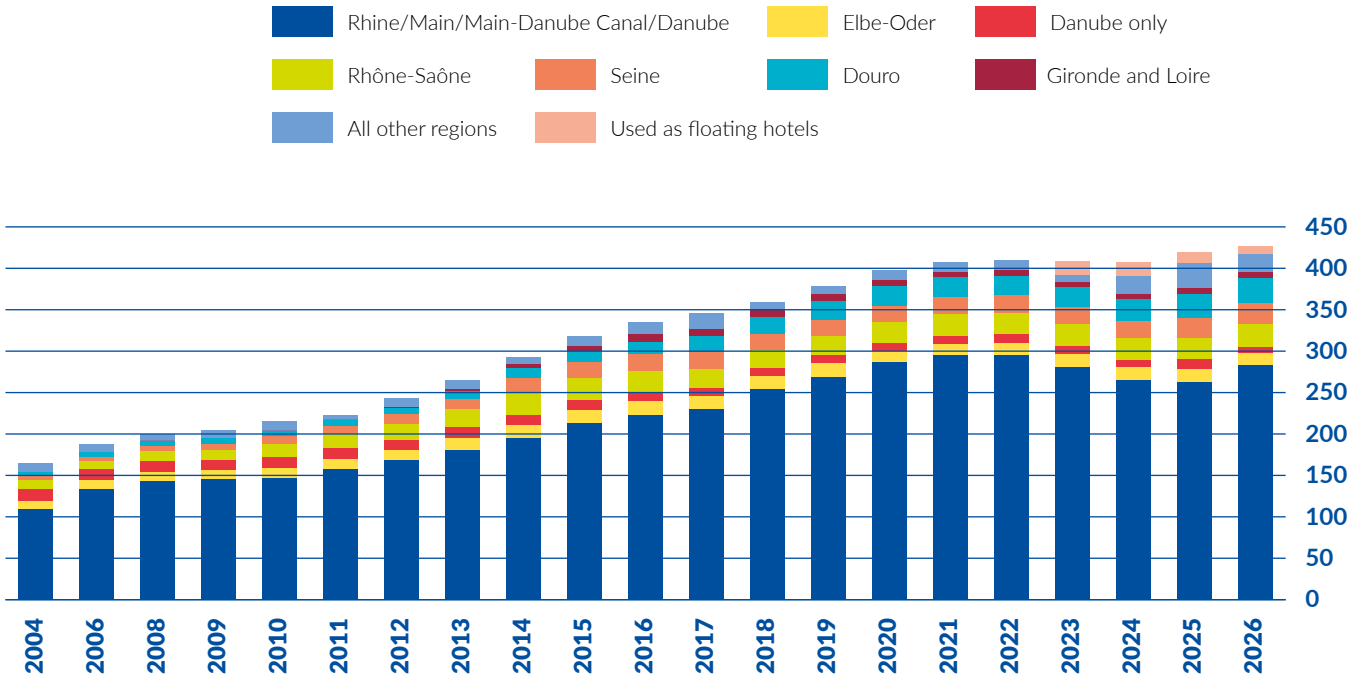
RIVER CRUISE FLEET
AND DEMAND

FLEET FOR RIVER CRUISES[36]

The active river cruise fleet in Europe[37], which represents more than 40% of the world active river cruise fleet, is mainly concentrated on central European waterways[38], accounting for nearly 72% of the total river cruise fleet in Europe. The number of active river cruise vessels in Europe in 2025 amounted to 420[39] (compared with 408 in 2024). This number is expected to reach 426 in 2026.

Some vessels - in parallel with their cruising activities outside the main touristic seasons - are being used as floating hotels. This remained true in 2025, with 14 vessels (included within the total of 420 active river cruise vessels) being used as floating hotels (compared to 18 in 2024 and 16 in 2023). Some of these are expected to fully resume their cruising activities in 2026.

FIGURE 1: **NUMBER OF RIVER CRUISE VESSELS IN THE EU BY REGION OF OPERATION** (2004-2025) *

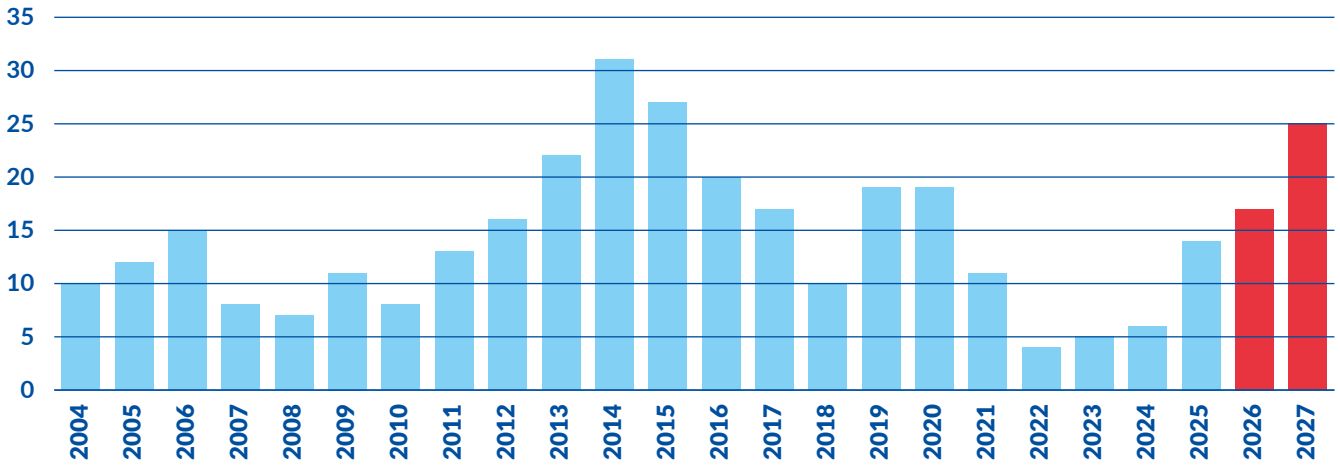


Source: Hader A., The River Cruise Fleet Handbook (April 2026)
** 2026: based on order books as of April 2026.*

[36] *Hader A., The River Cruise Fleet Handbook (April 2026). Only river cruise vessels with a minimum of 40 beds are considered in this analysis.*
[37] *Europe without Russia and Ukraine*
[38] *Rhine, Main, Main-Danube Canal, Danube, Elbe-Oder*
[39] *Including 14 vessels used as floating hotels*

Since Covid-19, the newbuilding activity for river cruises remained rather slow between 2022 and 2024. However, the activity picked up again in 2025, with 14 new river cruise vessels coming onto the market (compared to 6 in 2024). The order book for 2026 and 2027 also confirms this positive trend with 17 new river cruise vessels expected in 2026 and 25 in 2027.

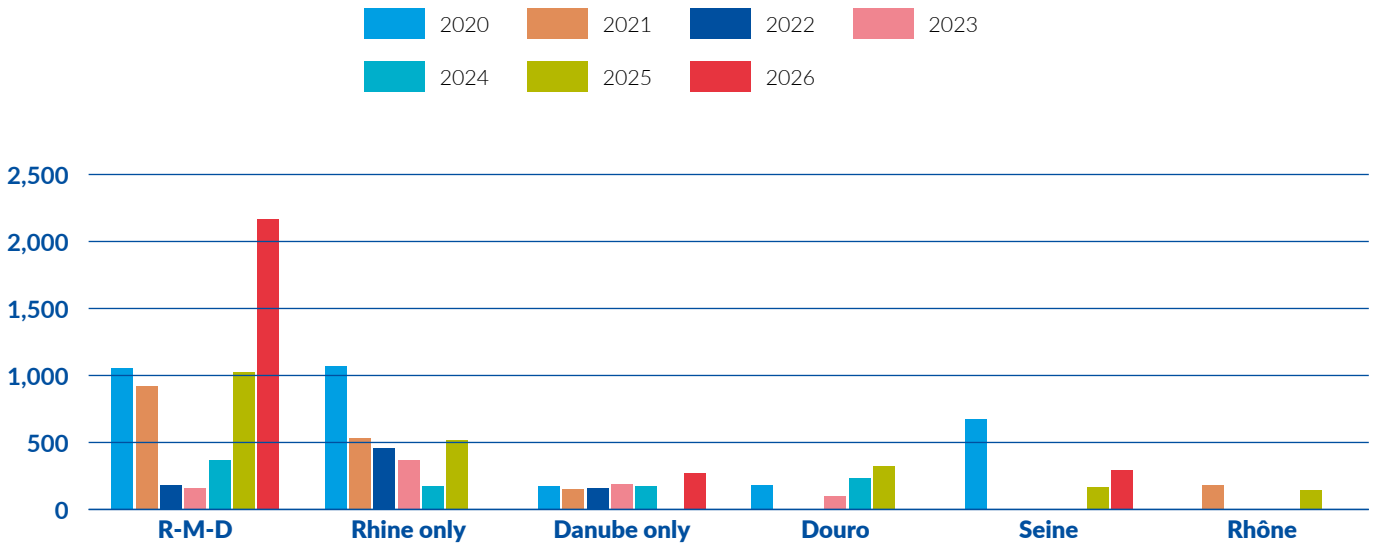
FIGURE 2: **NEW RIVER CRUISE VESSELS FOR THE EUROPEAN MARKET 2004-2027 ***



Source: Hader A., The River Cruise Fleet Handbook (April 2026)
** 2026 and 2027: based on order books as of April 2026*

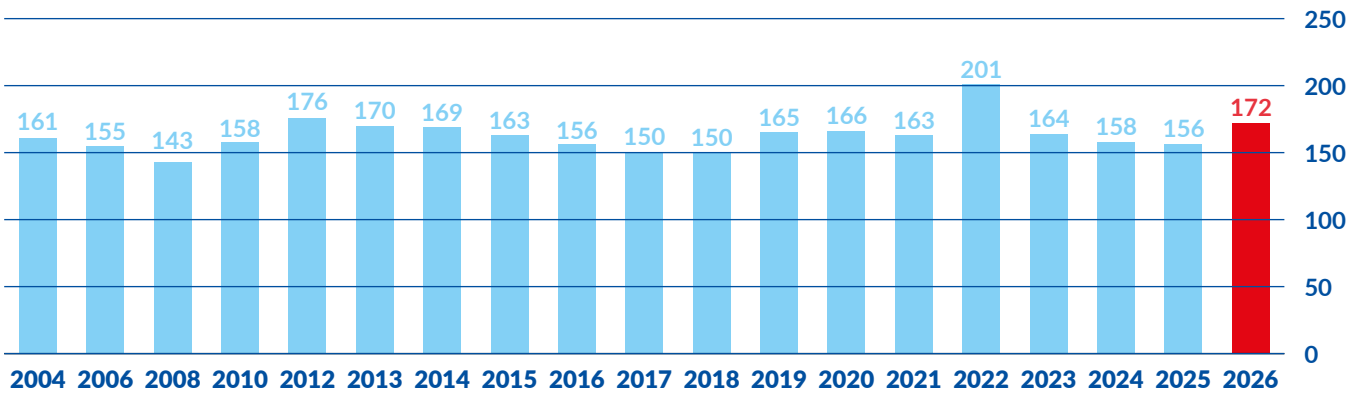
In 2025, the 14 new vessels brought an additional capacity of 2,182 (compared to 948 beds in 2024) to the river cruise market in Europe. An additional capacity of 2,730 beds is expected for the year 2026.

FIGURE 3: **NEW CRUISE CAPACITIES FROM 2020 TO 2026 PER REGION OF OPERATION** (NUMBER OF BEDS) *****



Source: Hader A., The River Cruise Fleet Handbook (April 2026)
** R-M-D= Rhine/Main/Main-Danube Canal/Danube. 2026: based on order books as of April 2026.*

FIGURE 4: **AVERAGE NUMBER OF BEDS IN NEW RIVER CRUISE VESSELS IN EUROPE BY YEAR OF CONSTRUCTION ***



Source: Hader A., The River Cruise Fleet Handbook (April 2026)
** Figure for 2026: based on order books as of April 2026.*

RIVER CRUISE DEMAND

River cruise tourism in Europe[40, 41]

The European river cruise industry continued to grow between 2024 and 2025 with both passenger numbers and revenues increasing, although at a slower pace than in the previous season. In 2025, 1.5 million passengers travelled on European rivers (+8.0% compared with 2024) and generated 3.7 billion euro in gross ticket sales (+5.0%). Non-European customers represented 45% of passengers but contributed 66% of total revenue, reflecting a longer average length of stay than European guests.

According to the IG River Cruise study, the Rhine and the Danube (including their tributaries) remain the backbone of the European river cruise market, together accounting for around 80% of passengers' destination choices in the 2025 season. Most passengers came from the DACH region[42] (586,801 customers - 39.4% of total passengers) and from the USA/Canada (544,819 customers - 36.6% of total passengers).

In terms of passenger age, the 56–75 years of age segment continued to dominate the European river cruise market, while demand from travellers under 40 years remained limited.

[40] *IG River Cruise, The River Cruise Market 2025, available on the IG River Cruise website*
[41] *Entreprises fluviales de France (E2F), Baromètre de l'activité tourisme fluvial, édition 2026, available on the E2F website*
[42] *DACH stands for the Germany - Austria – Switzerland source market.*

Passenger numbers by rivers

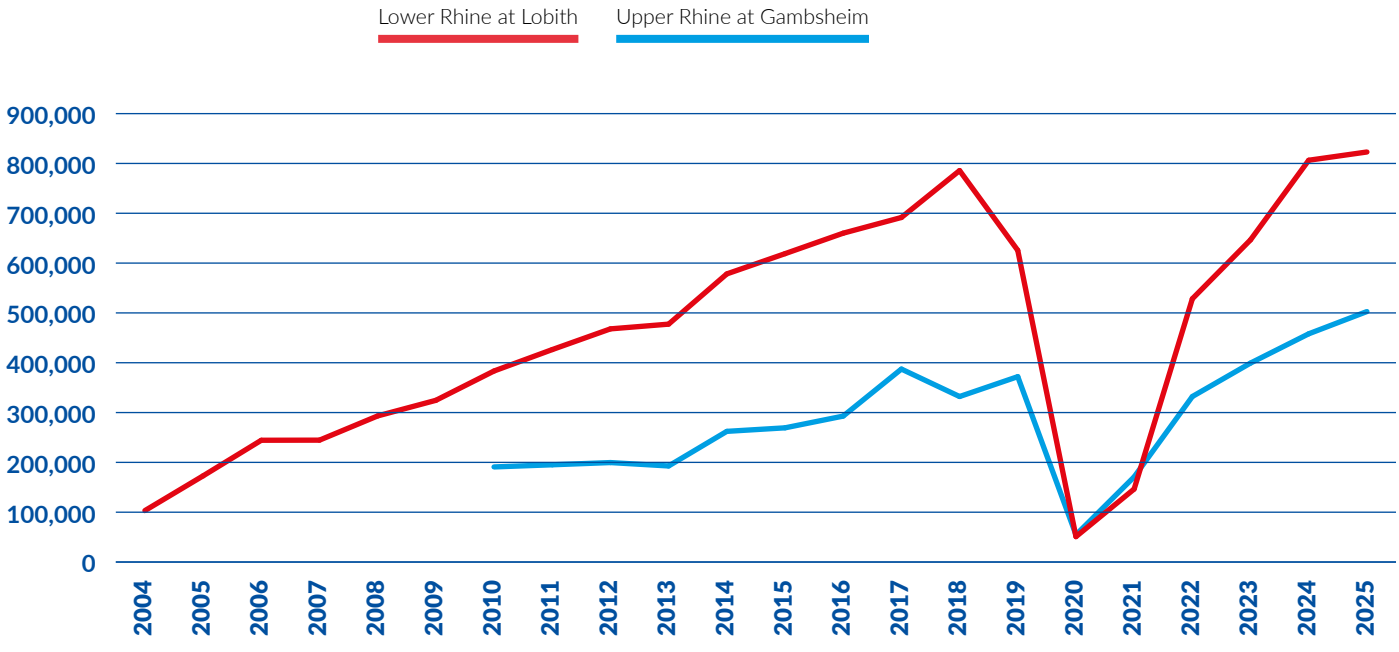
In this annual report, two additional data sources for river cruises on the Rhine have been integrated. The first new source is the Waterway and Shipping Administration in the Netherlands (Rijkswaterstaat) which registers river cruises at the Dutch-German border near Lobith. According to this new source, the annual figures for the Rhine are higher than those published previously. The only source in the earlier annual reports (German Waterway and Shipping Administration) measured cruise traffic at Iffezheim on the upper Rhine.

On the upper Rhine, the traffic is lower than on the lower Rhine, since many cruise vessels which come from Amsterdam turn off the middle Rhine into the Main and head towards the Danube. The second new source is the Waterway and Shipping Administration in France (Voies Navigables de France), which registers river cruise traffic at the lock of Gambsheim on the upper Rhine and which forms the border with Germany in this area.

Rhine

With 4,706 cruise vessels passing Lobith on the lower Rhine in 2025, the result was almost identical to the year 2024 (+0.3%). The number of passengers at this Dutch-German border point amounted to almost 823,000 (+2.1% compared to 2024). At Iffezheim on the upper Rhine, 3,340 cruise vessels were counted (+3.9%). The number of passengers at Gambsheim on the upper Rhine almost reached 503,000 in 2025 (+9.8%).

FIGURE 5: **YEARLY NUMBER OF PASSENGERS ON RIVER CRUISE VESSELS ON THE RHINE**



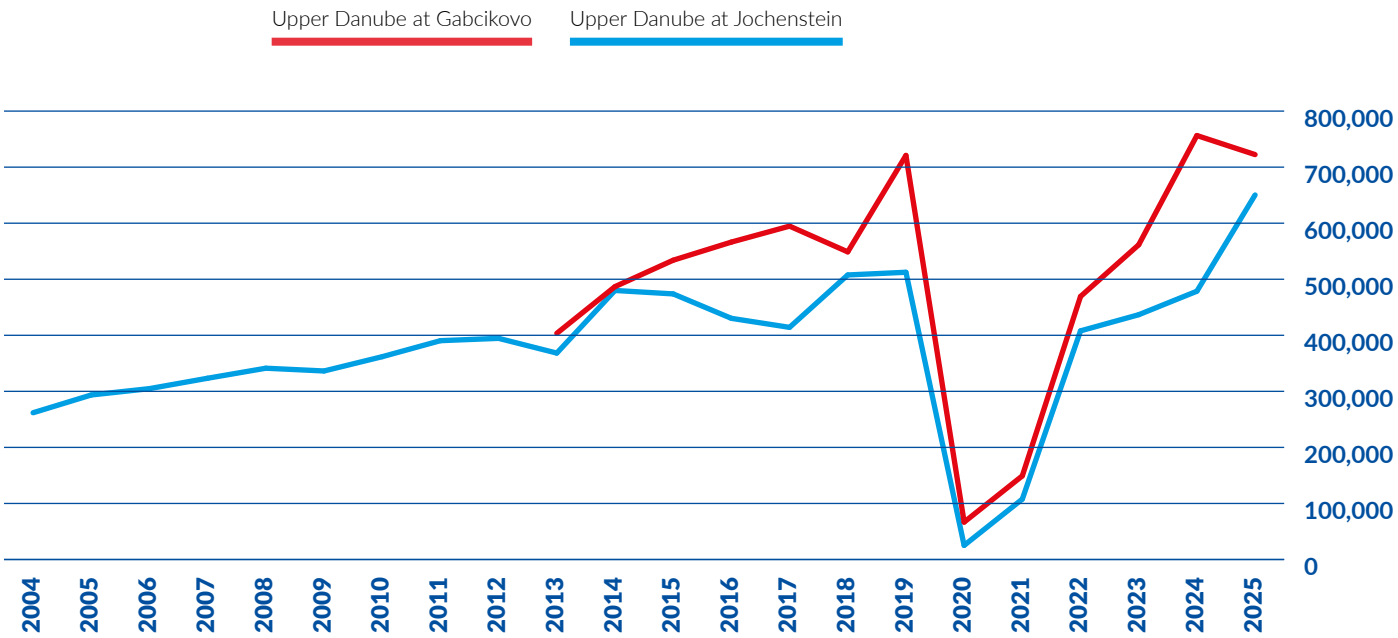
Sources: Rijkswaterstaat, VNF
** Lower Rhine = Dutch-German border (Lobith)*
Upper Rhine = French-German border (Gambsheim)

Danube

With 4,939 cruise vessels passing the lock of Gabčikovo at the border between Slovakia and Hungary, the result of river cruise vessel movements was +15.7% higher than in 2024, while the number of passengers at this border point was -4.5% lower than in 2024.

At the other measurement point, the German-Austrian border point of Jochenstein, the number of vessel movements was 4,606 in 2025, a strong increase of +28.1% compared to the previous year. The number of passengers amounted to 650,354 in Jochenstein near Passau (+35.9%). This exceptional boom was also influenced by a relocation of the starting point of cruise vessels from Engelhartszell (downstream of Jochenstein) to Passau (upstream of Jochenstein).

FIGURE 6: **YEARLY NUMBER OF PASSENGERS ON RIVER CRUISE VESSELS ON THE DANUBE**



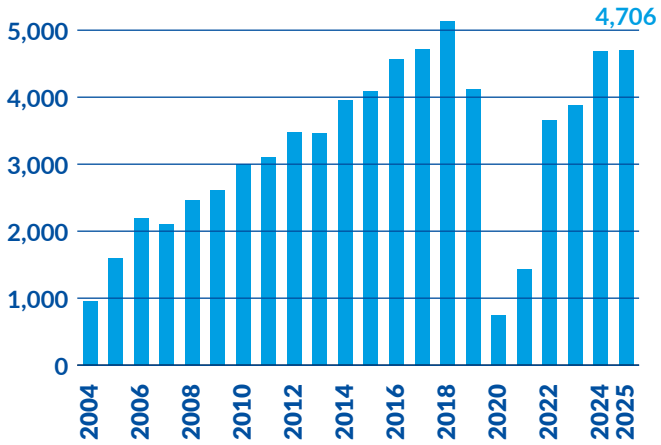
Sources: Danube Commission, WSV
** Gabčikovo = border Slovakia/Hungary; Jochenstein = border Germany/Austria*

Number of vessel movements

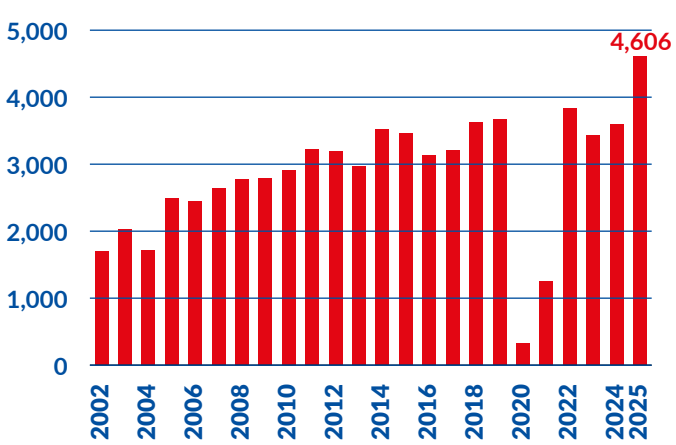
The following three graphs summarise the development of river cruise vessel movements on the Rhine, Danube and Moselle since 2002/2004. The Rhine figures are taken from the German-Dutch border and the Danube is shown at the border point between Germany and Austria. It should be noted that the number of vessel movements on the Danube is higher at Gabčíkovo (Slovakian-Hungarian border with 4,939 river cruise vessels in 2025), but the data available for this point are only available from 2013.

FIGURES 7, 8 AND 9: **YEARLY NUMBER OF CRUISE VESSEL TRANSITS ON RHINE, DANUBE AND MOSELLE ***

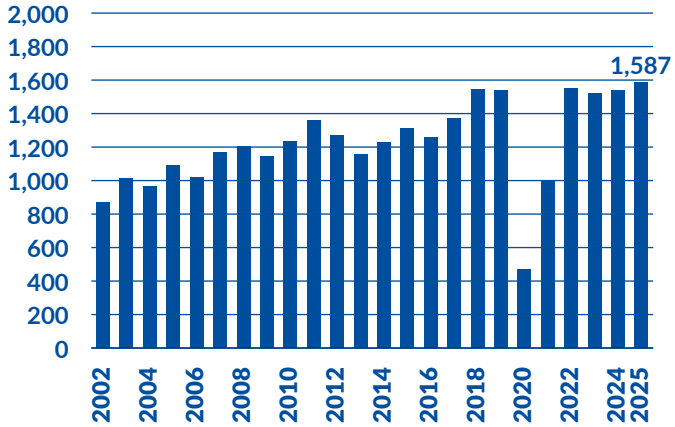
Rhine



Danube

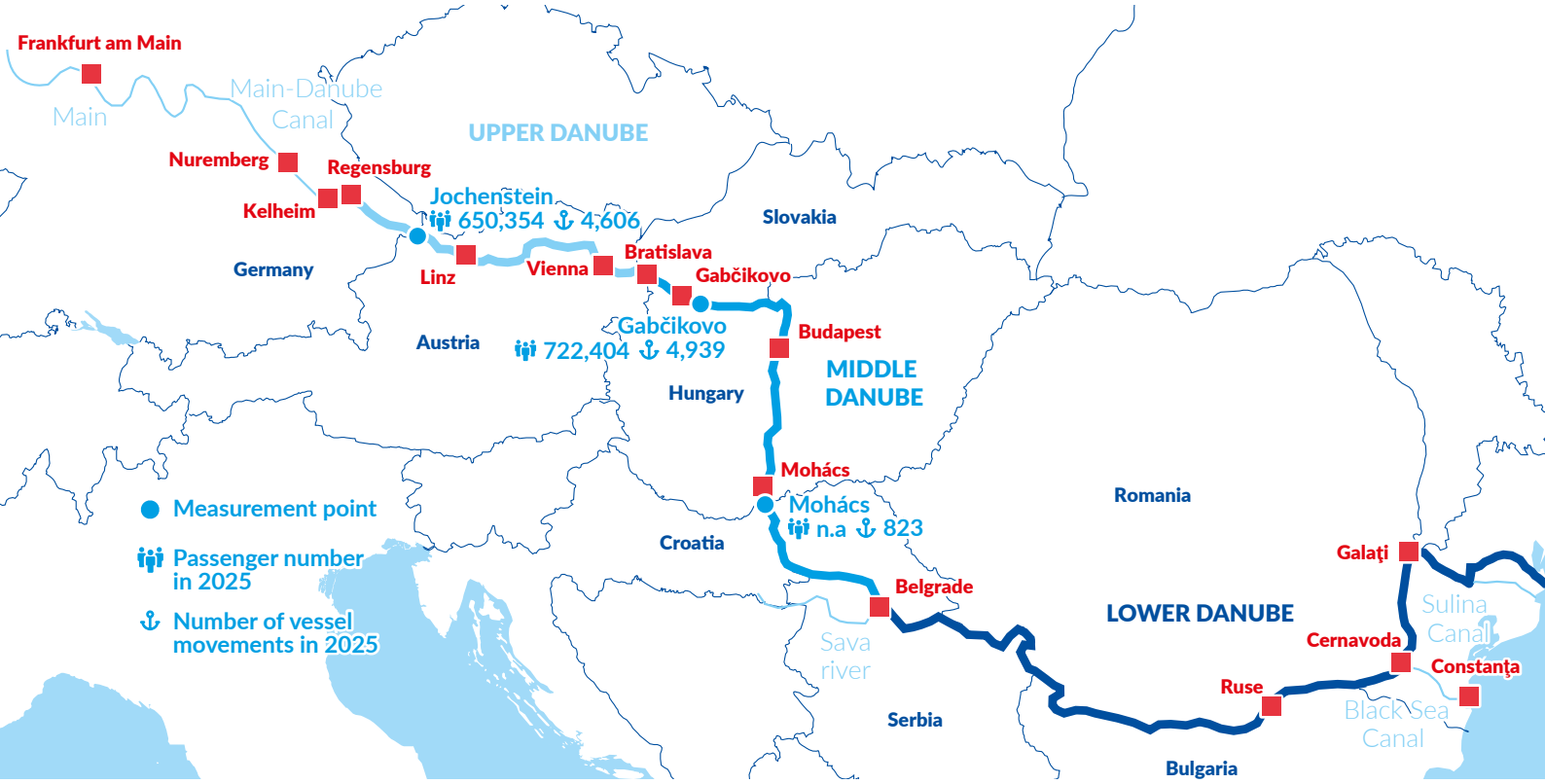


Moselle



Sources: Rijkswaterstaat, WSV and Moselle Commission
** Rhine = Dutch-German border (Lobith)*
Danube = upper Danube, Austrian-German border (lock of Jochenstein)
Moselle = lock of Koblenz


Netherlands
Rotterdam
Lobith
822,988
4,706
Germany
LOWER RHINE
Belgium
Bonn
Koblenz
Koblenz
n.a
1,587
Fankel
n.a
1,109
MIDDLE RHINE
Moselle
Zeltingen
n.a
1,012
Luxembourg
Kanzem
n.a
328
Mainz
Main
Saar
Mannheim
France
Neckar
Main-Danube Canal
Danube
UPPER RHINE
Gambsheim
502,731
3,586
Strasbourg
Measurement point
Passenger number in 2025
Number of vessel movements in 2025
Basel
Switzerland



Sources: Rijkswaterstaat, VNF, WSV, Danube Commission and Mosel Commission

Capacity utilisation

The capacity utilisation rate of the river cruise vessels is also a key indicator in assessing the development of the river cruise sector as it points to the profitability of operations. The degree of capacity utilisation of river cruise vessels can only be calculated for the upper Danube, as detailed data are needed for the number of passengers and the capacity of the vessels in terms of passenger places. The data are provided by WSV for the lock of Jochenstein (German-Austrian border).

The capacity utilisation is defined as the ratio of the number of passengers divided by passenger capacity of the vessels that passed through the lock. It is calculated as the annual average of monthly utilisation rates in percentage points.

The average capacity utilisation dropped from 64.0% in 2019 to 20.6% in 2020 due to the Covid pandemic. It took four years until 2024 to again reach a similar value to that of 2019 with 66.5% capacity utilisation. Since 2019 the highest level was reached in 2025 with a 74.0% capacity utilisation.

TABLE 1: **CAPACITY UTILISATION OF RIVER CRUISE VESSELS PASSING THE GERMAN-AUSTRIAN BORDER ON THE DANUBE**

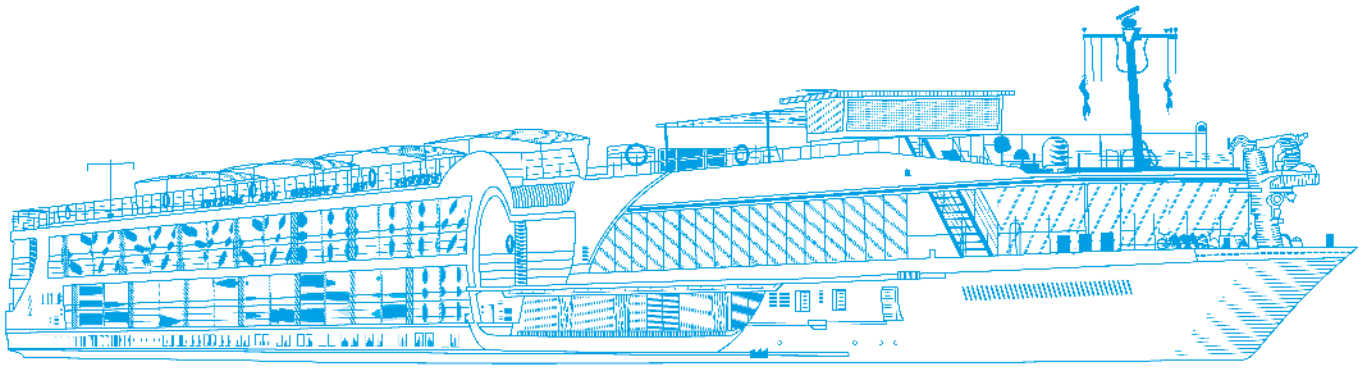
Year	Degree of capacity utilisation of the river cruise vessels
2019	64.0%
2020	20.6%
2021	27.3%
2022	54.6%
2023	55.1%
2024	66.5%
2025	74.0%

Sources: CCNR analysis based on data provided by WSV

Sava river

Most passenger traffic in the Sava and Kupa river ports is concentrated at the Port of Belgrade in Serbia. Since 2015, river cruise passenger numbers at the Belgrade passenger terminal have increased steadily, from 60,000 in 2015 to 104,000 in 2019, reflecting the broader growth of Danube cruising. Most vessels calling at Belgrade operate along the Danube and include major eastern European capitals in their itineraries.

As in other regions, passenger traffic was heavily affected by the Covid-19 pandemic, dropping to just 561 passengers in 2020. Since then, traffic has steadily recovered, reaching 81,649 passengers in 2025. While still below the 2019 peak, this level exceeds pre-2019 figures and confirms a positive recovery trend[43].



[43] *Passenger transport data have, to date, not been processed in a detailed manner due to a lack of up-to-date records, as well as non-harmonised methodology between the countries.*

DAY TRIP FLEET AND DEMAND

Day trip passenger fleet and demand data are not consistently available across European countries, and the level of detail varies significantly depending on national statistical systems. Based on the information that is available, the following overview can be provided for 2024.

Detailed data per country are also available on the market observation website by clicking on this QR Code.

DAY TRIP FLEET

TABLE 2: **NUMBER OF DAY TRIP VESSELS BY COUNTRY IN 2024**

Country	2024	Notes
Rhine countries		
Germany	1,093	Including 808 on rivers and canals, 124 on lakes and 161 small harbour boats
The Netherlands	529	Including 71 passenger ferries and 192 certified sailing historic passenger ships for the transport of more than 12 people (so called "Bruine vloot" – Brown fleet)[44].
France	322	
Switzerland	140	
Belgium	59*	*Data refer to 2023. Including 3 passenger ferries
Danube countries		
Romania	323*	*Data refer to 2023
Hungary	137	
Austria	31*	*Data refer to 2023
Slovakia	13	
Other countries		
Italy	276*	*Data refer to 2023
Poland	109	
Czech Republic	92	

Sources: VNF, WSV, IVR, Federal Swiss Office of Statistics, Danube Commission, Statistical Office of the Slovak Republic, Ministry of Transport of the Czech Republic, Italian Ministry of Transport, Statistics Poland

[44] *See Ministerie van Infrastructuur en Waterstaat (NL) website*

DAY TRIP DEMAND

TABLE 3: **NUMBER OF PASSENGERS** (IN MILLIONS) **ON DAY TRIP VESSELS BY COUNTRY IN 2024**

Country	2024 (in million passengers)	Notes
Rhine countries		
France	9.2	
The Netherlands (Amsterdam)	Approx. 3 per year	No annual breakdown available
Switzerland	13.7	Includes the Swiss lakes. Activity measured in vessel-km was approx. 2.2 mio. km in 2024)
Danube countries		
Hungary	2.0	Including Danube and Lake Balaton
Austria	0.6	
Slovakia	0.07	
Other countries		
Italy	103.3	Data refer to 2023. Including Venetian Lagoon (88%) + Italian lakes (12%) + River Po (<0.1%)
Poland	1.1	

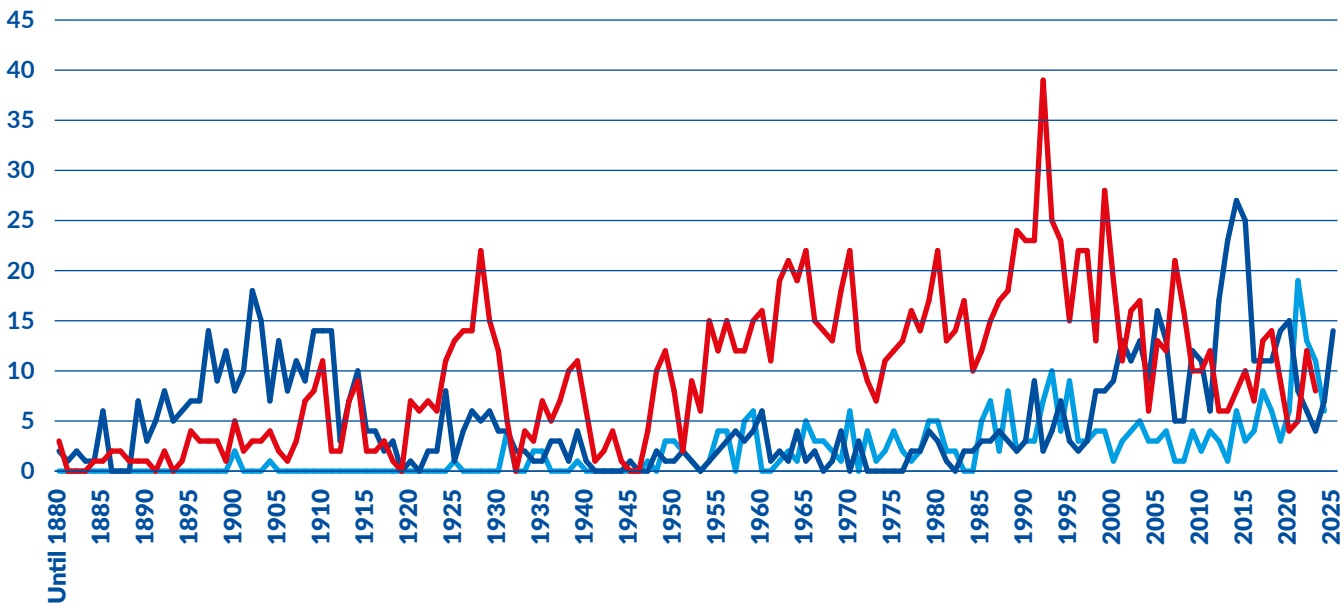
Sources: VNF, City of Amsterdam, Federal Swiss Office of Statistics, Danube Commission, Statistical Office of the Slovak Republic, Italian Ministry of Sustainable Infrastructure and Mobility, Statistics Poland



AGE STRUCTURE
OF THE RHINE PASSENGER FLEET

Concerning the passenger fleet, it is divided into passenger ferries, river cruise vessels, and passenger day-trip vessels. The figure below depicts the current fleet and its evolution over time. However, it is worth noting that inactive vessels may be included in these figures, and some of the newest vessels may not be accounted for. Most passenger ferries and day-trip vessels (which represent 69% of all passenger vessels on the Rhine) were constructed in the 20th century (with peaks in the 1960s and 1990s), but there has nevertheless been significant newbuilding activity in the 21st century. The number of day-trip newbuildings in Rhine countries has been following a decreasing trend since 2000, while the number of new ferries has grown over the past two decades.

FIGURE 10: **COMMISSIONING YEARS FOR THE RHINE PASSENGER FLEET OVER TIME** (NUMBER OF INLAND VESSELS)



Sources: IVR and CCNR analysis, Bačkalov I. et al., Evolution(s) of European Inland Vessel Fleets (2025).
Note that one river cruise vessel and six day-trip vessels have an unknown year of construction. The database of IVR accounts for active vessels but also includes some inactive vessels, in particular those commissioned in earlier years.

The number of passenger vessels on the Danube peaked in 1980 (162 ships) and increased steadily between 2000 and 2017. However, the capacity of the Danube passenger fleet in the 21st century has still not reached the pre-1990s levels[45].

[45] *Bačkalov I. et al., Evolution(s) of European Inland Vessel Fleets (2025)*





07

COMPANIES, EMPLOYMENT, TURNOVER AND PERSONNEL COSTS[46]

- **In 2024, 5,477 IWW freight transport companies were active in Europe (EU-27 plus Bosnia-Herzegovina, Serbia and Switzerland), with 86% located in Rhine countries. The Netherlands alone comprised 3,302 freight companies (60% of the total in Europe and 70% in Rhine countries). The number of companies in Danube countries was 254 in 2024 (a share of 4.6%). The total number of employed persons in IWW freight transport was 23,183 in 2024. The number of persons employed in Rhine countries accounted for 77.2%, and in Danube countries for 16.8%.**
- **The inland passenger transport sector comprised 5,103 companies in 2024, with 41.6% registered in Rhine countries, and 10.3% in Danube countries. Between 2011 and 2024, the number of IWW passenger transport companies in Europe followed an upward trend. The number of companies in 2024 was 44.5% higher than in 2011. The total number of persons employed in European IWW passenger transport amounted to 29,055 in 2024.**
- **Turnover in IWW freight transport in the EU-27 (plus Switzerland, Bosnia and Herzegovina and Serbia) reached approximately 7.5 billion euro in 2024, down from 7.9 billion euro in 2023. Rhine countries generated 90% of this figure. In IWW passenger transport, turnover rose to 4.2 billion euro in 2024 (from 3.1 billion euro in 2023), continuing its recovery from the pandemic. Rhine countries accounted for 70.0% of passenger turnover.**

[46] The topic related to crew shortage was further analysed and developed in the thematic report 2023 on labour market, available on the Market Observation website of the CCNR

FIGURES 1 AND 2: **DEVELOPMENT OF THE NUMBER OF COMPANIES AND EMPLOYMENT IN FREIGHT AND PASSENGER TRANSPORT IN THE INLAND WATERWAY TRANSPORT SECTOR IN EUROPE ***



Sources: data partly estimated.
Eurostat [sbs_na_1a_se_r2] until 2020 and [sbs_sc_ovw] from 2021 onwards
Luxembourg has been removed due to the low reliability of the data.



COMPANIES
AND EMPLOYMENT IN FREIGHT TRANSPORT

Main trends on the labour market for IWT: Many inland navigation operators continue to face difficulties in recruiting and retaining qualified crew members. Labour shortages, an ageing workforce, challenges in attracting new entrants, increasing training and certification requirements, and rising personnel costs remain important structural issues affecting the sector's competitiveness and long-term development.

According to Eurostat figures, 5,477 IWW freight transport companies were active in Europe (EU-27 plus Bosnia-Herzegovina, Serbia and Switzerland) in 2024[47]. Around 86% (4,730 in absolute numbers) were registered in Rhine countries[48]. The Netherlands alone comprised 3,302 IWW freight companies, which represents 60% of the total number in Europe and 70% of the number in Rhine countries. Since 2011, the trend in the number of IWW freight transport companies in Europe has been declining slightly (see figure 1). The number of companies in 2024 was 9.5% lower than in 2011.

The number of companies in Danube countries is relatively low (254[49] which is equivalent to a share of 4.6%), compared to the share that the Danube has within total transport performance on EU-27 inland waterways (14%)[50]. In this regard, it should be noted that companies in the Danube region are larger on average, due to historical reasons. Many companies in the Danube region are former large state-owned companies. The average size of companies in the Rhine region is very small, since many of them - in particular in the dry cargo segment in the Netherlands, France and Belgium - are family-owned companies with only one or two vessels.

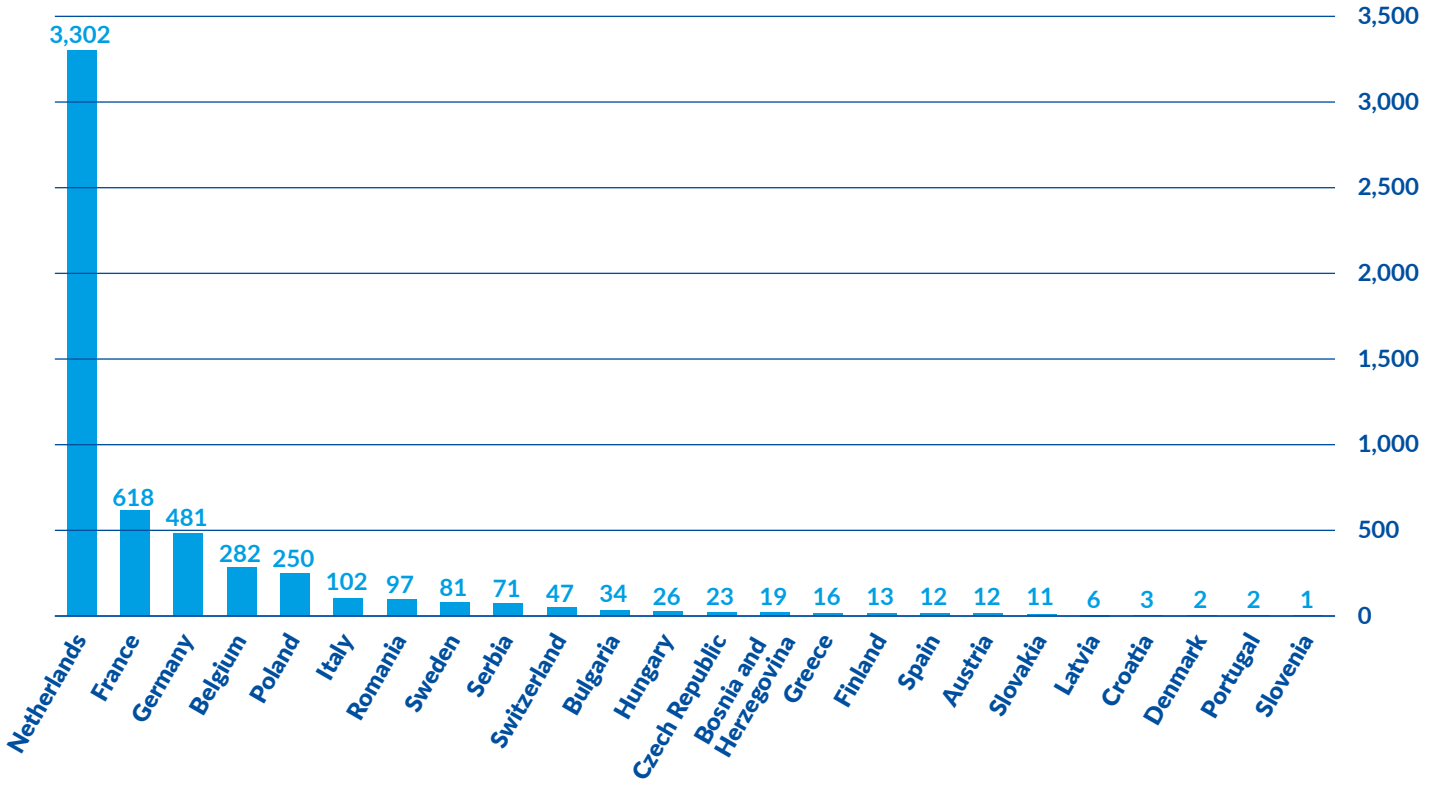
TABLE 1: **AVERAGE NUMBER OF PERSONS EMPLOYED PER FREIGHT TRANSPORT COMPANY IN RHINE COUNTRIES**

Belgium	**1.9**
The Netherlands	**2.8**
France	**3.3**
Germany	**11.0**
Switzerland	**20.4**
Rhine countries overall	**3.8**

Source: Eurostat [sbs_na_1a_se_r2] and [sbs_sc_ovw]

[47] Latest Eurostat figures for the overall number of enterprises in the freight transport sector [sbs_sc_ovw] are available for the year 2024.
[48] The Netherlands, Germany, Belgium, France, Switzerland and Luxembourg
[49] Austria, Croatia, Hungary, Slovakia, Serbia, Bulgaria and Romania.
[50] Values for 2024

FIGURE 3: **NUMBER OF COMPANIES IN IWW FREIGHT TRANSPORT IN EUROPE IN 2024***

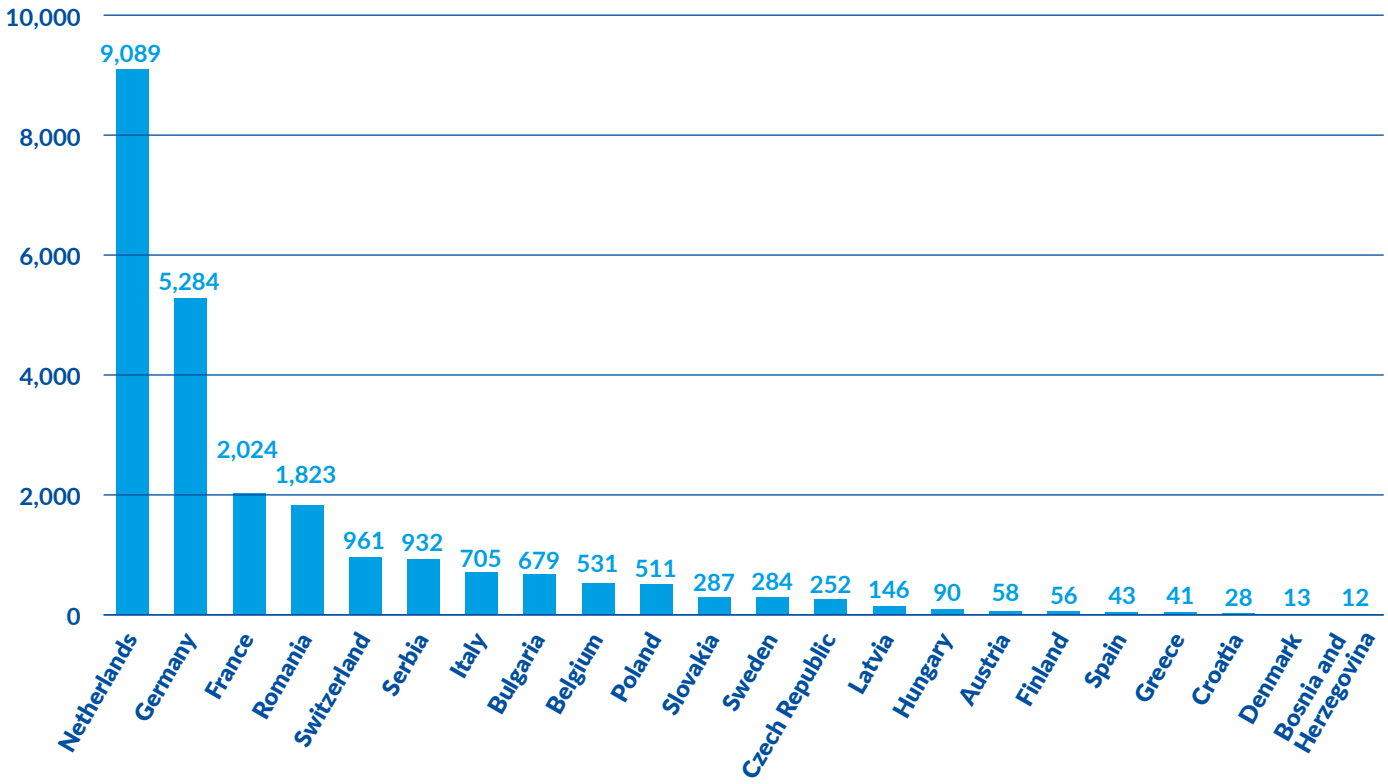


Sources: Eurostat [sbs_na_1a_se_r2] and [sbs_sc_ovw]

** Data for Belgium refer to 2023. Luxembourg has been removed due to the low reliability of the data. Individual data for Ireland are not available for confidentiality reasons. For Italy and Poland, the high number of companies relative to freight volumes is influenced by the structure of the inland waterway sector. In both countries, the majority of enterprises are very small.*

The number of employed persons in IWW freight transport includes self-employed, helping family members and employees. The total number of this variable was 23,183 in 2024 (EU-27 plus Bosnia-Herzegovina, Serbia and Switzerland). The number of persons employed in Rhine countries accounted for 77.2%, persons employed in Danube countries for 16.8% and persons employed in companies in countries outside the Rhine and Danube regions, for 6.0%. The trend in the number of persons employed was slightly negative between 2011 and 2024. The decrease between these years was -5.6%.

FIGURE 4: **NUMBER OF PERSONS EMPLOYED IN IWW FREIGHT TRANSPORT IN EUROPE IN 2024 ***



Sources: Eurostat [sbs_na_1a_se_r2] and [sbs_sc_ovw]
** Data for Denmark refer to 2023. Data for France refer to 2022. Data for Austria refer to 2021. Luxembourg has been removed due to the low reliability of the data. Individual data for Ireland, Portugal, and Slovenia are not available for confidentiality reasons. For Italy and Poland, see the note for figure 3.*

It can be observed that Germany has more than twice as many employed persons in IWW freight transport than France, while France has a higher number of companies. These data reflect the smaller average size of French companies compared to German companies. French companies had 3.3 employed persons per company in 2024 compared to 11.0 persons per company in Germany.

It should be noted that figures obtained from national labour market institutions or from other national offices might differ substantially from figures obtained from Eurostat, due to different statistical labour market concepts. For cross-country comparisons, Eurostat is treated as the preferred source since the data are harmonised across countries and are thus comparable.

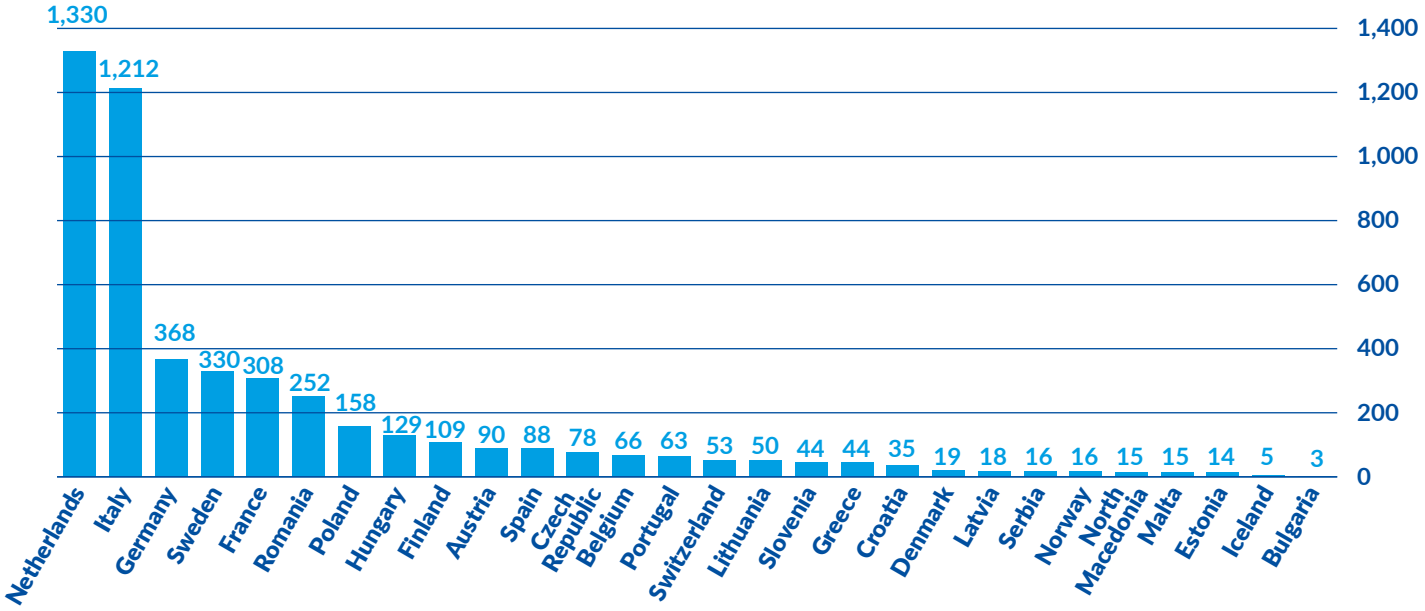
COMPANIES
AND EMPLOYMENT IN PASSENGER TRANSPORT

The number of IWW passenger companies in Europe (EU-27 plus Iceland, Norway, North Macedonia, Serbia and Switzerland) amounted to 5,103 in 2024. The geographical distribution shows that 41.6% are registered in Rhine countries, while those registered in Danube countries represent 10.3%. In contrast to IWW freight transport, Southern European countries have a somewhat high share within passenger transport companies (27.9% in 2024). Furthermore, Scandinavian countries represented 9.4% of all passenger transport companies in 2024.

Between 2011 and 2024, the number of IWW passenger transport companies in Europe followed a rather steady upward trend (see figure 1). As a result, the number of companies in 2024 was 44.5% higher than in 2011.

The three countries with the highest number of companies are the Netherlands, Italy and Germany. In terms of the number of companies, Switzerland ranks in the middle of the European countries. However, as is seen below, Switzerland ranks on position 3 when it comes to employment in passenger transport. The reason for this divergence is that Switzerland hosts many river cruise companies which have a higher number of employees than other types of companies in passenger transport.

FIGURE 5: **NUMBER OF IWW PASSENGER TRANSPORT COMPANIES IN EUROPE IN 2024 ***



Source: Eurostat [sbs_sc_ovw]

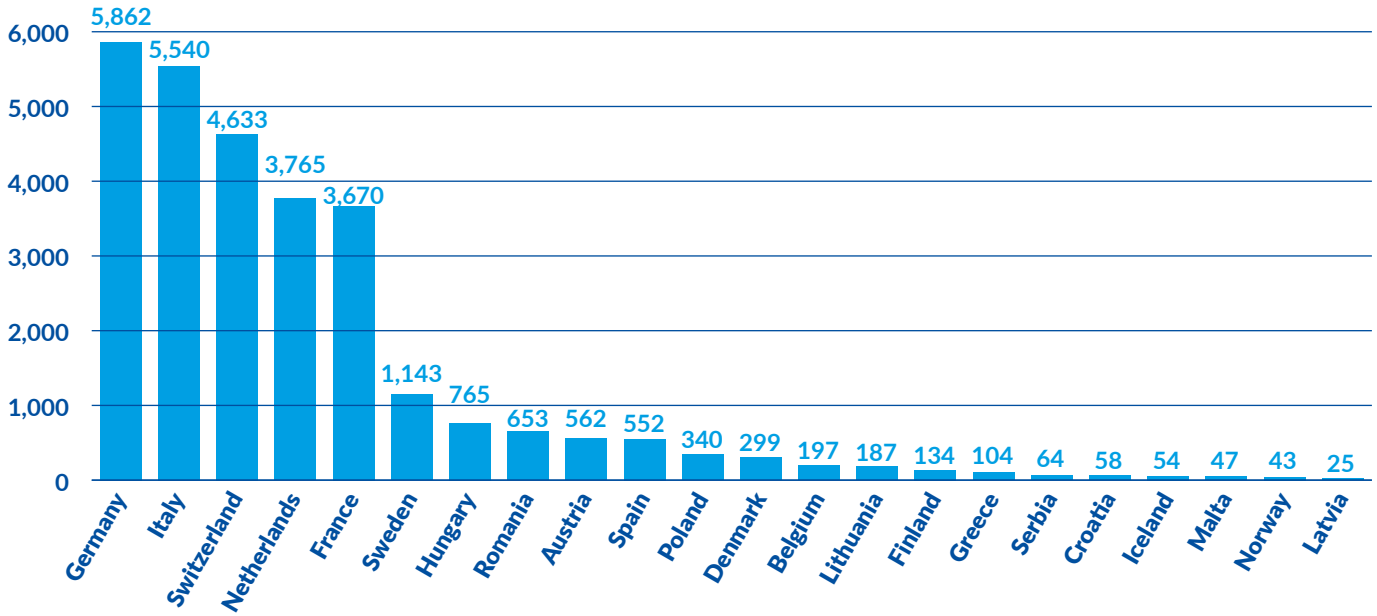
** Data for Belgium refer to 2023. Data for Serbia and Bulgaria refer to 2022. Luxembourg has been removed due to the low reliability of the data. Individual data for Slovakia and Bosnia and Herzegovina are not available for confidentiality reasons. For Poland, the high number of companies is influenced by the structure of the inland waterway sector. See previous notes.*

The total number of persons employed in European IWW passenger transport amounted to 29,055 in 2024 (EU-27 plus Iceland, Norway, North Macedonia, Serbia and Switzerland). The development for the years 2020-2023 shows an impact and a recovery from the Covid pandemic (see figure 2). Hence, in 2024, the number of persons employed returned to its upward trend that is visible for the period 2010-2024.

Regarding the number of companies, the Netherlands ranks first. However, this country is only ranking fourth when it comes to the number of persons employed. The reason is that the Netherlands has many day-trip companies in cities such as Amsterdam. The size of these day-trip companies is mostly small, compared to the large river cruise companies, which are often located in Switzerland or Germany.

On employment, Germany and Italy take the lead ahead of Switzerland and the Netherlands. Around 55% of all persons employed in IWW passenger transport are employed in one of these three countries. The employment in the passenger transport sector in these countries is rather high, which is due to their many lakes (and rivers in the case of Germany) and to the many river cruise companies in Germany and Switzerland.

FIGURE 6: **NUMBER OF PERSONS EMPLOYED IN IWW PASSENGER TRANSPORT IN EUROPE IN 2024 ***



Source: Eurostat [sbs_sc_ovw]
** Data for Austria refer to 2021. Data for Serbia refer to 2022. Data for Denmark refer to 2023. Individual data for Bulgaria, Czech Republic, Estonia, Portugal, Slovenia, Slovakia, and Bosnia and Herzegovina are not available for confidentiality reasons.*

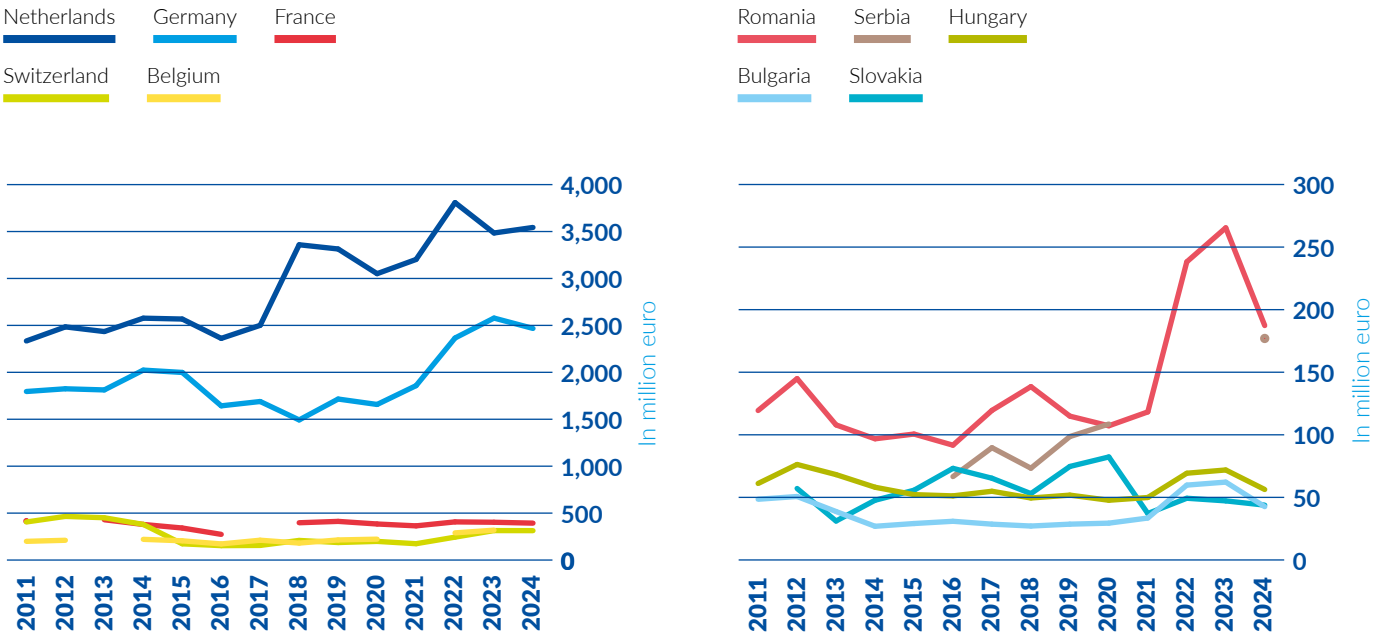
About 62% of all persons employed in EU inland waterway passenger transport are employed in Rhine countries. The share of Danube countries amounts to 7%, the share of Southern European countries is 22% and the share of Scandinavian countries is 6%.

TURNOVER
IN IWW FREIGHT AND PASSENGER TRANSPORT

TURNOVER IN IWW FREIGHT TRANSPORT

In 2024, for IWW freight companies in the EU-27 (plus Switzerland, Bosnia and Herzegovina and Serbia), a turnover of approximately 7.5 billion euro was registered[51], compared to 7.9 billion euro in 2023 and in 2022. Rhine countries accounted for approximately 6.7 billion euro (90% of the turnover in the EU-27, plus Switzerland, Bosnia and Herzegovina and Serbia). An upward trend can be observed for Germany since 2018.

FIGURE 7: **ANNUAL TURNOVER IN IWW FREIGHT TRANSPORT IN RHINE AND DANUBE COUNTRIES** (IN MILLION EURO) *



Sources: Eurostat [sbs_na_1a_se_r2], [sbs_sc_ovw], CBS (NL) for data before 2021, Swiss Federal Tax Administration (FTA-CH) for data before 2021, CCNR estimation based on data from Eurostat for France for 2019.
For Switzerland and the Netherlands, a break in the data can be observed from 2021 onwards. This is due to the use of Eurostat figures from 2021 onwards derived from a new database [sbs_sc_ovw]. Turnover data were missing in the former Eurostat database [sbs_na_1a_se_r2] for these two countries, leading to the use of national databases from CBS and FTA for years before 2021.
** The value for Dutch companies for data until 2020 (included) is an estimation based on net turnover data for the entire inland navigation sector in the Netherlands. Value for Swiss companies for data until 2020 (included) was converted into euros according to the yearly average exchange rate.*

[51] *This figure includes the turnover for Serbia (168 million euro).*

TABLE 2: **TURNOVER IN IWW FREIGHT TRANSPORT IN RHINE COUNTRIES** (IN MILLION EURO)

	2022	2023	2024
Dutch companies	3,808	3,484	3,543
German companies	2,366	2,578	2,468
French companies	407	403	393
Belgian companies	290	318	318
Swiss companies	244	314	313
Rhine countries *	**7,115**	**7,097**	**7,035**

Source: Eurostat [sbs_sc_ovw]
** Data for Belgium in 2024 refer to 2023.*

The estimated turnover generated in IWW freight transport companies registered in Danube countries amounted to 584 million euro in 2023, and 527 million euro in 2024. Hereby, the data for Serbia are missing for 2022 and 2023, and the data for Austria are missing for 2022,2023 and 2024.

TABLE 3: **TURNOVER IN IWW FREIGHT TRANSPORT IN DANUBE COUNTRIES** (IN MILLION EURO)

	2022	2023	2024
Romanian companies	238	265	187
Serbian companies*	109	109	168
Hungarian companies	69	72	56
Bulgarian companies	60	62	43
Slovakian companies	49	47	44
Austrian companies*	27	27	28
Croatian companies*	3	2	2
Danube countries *	**555**	**584**	**528**

Source: Eurostat [sbs_na_1a_se_r2], [sbs_sc_ovw]
** Data for Serbia in 2022 and 2023 refer to 2020, data for Austria in 2022 and 2023 refer to 2021 and data for Croatia in 2024 refer to 2023.*

Within European regions outside of the Rhine and Danube areas, the countries with the highest turnover[52] are Italy (76 million euro), Poland (47 million euro), Sweden (27 million euro), and Czech Republic (23 million euro).

[52] *All values for 2024*

TURNOVER IN IWW PASSENGER TRANSPORT

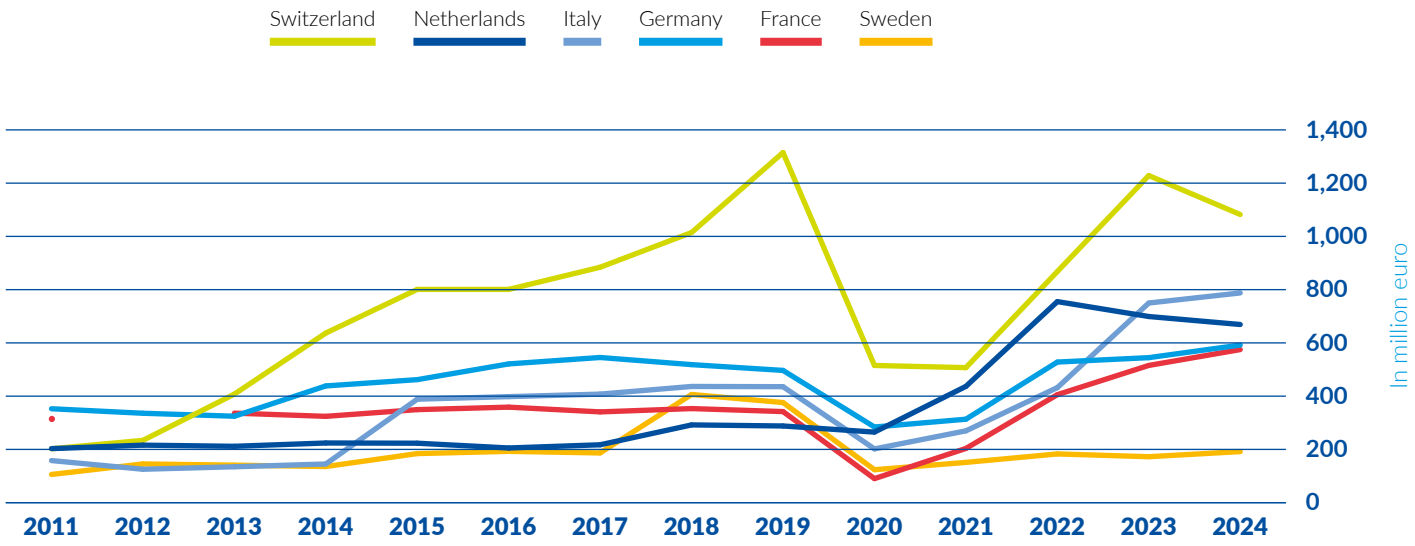
Regarding turnover in the EU (plus Switzerland, Norway, Iceland, North Macedonia, and Serbia) for IWW passenger companies in 2024, approximately 4.2 billion euro was registered, compared to 3.1 billion euro in 2023 and 2.7 billion euro in 2022.

Rhine countries[53] accounted for approximately 3.0 billion euro in 2024, a share of 70% within total IWW passenger turnover in Europe.

It is important to note that the following turnover figures include those generated by all passenger market segments (day trips on rivers, day trips on lakes, river cruises or ferry traffic). For some countries, the turnover figures are based almost entirely on river cruise activities or day-trip activities or on both activities.

The curves for turnover in IWW passenger transport reflect a strong recovery that took place in 2022 and 2023 from the Covid-19 pandemic. The turnover values that were reached in those years are often higher than the pre-pandemic levels.

FIGURE 8: **ANNUAL TURNOVER IN IWW PASSENGER TRANSPORT IN MOST RELEVANT COUNTRIES** (IN MILLION EURO)



Sources: Eurostat [sbs_na_1a_se_r2] until 2020, [sbs_sc_ovw] from 2021 onwards, CBS (NL) for data before 2021, FTA (CH) for data before 2021 and CCNR estimation based on data from Eurostat only for France for the year 2019.
For Switzerland and the Netherlands, see the notes under graph 7. Data were unavailable for many countries until 2020.

[53] *Without Luxembourg, as data are not available for reliability reasons.*

TABLE 4: **TURNOVER IN IWW PASSENGER TRANSPORT IN RHINE COUNTRIES** (IN MILLION EURO)

	2022	2023	2024
Swiss companies	868 (e)	1,229 (e)	1,082
Dutch companies	755	699	669
German companies	528	545	592
French companies	406	515	575
Belgian companies	17	31	34
Rhine countries	**2,574 ***	**3,019 ***	**2,952**

Source: Eurostat [sbs_sc_ovw]
** Includes an estimation for Switzerland as data were unavailable in 2022 and 2023.*
(e) = estimation

For companies in Danube countries, the existing data[54] show significantly lower values than in Rhine countries. For some years and countries, some data are unavailable. This indicates often very low economic activities of an industry, so that data are not high enough to be disseminated (for reasons of confidentiality).

The generally low values of Danube countries regarding turnover for IWW passenger transport does not point to low passenger transport numbers on the Danube in general. It rather points to a combination of factors, such as the fact that most river cruises on the Danube are operated by companies that have their headquarter in Rhine countries. In this case, turnover is counted within Rhine countries and not within Danube countries. Furthermore, the turnover in a Danube country might be very low, because of low wage levels in Danube countries. Lower wages and therefore lower personnel costs imply lower total costs, especially in passenger transport, which is quite labour-intensive. Lower total costs, in return, imply lower price levels and therefore also lower turnover figures.

[54] For several Danube countries, turnover data in the Eurostat SBS database is missing for confidentiality reasons. Similarly, the turnover values reached low levels and therefore could not be displayed.

TABLE 5: **TURNOVER IN IWW PASSENGER TRANSPORT IN DANUBE COUNTRIES** (IN MILLION EURO)

	2022	2023	2024
Austrian companies	76 (e)	95 (e)	88
Hungarian companies	31	40	43
Romanian companies	20	22	23
Slovakian companies	14 (e)	14 (e)	13
Serbian companies	3	3 (e)	3 (e)
Croatian companies	2	3	3 (e)
Danube countries *	**147**	**178**	**173**

Source: Eurostat [sbs_sc_ovw]
** Includes estimations for Austria and Slovakia for 2022 and 2023. Data for Serbia for 2023 and 2024 refer to 2022 and data for Croatia for 2024 refer to 2023.*
(e) = estimation

Two countries in Europe outside the Rhine and Danube region with a considerable level of turnover in IWW passenger transport are Italy (788 million euro in 2024) and Sweden (192 million euro in 2024). It can be noted that for Italy, the turnover is almost entirely generated from day-trip activity on lakes and on passenger transport in Venice.


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08

OUTLOOK FOR INLAND WATERWAY FREIGHT TRANSPORT AND PASSENGER TRANSPORT

- The outlook for the iron ore and steel segment has improved slightly in the short term, with steel demand stabilising and apparent steel consumption expected to rebound in 2025. Supported by stronger prospects for the construction and automotive sectors, iron ore transport on the Rhine is forecast to recover modestly in 2026-2027. In contrast, mineral oil products face a negative outlook, as low water conditions, weaker heating oil demand, reduced incentives for stockpiling and the long-term energy transition are expected to constrain transport demand.
- Agricultural products benefited from strong harvests and export demand in 2025. In contrast, the chemical sector is expected to remain challenging in the short term due to weak demand, high energy costs and global competition. The output of the EU-27 chemical industry declined by -2.4% in 2025 compared to 2024. Container transport continues to face challenges from low water, geopolitical tensions, and logistical inefficiencies, with only moderate growth expected and at a slower pace than in the past.
- In the long run, production forecasts point to declining output for petroleum products, coal and steel in Rhine countries, while chemical production and international trade are expected to grow and support transport demand. Container transport is projected to benefit from growth in global trade over the long term.

SHORT-TERM OUTLOOK
FOR IWT MARKETS IN RHINE AND DANUBE COUNTRIES

STEEL AND IRON ORE

Inland navigation is an important transport mode for raw materials and end products of the steel industry. In the German steel industry (the largest steel producing country in the EU), for example, inland navigation has a market share of approximately 32% among all logistic activities, according to the German Steel Association. This market share increased slightly in 2023 and 2024, although it shows a rather constant evolution since 2011, fluctuating around the 30% share.

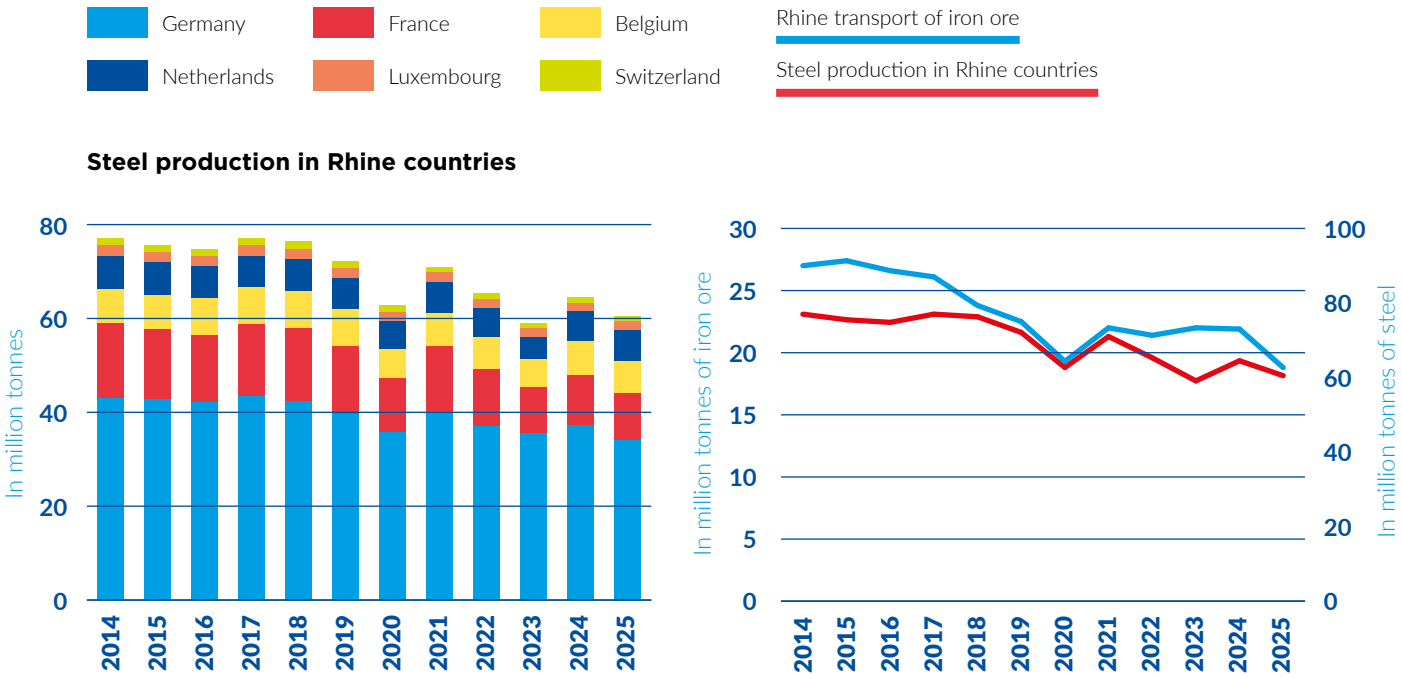
On the entire Rhine, 16.5% of all cargo transport is related to steel production (iron ore, coking coal, metals, metal products)[55]. For the traditional Rhine, this share is around 30% if an estimate for the share of scrap steel is added. On the Danube, the share is even higher and amounts to 40% for the middle Danube.

Iron ore transport on the Rhine in general follows a similar trend to steel production, despite a small divergence in 2023, due to a replenishment of stocks in iron ore.

[55] *Without scrap steel*



FIGURES 1 AND 2: **STEEL PRODUCTION IN RHINE COUNTRIES AND TRANSPORT OF IRON ORE ON THE ENTIRE RHINE**



Sources: Eurofer, Destatis, Rijkswaterstaat, CCNR analysis
Switzerland: estimation

In order to identify the influencing factors for iron ore transport on the Rhine, a statistical regression model was developed, based on monthly data for iron ore transport on the traditional Rhine from the year 2000 until the year 2025. The results show that around 75% of the data movements[56] of iron ore transport are explained by only four influencing or explanatory factors, shown in the following infographics:

[56] *The adjusted coefficient of determination of the model is 0.75.*

FIGURE 1: FACTORS IMPACTING THE TRANSPORT OF IRON ORE



WATER LEVEL
DUISBURG-RUHRORT

WATER LEVEL → TRANSPORT VOLUME

IMPACT

500 → 480 cm	300 → 280 cm	200 → 180 cm
-10.5%	-23.2%	-47.5%

Increasing losses during low water periods

GASOIL PRICE

GASOIL PRICE → TRANSPORT VOLUME

IMPACT

Iron ore transport is very energy-intensive due to the use of pushed convoys

+ 1 Unit of diesel price residuals

- 0.54 Transport volume

STEEL PRODUCTION
IN GERMANY

STEEL PRODUCTION → TRANSPORT VOLUME

STORAGE CAPACITY → TRANSPORT VOLUME

IMPACT

As steelworks have limited storage capacity, transport follows production in the same month immediately. A decrease in steel production would have the reverse effect on transport volume.

+ 1% Steel production

+0.68% Transport volume

STRUCTURAL SHIFT
2008/2009 CRISIS

STRUCTURAL DECREASE → TRANSPORT VOLUME

IMPACT

Transport volumes have consistently been below pre-crisis levels

-25.5% Estimated impact on transport volumes

TABLE 1: **EXPLANATORY VARIABLES FOR IRON ORE TRANSPORT ON THE RHINE – RESULTS OF A STATISTICAL MODEL** (BASED ON DATA FOR THE PERIOD JANUARY 2000-DECEMBER 2025)

Explanatory variable	Coefficient of influence	t-statistic *	Confidence level**
LN (German steel production)	+0.679	+10.87	99%
Water level Duisburg-Ruhrort (reciprocal)	-19.607	-2.06	95%
Financial crisis 2008/2009	-0.189	-7.17	99%
Fuel price (gasoil)	-0.536	-5.50	99%
Constant	+2.334	+4.45	99%

Sources: CCNR calculation based on data from Destatis, data from WSV, provided by BfG.
** The t-statistics are calculated with the NEWEY-WEST procedure which makes them robust against autocorrelation and heteroscedasticity. The higher the t-statistic in terms of amount, the greater the statistical significance.*
*** This level is linked with the t-statistic and explains by which probability the result for an explanatory variable is reliable and not due to chance.*

Based on this table the following conclusions can be drawn. During the time period 2000 to 2025, an increase in steel production of +1% was followed by an increase in iron ore transport of +0.679% (on average)[57]. A negative coefficient is associated with water level, indicating that lower water levels lead to less iron ore transport. Moreover, this relationship is non-linear: the lower the water level, the stronger is the negative impact on iron ore transport if the level drops further.

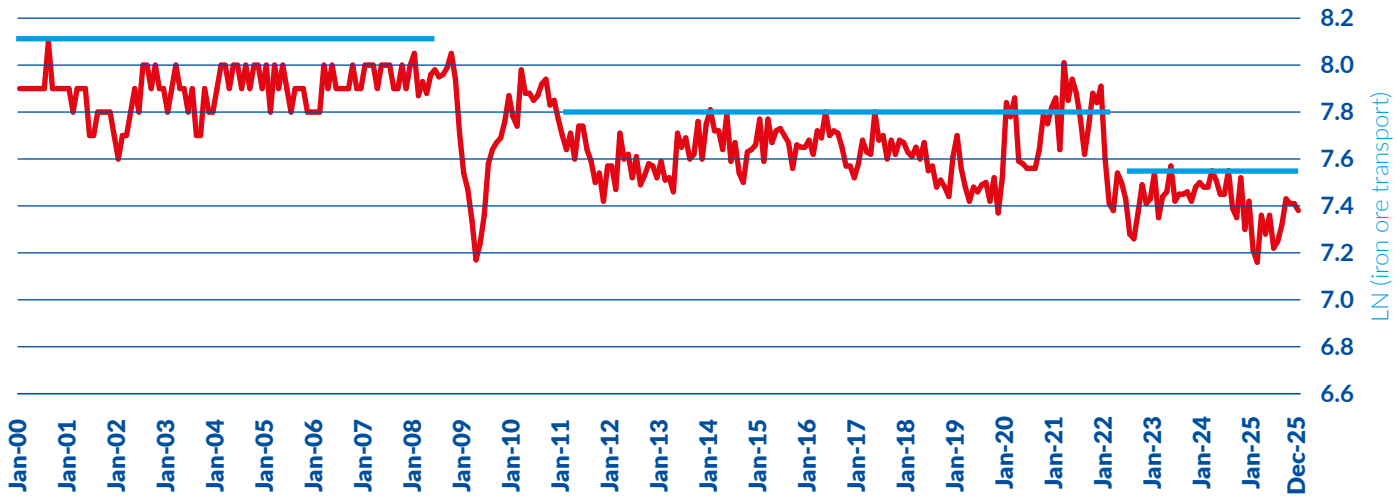
The financial crisis in 2008/2009 had a permanent effect on the level of iron ore transport. Volumes following this crisis were systematically lower than they were previously (by around 25%). This crisis acted as a strong catalyst, accelerating the structural decline of classic steel production in western Europe[58]. In particular, the crisis was seen as an opportunity to shut down inefficient steel plants due to dwindling demand, which were not reopened when demand recovered. In all three countries relaying on Rhine and Moselle transport of iron ore (Germany, France and Luxembourg) steel production was significantly lower in 2025 compared to 2007[59].

The Covid pandemic and its effect on industrial production, as well as the output in the service sector, seems to have acted as another crisis catalyst, structurally lowering steel demand and iron ore transport on the Rhine.

Finally, iron ore transport is very energy intensive (push boats and convoys), so that the fuel price for gasoil turned out to be of influence for the level of transport.

[57] An assessment was carried out on whether the iron ore transport depends directly on steel production in the same month, or if there are leads or lags present in this relationship. The strongest correlation was observed for iron ore transport depending on steel production in the same month.
[58] In France, some parts of steel production along the Moselle in Lorraine was abandoned permanently with a delay of around three years after the financial crisis. This has reduced iron ore transport on Rhine and Moselle permanently.
[59] According to data from the World Steel Association, steel production developed as follows: Germany: 49 mio. t in 2007, 34 mio. t in 2025; France: 19 mio. t in 2007, 10 mio. t in 2025; Luxembourg: 3 mio. t in 2005, 2 mio. t in 2025.

FIGURE 3: **NATURAL LOGARITHM OF MONTHLY IRON ORE TRANSPORT ON THE TRADITIONAL RHINE AND PERMANENT EFFECT OF STRUCTURAL EVENTS**

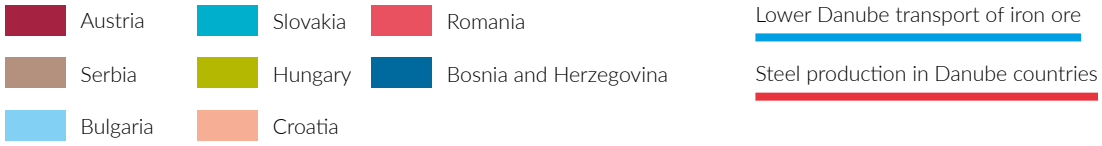


Source: Destatis

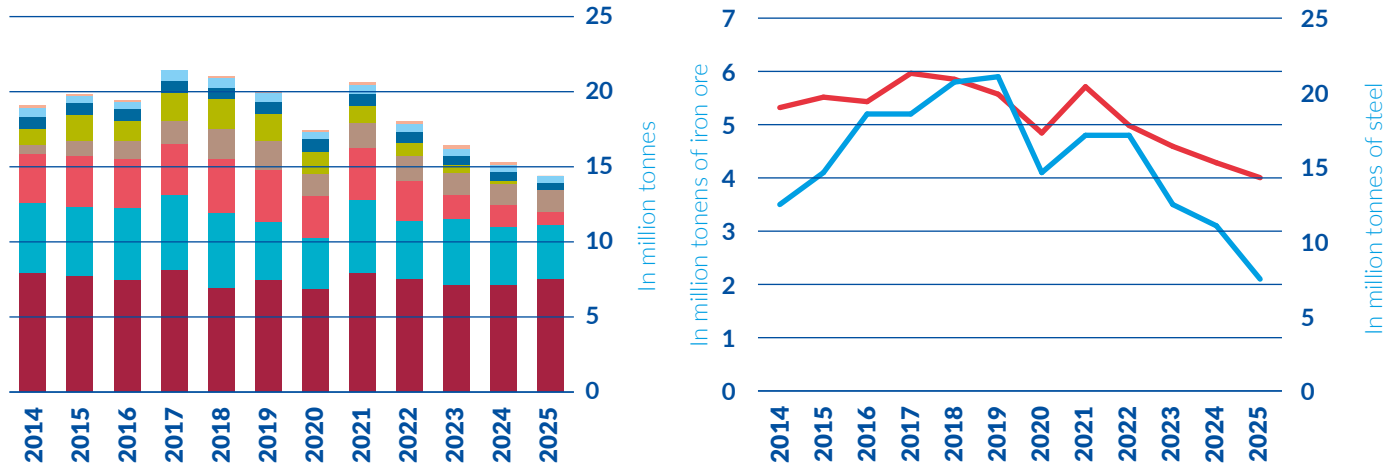
According to this model, a short and mid-term forecast for iron ore transport must look at the forecast for German steel production, hydraulicity and fuel prices.

Steel production in Danube countries[60] amounted to 14.3 million tonnes in 2025, a decrease of -6.5% compared to 2024.

FIGURES 4 AND 5: **STEEL PRODUCTION IN DANUBE COUNTRIES AND TRANSPORT OF IRON ORE ON THE LOWER DANUBE ***



Steel production in Danube countries



Sources: Eurofer, Eurostat [iww_go_atygo], National Institute of Statistics (Romania)
** Lower Danube = Romania;*
Data for Serbia and Bosnia-Herzegovina for 2024: estimation
[60] Without Ukraine

Outlook for the iron ore and steel segment

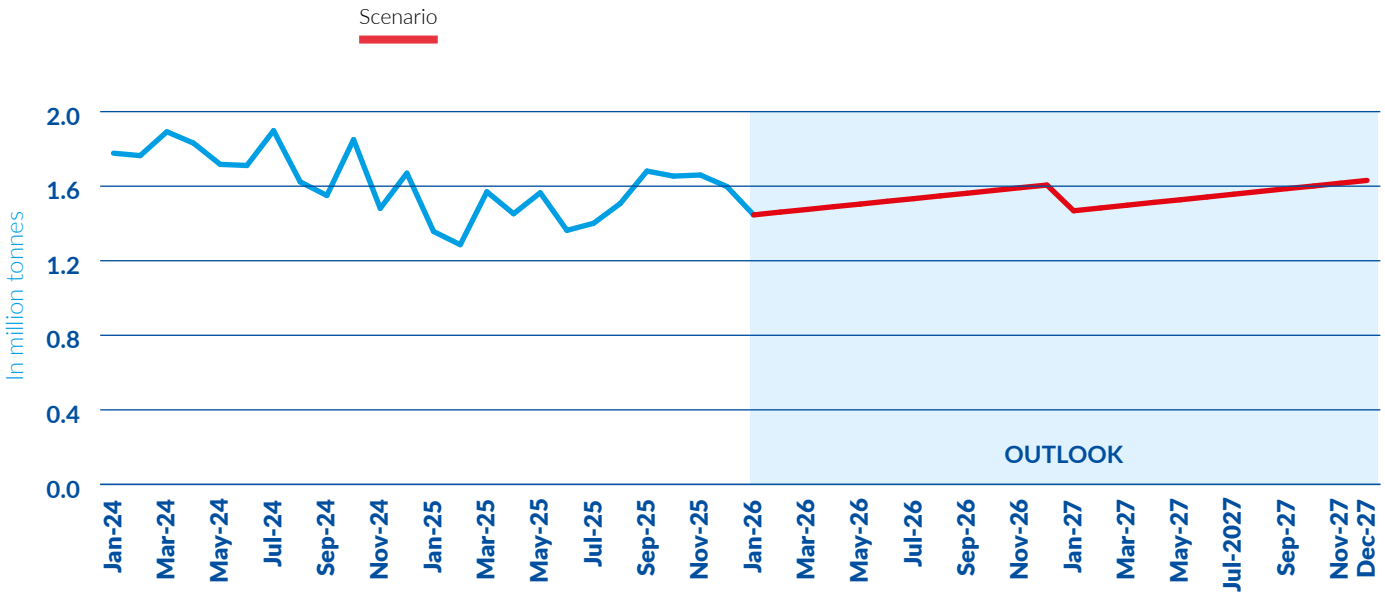
Steel demand is dependent upon the development in the steel using sectors, which are, particularly, the construction sector and the automobile industry. In Germany, two-thirds of demand for steel comes from these two sectors, for which the following outlook can be expected according to Eurofer[61]:

- The construction sector is expected to continue growing in 2026 (+1.5%), and in 2027 (+2.9%), driven by recovery in housing demand and a pick-up in infrastructure spending.
- For the automotive industry, a moderate decline is expected in 2026 (-0.2%), before increasing in 2027 (+2.9%), although output volumes are expected to remain well below those recorded in 2019.

Based on the coefficients of the econometric model, the forecast of steel production in the construction and automotive sectors in 2026 (+2.4%/+0.9%) and 2027 (+2.8%/+1.7%), and assumptions for water levels, a scenario for iron ore transport in 2026 and 2027 was developed. This scenario assumes a growth of steel production as expected, and water levels at a historically average level.

The scenario was developed by translating the expected increase in steel production into a forecast for iron ore transport (using the coefficient +0.679 of the model, see table 1). The resulting scenario points to a recovery of iron ore transport to a limited extent in 2026 and 2027.

FIGURE 6: **SCENARIO FOR IRON ORE TRANSPORT ON THE TRADITIONAL RHINE IN 2026 AND 2027***



Source: CCNR analysis

[61] *Eurofer, Economic and steel market outlook 2026-2027 (June 2026), available on the Eurofer website*

MINERAL OIL PRODUCTS

Mineral oil products are the largest product segment on the Rhine with an annual transport volume of 63 million tonnes (2025). They have a share of 19% of all goods on the traditional Rhine and a share of 23% on the entire Rhine.

In order to better understand the influencing factors for mineral oil transport on the Rhine, monthly data for mineral oil product transport on the traditional Rhine (dependent variable) were analysed and modelled using a multiple non-linear regression model. The explanatory variables were selected on the basis of evidence from market observation and information from market reports of other relevant market research firms (Insights Global). The estimation results point to a dominant influence of the physical variable 'water level' which physically limits transport, particularly during low water. Economic factors include seasonal effects on heating oil demand in autumn and winter, as well as price expectations for heating oil/gasoil, the core product within mineral oil products on the Rhine. These price expectations are measured via the difference between the 1-month future price for gasoil and the 6-month future price. They determine the economic incentives for stockpiling and transporting petroleum products. Lower gasoil prices in the future (backwardation) act as limiting factor for stockpiling and for transport, as is put forward in market comments. This was confirmed by the model.

Furthermore, mineral oil transport on the traditional Rhine is also influenced by a slight negative trend, leading to a reduction in mineral oil transport of -0.7% per year, irrespective of physical and economic factors. This structural trend is attributable to savings in thermal energy resulting from efficiency improvements and the switch to more sustainable energy sources.

TABLE 2: **EXPLANATORY VARIABLES FOR MINERAL OIL PRODUCT TRANSPORT ON THE RHINE – RESULTS OF A STATISTICAL MODEL** (BASED ON DATA FOR THE PERIOD JANUARY 2003-DECEMBER 2025)

Explanatory variable	Coefficient of influence	t-statistic *	Confidence level**
Reciprocal of the Kaub water level	-30.50	-9.97	99.9%
Seasonal effect in autumn (heating oil)	+0.035	+2.29	95.0%
Seasonal effect in winter and March (heating oil)	+0.016	+2.59	95.0%
Difference in gasoil futures prices***	-0.003	-1.80	90.0%
Structural trend	-0.0006	-4.91	99.9%
Constant	+8.032	+245.83	99.9%

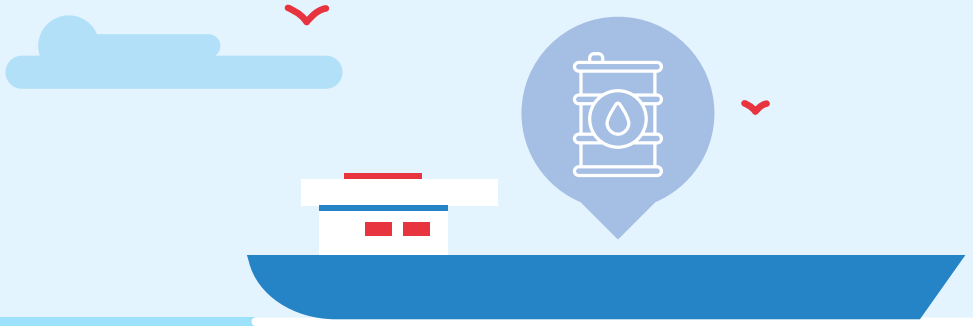
Sources: CCNR calculation based on data from Destatis, data from WSV, provided by BfG, German Meteorological Service, Investing.com.

** The t-statistics are calculated with the NEWEY-WEST procedure, which makes them robust against autocorrelation and heteroscedasticity. The higher the t-statistic in terms of amount, the greater the statistical significance.*

*** This level is linked with the t-statistic and explains by which probability the result for an explanatory variable is reliable and not due to chance.*

**** Percentage difference between the 1-month future price and the 6-month future price*

FIGURE 1: FACTORS IMPACTING THE TRANSPORT OF PETROLEUM PRODUCTS



WATER LEVEL
KAUB

WATER LEVEL → TRANSPORT VOLUME

IMPACT

300 → 290 cm	200 → 190 cm	100 → 90 cm
-0.35%	-0.80%	-3.4%

Increasing losses during periods of low water

PRICE EXPECTATIONS
HEATING OIL/GASOIL

TREND IN GASOIL PRICES → STOCKPILING OF HEATING OIL

TREND IN GASOIL PRICES → TRANSPORT VOLUME

IMPACT

When future stock markets expect gasoil prices to fall (M1 > M6), storage becomes less profitable. This leads to a reduction in the transport of heating oil to storage facilities located in the Rhine hinterland.

SEASONAL VARIATIONS

TEMPERATURE (WINTER) → STOCKPILING OF HEATING OIL

TEMPERATURE (WINTER) → TRANSPORT VOLUME

IMPACT

Stockpiling of heating oil before winter	+3.6%	Sept./Oct.
Cold January and February (-3°C and -2°C)	+11.9%	March

STRUCTURAL TREND
NEGATIVE IN THE MEDIUM TERM

STRUCTURAL DECLINE → TRANSPORT VOLUME

IMPACT

A slow structural decline linked to the energy transition is observed

-0.7% per year

Petroleum products transport on the traditional Rhine

Overall, the model suggests that the transport of mineral oil products on the Rhine is centred around two main explanatory blocks: 1) hydrology and 2) stockpiling due to seasonal and economic signals.

Outlook for mineral oil products transport

Based on the econometric model, two scenarios for transport demand in 2026 and 2027 were developed. The two scenarios are identical in all respects except for one: the assumed Rhine water level. All other variables are either deterministic, such as the time trend (no estimation required) or held constant across scenarios. This is the case for the seasonal effect in autumn and the winter temperatures.

Future water levels cannot be predicted with precision. Instead, monthly reference values were derived from the 22 years of historical observations (2003–2025). For each month, two percentile values were extracted:

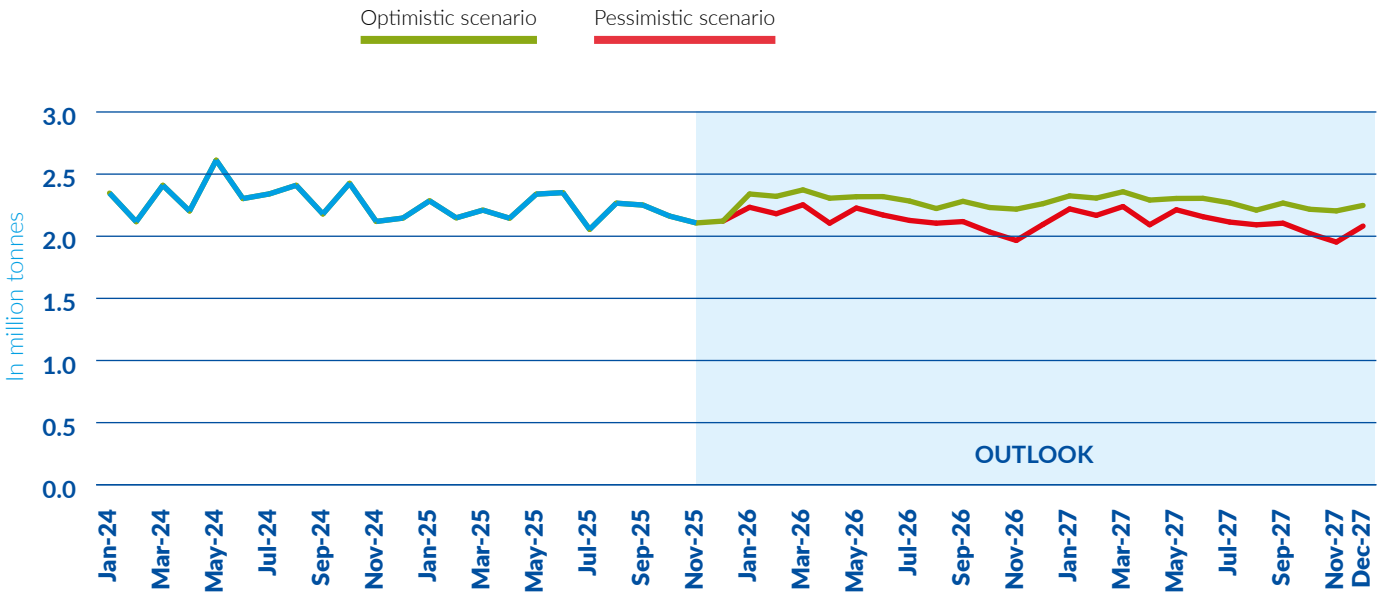
- **Optimistic scenario:** the 75th percentile of historical water level values for each month. This corresponds to a year with above-average water levels: only 25% of historical years had water levels this high or better.
- **Pessimistic scenario:** the 25th percentile. This corresponds to a year with below-average water levels: 75% of historical years had better conditions than this. Rhine draft restrictions apply and barges must operate below full load, reducing effective transport capacity.

As to the gasoil future prices, the outlook for 2026 and 2027 is subject to considerable uncertainty, but energy market forecasts point towards a moderate decline in crude oil and gasoil prices compared to 2025[62]. In this context, a sustained backwardation was assumed for the entire forecast. As the model results confirm, backwardation reduces the economic incentive for traders and distributors to build up stocks of gasoil. In turn, lower stockpiling activity reduces transport demand on the Rhine. The assumed spread was derived as the historical monthly average spread plus a backwardation premium of +2.0 in 2026 and +1.7 in 2027, with a floor of 1 to ensure the backwardation assumption is never violated. The slight reduction of the premium in 2027 reflects the principle that commodity markets do not sustain pronounced backwardation indefinitely.

If oil and gasoil prices do gradually decline in 2026 as forecasted, this backwardation effect would continue to act as a limiting factor for mineral oil transport volumes on the Rhine, reinforcing the structural downward trend already identified in the model. It should be noted, however, that oil price forecasts carry significant uncertainty, and any unexpected supply disruptions or demand increases could change this outlook considerably.

[62] *U.S. Energy Information Administration (EIA), Short-Term Energy Outlook, April 2026, available on the EIA website*

FIGURE 7: **SCENARIOS FOR TRANSPORT DEMAND FOR MINERAL OIL PRODUCTS ON THE TRADITIONAL RHINE IN 2026 AND 2027**



Source: CCNR analysis

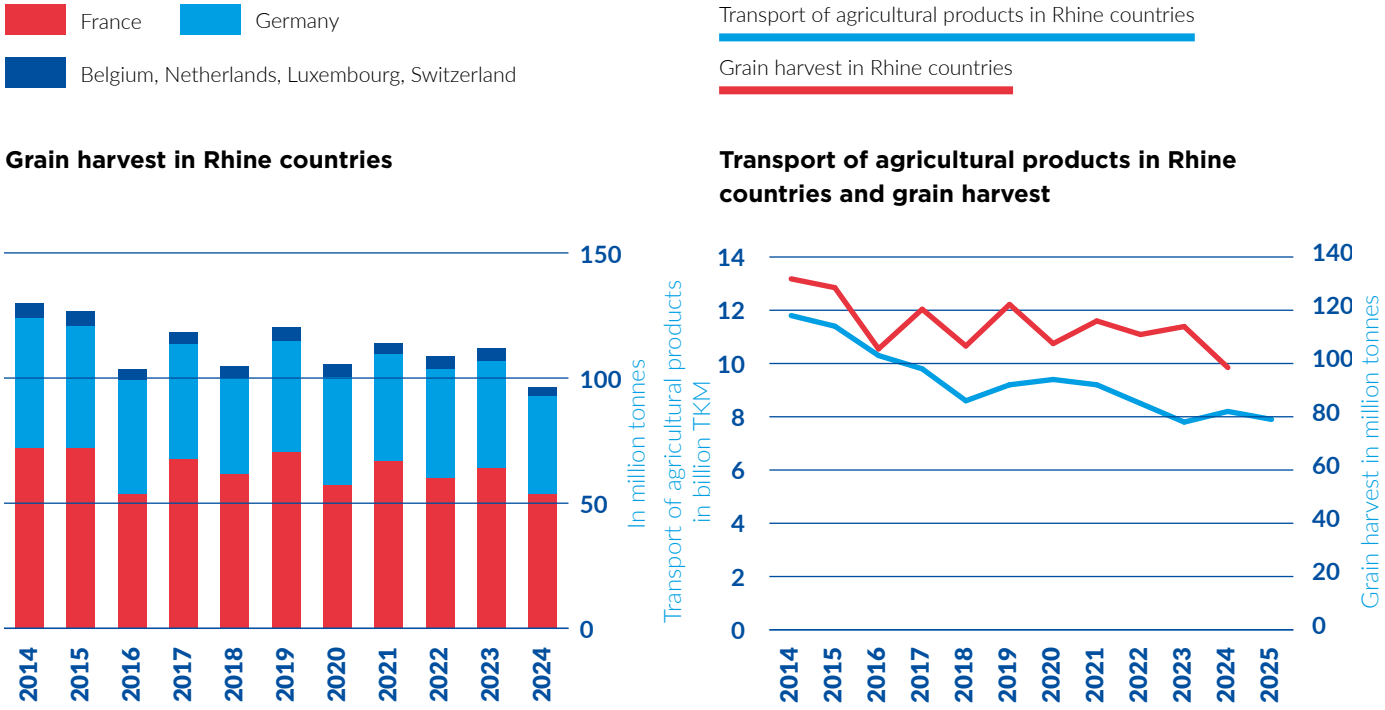
In the optimistic scenario, better waterway conditions lead to a slightly higher transport demand than in the low water scenario. For the traditional Rhine, the annual volume would amount to 27.5 million tonnes in 2026 in the optimistic scenario, compared to 25.6 million tonnes in the pessimistic scenario. For the year 2027, the optimistic scenario would include a volume of 27.3 million tonnes, and the pessimistic scenario 25.5 million tonnes



AGRICULTURAL AND FOOD PRODUCTS

Agricultural and food products have a share of around 10% in Rhine navigation and around 33% in Danube navigation.

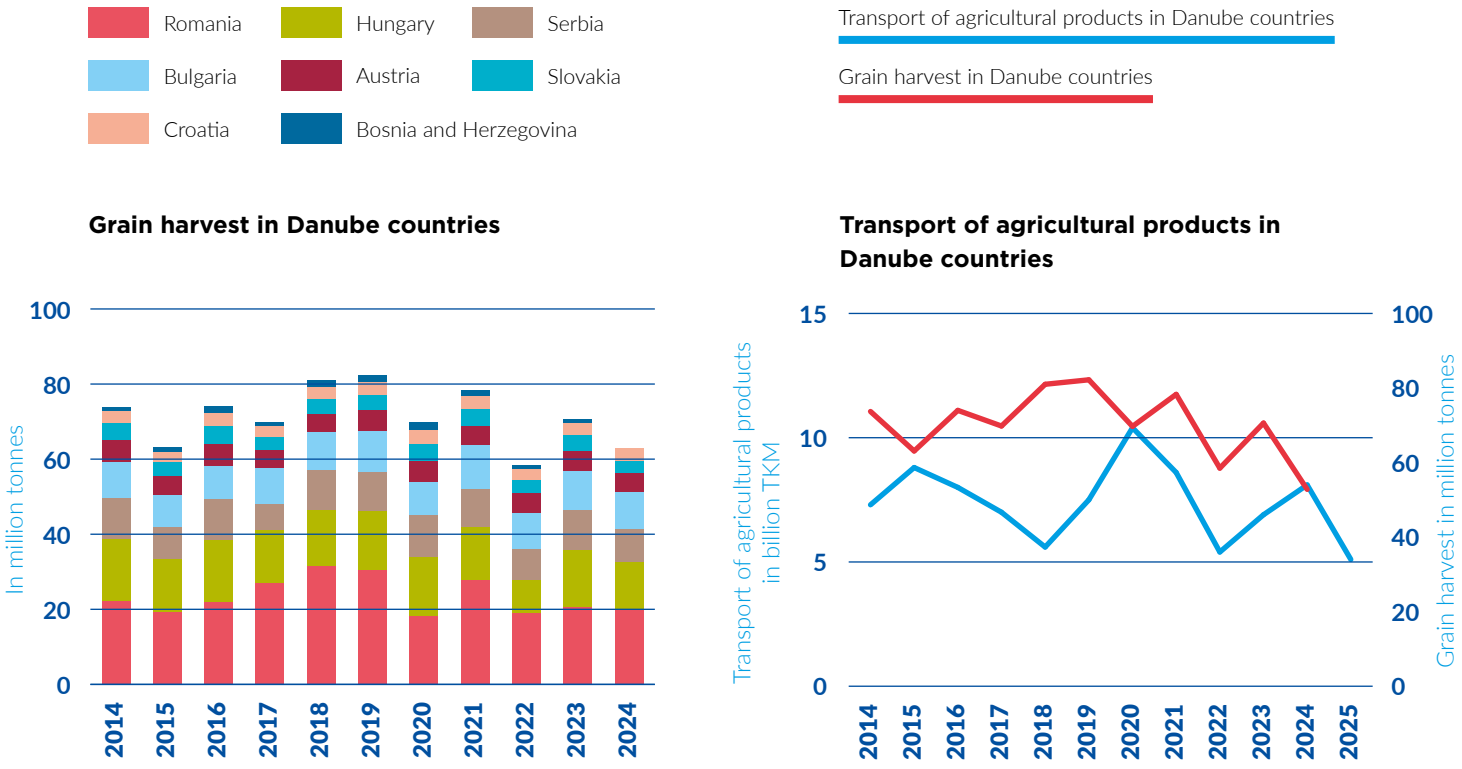
FIGURES 8 AND 9: **GRAIN HARVEST PRODUCTION AND TRANSPORT OF AGRICULTURAL PRODUCTS IN RHINE COUNTRIES**



Sources: Eurostat [apro_cpsh1] and [iww_go_atygo]
Grain = Cereals (excluding rice) for the production of grain (including seed)



FIGURES 10 AND 11: **GRAIN HARVEST PRODUCTION AND TRANSPORT OF AGRICULTURAL PRODUCTS IN DANUBE COUNTRIES**



Sources: Eurostat [apro_cpsh1] and [iww_go_atygo]
Grain = Cereals (excluding rice) for the production of grain (including seed). For figure 7, missing data for Bosnia and Herzegovina in 2024. For figure 8, data for Serbia and Bosnia and Herzegovina are not available for the transport of agricultural products in Danube countries.

Outlook for the agri-food segment

Wheat

For soft wheat[63], harvest volumes for the 2025/26 season in the EU, including in France, are well above the five-year average. On a worldwide scale, harvest volumes are also above the five-year average. The situation is similar for hard wheat[64], where harvest volumes are slightly above the five-year average in the EU and worldwide. EC projections for the 2026/2027 season remain on the lower side, indicating a 6% decrease compared with the previous season, while still broadly consistent with the five year average.

Barley

Worldwide production increased to 154.8 million tonnes and EU production to 55.7 million tonnes for the 2025/26 season. Harvest volumes on a worldwide scale, as well as in the EU-27, including in France, are above the five-year average. Harvest results are foreseen to decrease in the EU 2026/27 season, to a level of 54.7 million tonnes (-2%) while still remaining above the five-year average.

[63] *Soft wheat is generally suitable as a raw material for flour and baked goods, such as bread and bread rolls, but is also used to produce malt, animal feed and starch.*
[64] *Hard wheat is primarily used for the production of pasta.*

Maize

Harvest results on a worldwide scale increased to 1,301 million tonnes in the season 2025/26, above the five-year average. In the EU, production decreased to 58.1 million tonnes, below the five-year average, but is projected to increase to 61.2 million tonnes (+5%).

TABLE 3: **HARVEST VOLUMES FOR THE 2025/26 AND PROJECTIONS FOR 2026/2027 SEASON COMPARED TO FIVE-YEAR- AVERAGE**

Harvest season 2025/26 in million tonnes	World	EU-27	France	Projection harvest season 2026/2027 EU-27
Soft wheat	**844.2**	**142.3**	**33.3**	**133.6**
5-year average	787.0	130.5	31.8	134.4
Hard wheat	**37.3**	**8.1**	**1.3**	**7.8**
5-year average	34.1	7.5	1.4	7.7
Maize	**1,301.1**	**58.1**	**13.0**	**61.2**
5-year average	1,194.5	62.6	12.6	59.5
Barley	**154.8**	**55.7**	**11.8**	**54.7**
5-year average	148.9	50.5	11.0	50.5

Sources: FranceAgriMer April 2026, Banque CIC agriculture, European Commission, Service de la statistique et de la prospective (SSP) du Ministère de l'Agriculture et de la Souveraineté alimentaire (France)

CHEMICALS

The year 2025 was marked by uncertainty and volatility, driven by a weakened economic growth, policy shifts, and geopolitical tensions in Europe and the Middle East. With this difficult global economic context, confidence in the EU-27 chemical industry weakened since businesses faced a high level of uncertainty, further deteriorating in the autumn and reaching around -19% in October 2025. At the same time, energy costs in Europe remained among the highest in the world, and weak demand has continued to weigh on chemicals sales. According to the German Chemical Industry Association (VCI), many industrial customers reduced production and remained cautious about ordering chemicals throughout 2025[65].

As a result, the output of the EU-27 chemical industry remains significantly below the pre-crisis levels of 2014 to 2019 but saw a modest increase of +1.6% in 2025 (following a contraction of -3% in 2024), underperforming the EU-27 manufacturing average. Likewise, many downstream industries that rely on chemicals reported a decline in output levels in 2025[66].

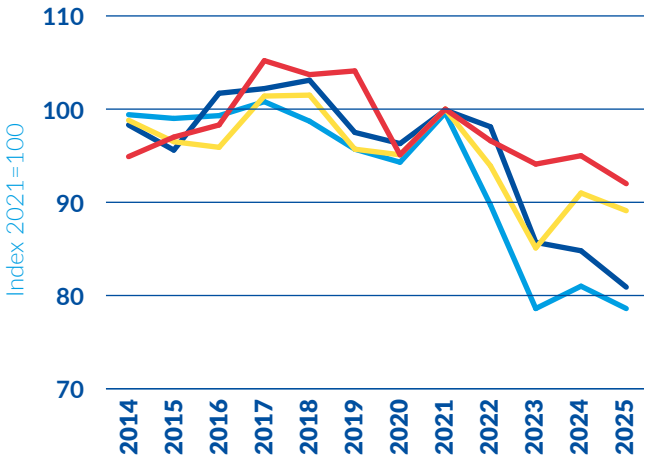
[65] *Verband der Chemischen Industrie e.V. (VCI), Quarterly Report 02/2025, available on the VCI website*
[66] *European Chemical Industry Council (CEFIC), Chemical Trends Reports, available on the CEFIC website*

With regard to transport performance, the share of chemicals amounts approximately to 17% on the Rhine and 11% on the Danube. The transport performance for chemicals in Rhine and Danube countries has fluctuated over the last five years, with significant drops in 2018 (low water effect) and 2022 (as a consequence of the war in Ukraine and the low waters). For both rivers, the trend in transport demand roughly followed the trend in production.

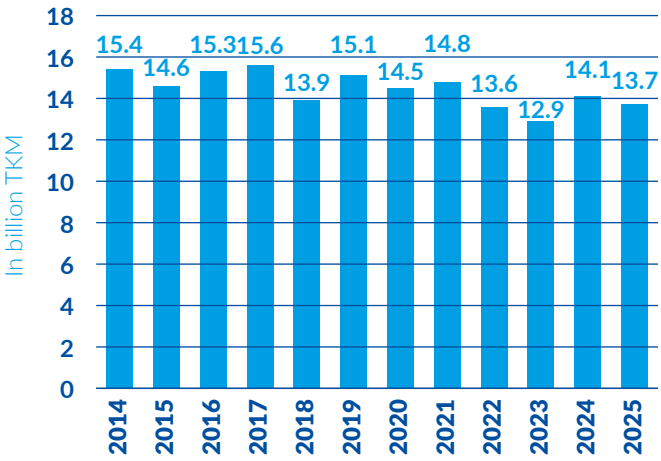
FIGURES 12, 13, 14 AND 15: **INDEX OF CHEMICAL PRODUCTION AND TRANSPORT OF CHEMICAL PRODUCTS IN RHINE AND DANUBE COUNTRIES**

France Belgium Netherlands Germany

Index of chemical production in Rhine countries

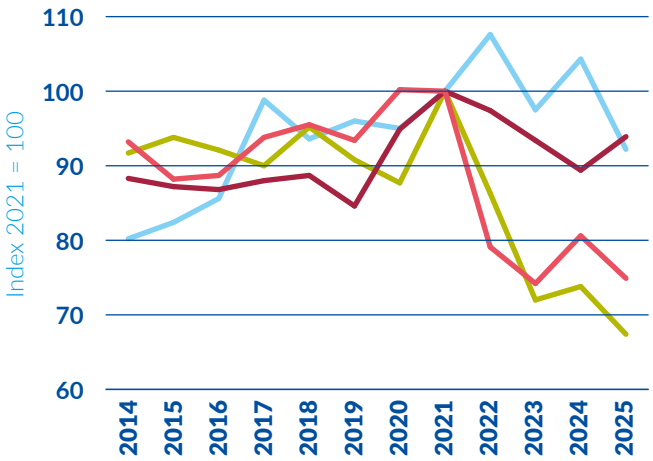


Transport of chemical products in Rhine countries

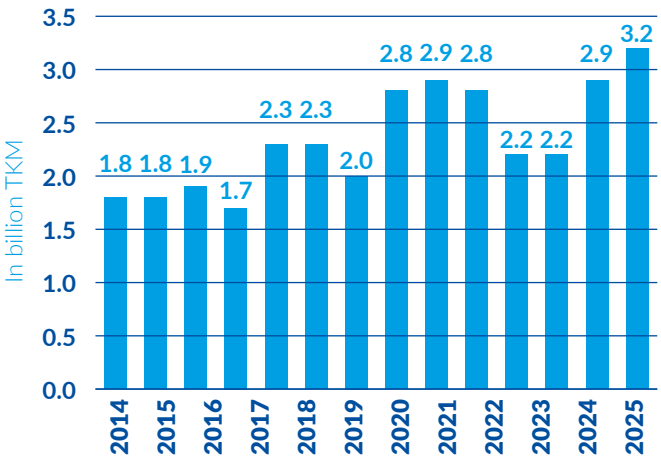


Bulgaria Austria Romania Hungary

Index of chemical production in Danube countries



Transport of chemical products in Danube countries



Source: Eurostat [sts_inpr_a] and [iww_go_atygo], Manufacture of chemicals and chemical products.

Outlook for the chemical segment

2026 is expected to remain challenging for the chemical industry since the sector now faces soft demand, limited investment, and global uncertainty. The core challenge is that EU-27 capacity utilisation remains at historically low levels, falling well below both the EU's long-term average and the US average. In early 2026, capacity utilisation in the EU-27 chemicals sector increased slightly, reaching 73.2% in the first quarter of 2026 and 74.3% in the second quarter of 2026, though it remains below the long-term average of 81.3%[67]. VCI reported that capacity utilisation in the chemical industry fell to around 70-72% during 2025, the lowest level in decades and below the profitability threshold[68].

European producers continue to face a major competitive disadvantage due to high energy costs. Throughout 2025, European gas prices were 2.5 times higher than in the United States, putting additional pressure on production costs. In early 2026 (January-April), European gas prices remained 3.3 times higher than US levels. Furthermore, the industry faces intense competition from China, particularly in commodity products and petrochemicals, where Chinese producers benefit from large-scale production capacity and lower production costs. Furthermore, China's economic policy artificially boosts the country's exports by devaluing its currency and providing subsidies to exporting companies.

CONTAINERS

Container transport on the Rhine and in Rhine countries has been declining for several years. There are five main reasons for this:

1) **Low water:** severe low water periods in 2018 and 2022 leading to a modal shift away from IWT.

2) **Geopolitical instability:**

   a. *War in Ukraine:* decrease (2022) and stagnation (2023-2025) in maritime container throughput in the seaport of Rotterdam due to the war in Ukraine;

   b. *Attacks by Houthi rebels* on cargo ships in the Red Sea;

   c. *Conflict in the Middle East.*

3) **Pandemic:** in the aftermath of the pandemic, the consumption of goods has slowed down, while the consumption of services has increased.

4) **Logistical inefficiencies:** within container barge handling in the seaports, maritime vessels are handled with priority which leads to long waiting times and less reliability of IWT.

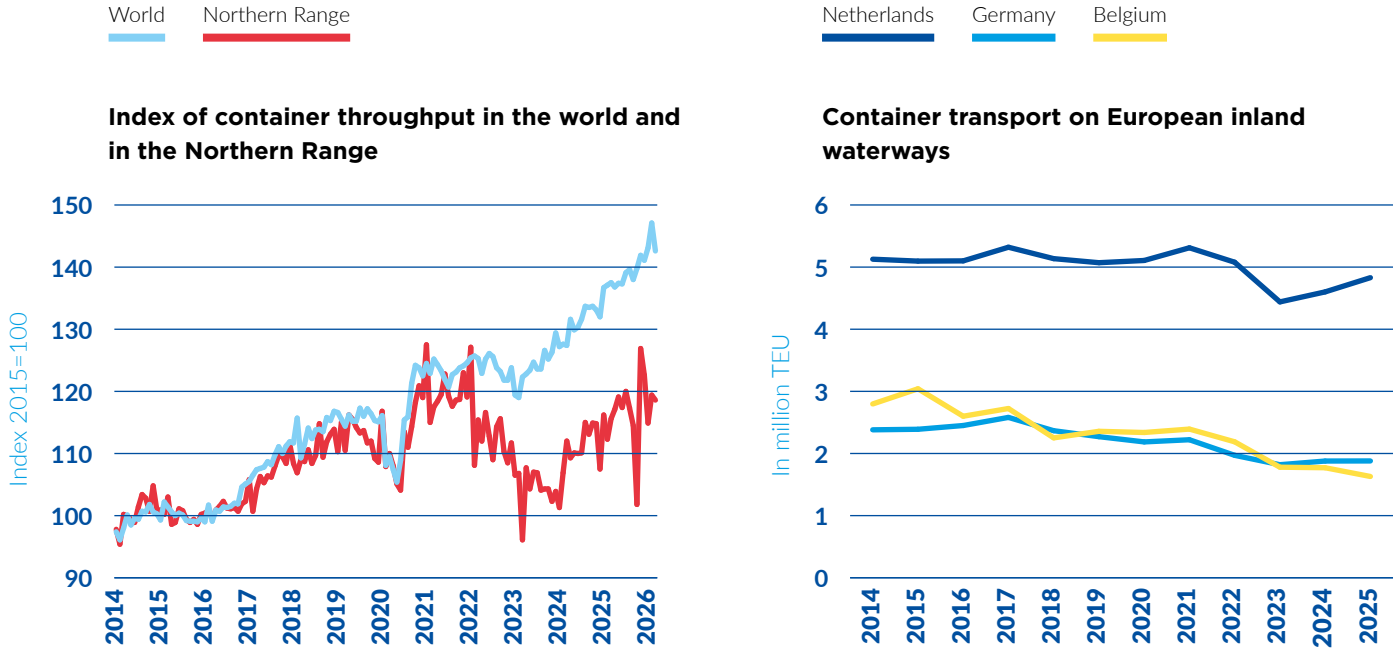
5) **Trade policy and tariffs:** rising trade tensions, including US tariffs, have reduced trade efficiency and contributed to slower growth in global container volumes.

[67] *European Chemical Industry Council (CEFIC), Chemical Trends Reports, available on the CEFIC website*
[68] *Verband der Chemischen Industrie e.V. (VCI), Quarterly Report 02/2025, available on the VCI website*

At the same time, there are concerns regarding the growing imbalance between imports and exports of containers. This is likely to result in increasing numbers of empty containers being repositioned to seaports in order to ensure their timely availability for loading elsewhere in the world. While these movements contribute to transport volumes, they do not necessarily improve the overall efficiency of the logistics system and may create additional operational challenges in the future.

The reference series which gives an orientation about the outlook for container transport in IWT is the index of container throughput in the Northern Range[69].

FIGURES 16 AND 17: **INDEX OF CONTAINER THROUGHPUT IN THE WORLD AND IN THE NORTHERN RANGE** (2015 = 100) **AND IWW CONTAINER TRANSPORT IN EUROPE** (IN TEU)



Sources: RWI/ISL Container Throughput Index, seasonally adjusted series, Eurostat [iww_go_actygo]

Outlook for the container segment

Despite the decline in container throughput since 2022, Northern Range ports[70] showed signs of recovery in 2024 which continued into 2025. However, a renewed downturn emerged in the first three months of 2026, largely due to the war in Iran. Overall, while the global index shows a steady upward trend, the Northern Range index exhibits weaker growth and greater volatility, diverging noticeably in recent years.

The outlook for container transport in inland navigation remains mixed. While short-term growth is projected, container trade is expected to grow at a slower pace than before. The IMF's World Economic Outlook of April 2026 projects global growth at only +3.1% in 2026 and +3.2% in 2027, lowered from earlier estimates due to the outbreak of war in the Middle East at the end of February 2026.

[69] *The seaports of Rotterdam, Antwerp-Bruges, Hamburg, Bremerhaven, Le Havre, Zeebrugge, Wilhelmshaven*
[70] *The expression 'Northern Range' designates the concentration of European maritime ports located along the North Sea, most of which are among the most active in the world. These Northern Sea ports mainly refer to Antwerp, Rotterdam, Le Havre, Zeebrugge, Hamburg, and Bremen/Bremerhaven. Together, they give an indication of economic development in the northern Eurozone and Germany. RWI/ISL Container Throughput Index, last consulted on 05.05.2026, available on the RWI/ISL website Note that global container throughput is an important indicator for international trade and economic activity.*

In addition, world trade volume growth is now expected to decline from +5.1% in 2025 to just +2.8% in 2026, before rebounding to +3.8% in 2027. The closure of the Strait of Hormuz has disrupted energy supply chains and driven up oil and gas prices, worsening the pressure already caused by US tariffs and geopolitical fragmentation[71]. The conflict in Iran is therefore expected to further weaken container activity in northern European ports in the short term, with knock-on effects for inland navigation[72]. Looking ahead, the persistence of low growth will depend on the evolution of geopolitical tensions. In the medium term, additional risks include potential trade conflicts arising from EU efforts to reduce dependency on China.

OUTLOOK FOR PASSENGER TRANSPORT

Order books

The outlook for the European river cruise fleet points to continued expansion in the coming years. Newbuilding activity is projected to remain dynamic, with 17 new river cruise vessels scheduled for delivery in 2026, followed by a significant increase to 25 vessels in 2027. These figures confirm a strong recovery and growing confidence in the sector as to future demand. This expansion will also translate into additional passenger capacity. Overall, the order books signal a sustained positive outlook for the European river cruise industry.

Interviews among European companies

As to the outlook, the majority of companies interviewed for a study of the European industry Association IG River Cruise, indicated that they expect the growth trend to continue regarding the number of passengers and the revenue in 2026, with a constant strong growth momentum without slowdown for distant markets[73].

Interviews among French companies

In France, 88.2% of managers in the river tourism sector express confidence about the next five years and plan for investments in the short term. These investments are primarily aimed at modernising fleets, meeting environmental requirements, restructuring their human resources and digitising. Such investments are taking place despite persistent constraints such as rising operating costs, uncertainties surrounding technological developments and pressures in the labour market[74].

[71] International Monetary Fund (IMF), World Economic Outlook Database, Outlook from April 2026, available on the IMF website
[72] RWI/ISL Container Throughput Index, last consulted on 06.05.2026, available on the RWI/ISL website
[73] IG River Cruise, Der Flusskreuzfahrtmarkt 2025, available on the IG River Cruise website
[74] Entreprises fluviales de France (E2F), Baromètre de l'activité tourisme fluvial, édition 2026, available on the E2F website

LONG RUN OUTLOOK
FOR IWT MARKETS IN RHINE AND DANUBE COUNTRIES BASED ON PRODUCTION

Transport demand in IWT is derived from the development of underlying economic sectors and branches such as the construction and energy sectors, the steel industry, petrochemical and chemical industry, etc. To analyse the long-term development of transport demand according to goods segments, it is crucial to look at long-term trends of the production of the respective goods. The forecasts shown below were based on data from Oxford Economics from March 2026. These forecasts do not therefore consider events that took place after this date.

It is acknowledged that besides production levels, several other factors should be considered to develop a comprehensive outlook model for IWT volumes. The level of production is however considered as one of the building blocks towards the development of such a model.

It is therefore important to consider such long-term outlooks with caution given that these forecasts are mostly based on production, and that many exceptional years have distorted long-term trends in recent years (i.e. low water in 2018 and 2022, Covid in 2020, war in Ukraine from 2022 onwards, US "trade war" with Europe).

TABLE 4: **SHARE OF MAJOR GOODS SEGMENTS WITHIN RHINE TRANSPORT**
(BASED ON CALCULATION OF SHARE IN TONNES)

Product segment	Share in % in 2023	Share in % in 2024	Share in % in 2025	Average share 2015-2025 in %
Mineral oil products	22.1	22.7	22.3	21.0
Chemicals	16.2	16.9	16.7	15.5
Sand, stones, gravel	17.3	16.6	16.6	17.2
Container	10.2	10.2	10.2	10.9
Agribulk and food products	9.6	10.0	10.2	9.5
Iron ore	7.9	7.7	6.7	7.5
Coal	7.3	6.2	6.7	8.3
Metals	5.0	5.1	5.2	4.8

Sources: CCNR calculation based on Destatis, Rijkswaterstaat and VNF

For the Danube, the major goods segments with the highest shares are agricultural products, food products and iron ores. Due to a substantial amount of missing data, it is not possible to indicate the exact shares per goods segment for the Danube.

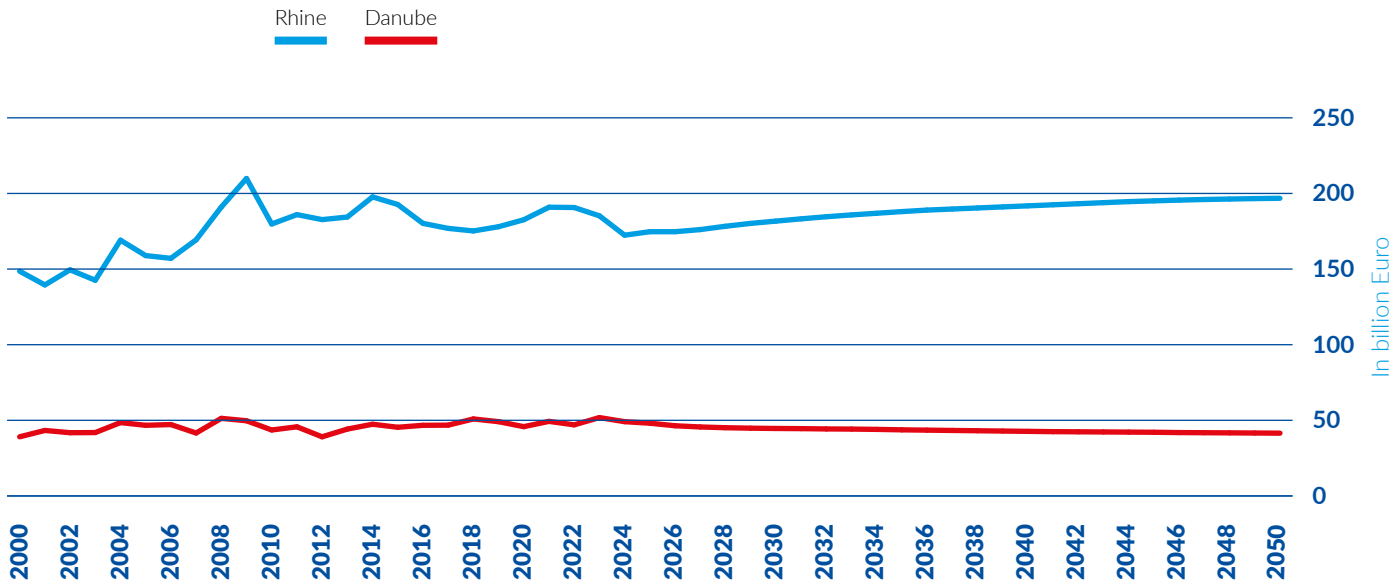
AGRICULTURE, FORESTRY, FISHERIES AND FOOD PRODUCTS

IWT remains the preferred mode of transport for long-distance shipping of agricultural and food products. However, according to shipping companies questioned in a *Haskoning* study[75], the 2020 decade is likely to witness a decline in the use of the IWW mode of transport. Indeed, the period 2020-2030 is seen as a transition period for agriculture, with a trend towards smaller scale, more localised production. This tendency, coupled with a reduction in the number of small vessels (traditionally used for grain transport), could negatively weigh on IWW agricultural traffic volumes.

Long-term forecasts for the production of agricultural products foresee an increasing trend in Rhine countries. The gross real output in this sector is foreseen to increase by +12.7% between 2025 and 2050 in the region. This output is primarily driven by France and Germany, which together account for the vast majority of the sector's total production. Indeed, a correlation between harvest results and IWT of agricultural products has been found for France and Germany.

Regarding Danube countries, the output of the sector is forecast to fall by -13.7% in the region between 2025 and 2050. Danube countries show a mixed pattern with Austria, Romania, Bulgaria and Croatia experiencing strong growth in the 2020s, but most countries in the region are facing a subdued development or slight declines in the following decades.

FIGURE 18: **REAL GROSS OUTPUT OF AGRICULTURAL, FORESTRY AND FISHERY PRODUCTION IN RHINE AND DANUBE COUNTRIES** (2015 PRICES IN EURO) *



Source: Oxford Economics

** Data were transformed from US-Dollar into Euro based on the US-Dollar/Euro exchange rate for the year 2015[76].*

[75] *Haskoning, Impact energietransities en wereldhandelstromen ingrijpend voor de binnenvaart, available on the Haskoning website*
[76] *Source: European Central Bank*

TABLE 5: **GROWTH RATES OF AGRICULTURAL, FORESTRY AND FISHERY PRODUCTION IN RHINE AND DANUBE COUNTRIES**

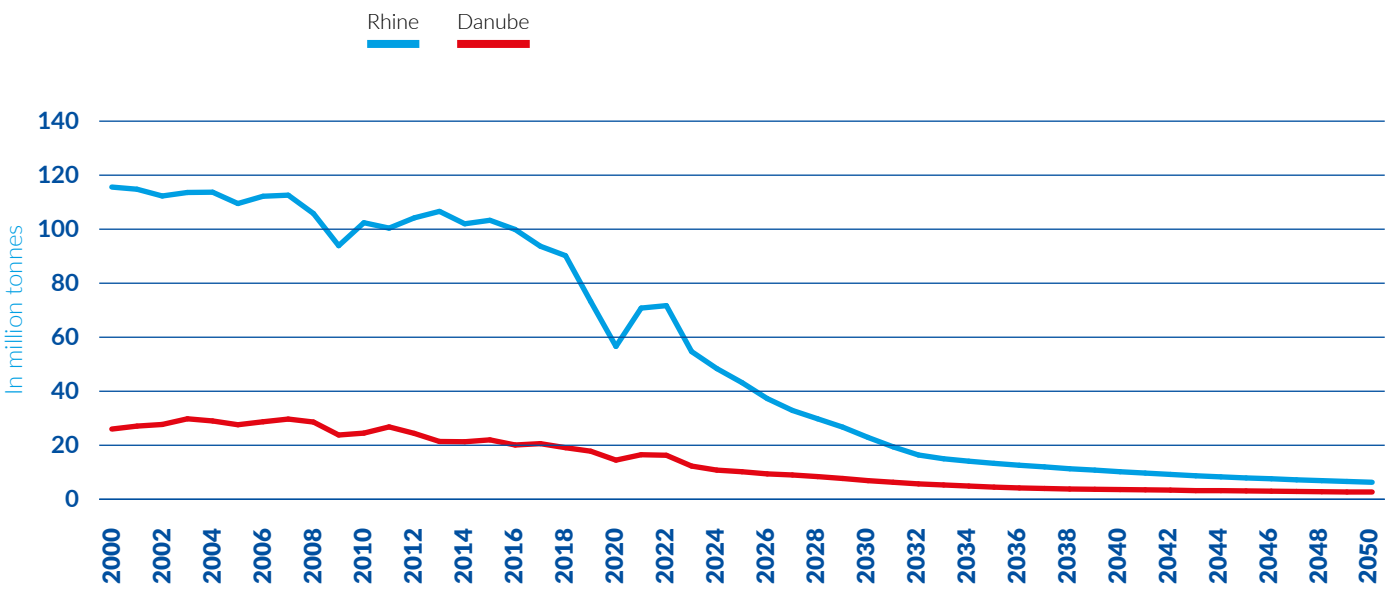
Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	+12.7%	-0.5%	+5.6%	+2.6%
Danube	-13.7%	-2.4%	-4.3%	-2.7%

Source: CCNR calculation

COAL

The volume of coal transported on inland waterways is expected to decrease strongly in the next two decades, as European countries progress further in their energy transition. Germany, for example, has planned to close all of its coal power plants by 2038; as a result, the country's coal imports have fallen significantly in recent years[77]. This structural decline is reflected in long-term projections, which estimate a reduction of -85.4% in coal demand in Rhine countries and -73.5% in the Danube region by 2050, confirming a sustained downward trajectory for coal transport in European inland waterways.

FIGURE 19: **COAL, DOMESTIC DEMAND IN RHINE AND DANUBE COUNTRIES, ANNUALISED**



Source: Oxford Economics

[77] *In 2013, coal imports amounted to 52.4 mio tonnes, and reduced to 49.7 mio tonnes in 2015, 48.5 mio. tonnes in 2017, 43.2 mio. tonnes in 2019 and 31.3 mio. tonnes in 2020. After a temporary resurgence in coal imports (2021: 38.7 mio. tonnes; 2022: 42.6 mio. tonnes), the downward trend resumed in 2023 (2023: 30.1 mio. tonnes).*

TABLE 6: **GROWTH RATES OF COAL DEMAND IN RHINE AND DANUBE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	-85.4%	-59.5%	-55.5%	-38.2%
Danube	-73.5%	-52.4%	-47.8%	-25.0%

Source: CCNR calculation

CONTAINERS

It is estimated that about 75-80% of traded goods are shipped by sea[78]. Container transport, in turn, is the dominant mode of transport in maritime trade, particularly in value terms (around two-thirds of total maritime trade). The UNCTAD Review of Maritime Transport 2025 reinforces this dominance, noting that container shipping is increasingly utilised not only for traditional consumer goods but also for high-value cargo, processed minerals, and materials requiring enhanced security and traceability.

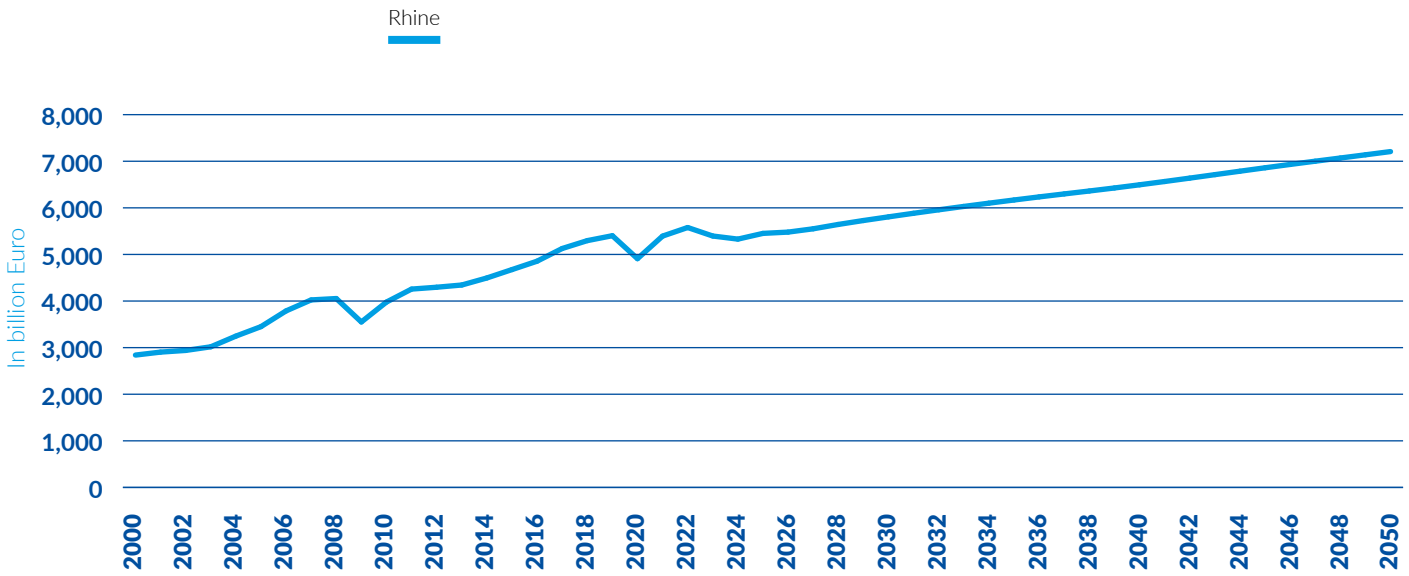
In the absence of harmonised long term data on inland container flows by country, the sum of national imports and exports of goods was used as a proxy to analyse the evolution of container transport on the Rhine. This approach reflects the close structural link between inland container transport, seaborne container flows and overall economic openness, while recognising that these trends may not strictly evolve in parallel. Danube countries are excluded, as container transport on the Danube is exceedingly rare. Similarly, information related to world trade was used for the outlook for container transport in Europe.

Based on long-term forecasts available for international trade, container transport on inland waterways is supported by a positive underlying trend in international trade. However, the physical limitations due to low waters and climate change will play another role, so that container transport in IWT might not follow the same steep and steady growth trend as shown in the outlook for international trade.

The highest growth rate in international trade between 2025 and 2050 is expected to be seen in Switzerland (+56.7%). Germany should remain the country with the highest trade value, with an increase of almost +30.6% in the value of both its exports and imports. The growth of trade value in other western European countries is forecast to be +17.9% in Belgium, +36.8% in the Netherlands, and +24.5% in France. Rhine countries overall are expected to see moderate to strong growth (+32.2%) in the sum of real imports and exports of goods from 2025 to 2050.

[78] *Source: Verschuur, J., Koks, E.E. & Hall, J.W. Ports' criticality in international trade and global supply-chains. Nat Commun 13, 4351 (2022), available on the nature communications website and UN Trade and Development (UNCTAD), Seaborne trade data (April 2025), available on the UNCTAD website.*

FIGURE 20: **YEARLY SUM OF REAL IMPORTS AND EXPORTS OF GOODS IN RHINE COUNTRIES** (2015 PRICES IN EURO)



Source: Oxford Economics
Switzerland's exports and imports value was converted from 2015 Swiss francs into 2015 euros.

TABLE 7: **GROWTH RATES OF THE SUM OF REAL IMPORTS AND EXPORTS OF GOODS IN RHINE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	+32.2%	+18.3%	+11.8%	+11.0%

Source: CCNR calculation

CHEMICALS

Inland waterway transportation is likely to remain in a strong modal split position for the transport of chemicals, as other modes of transport are generally not considered competitive alternatives, except for pipelines. The chemical industry supplies clients from many economic sectors, especially in agriculture (fertilisers), plastics, automotive, construction, paper and pulp industries.

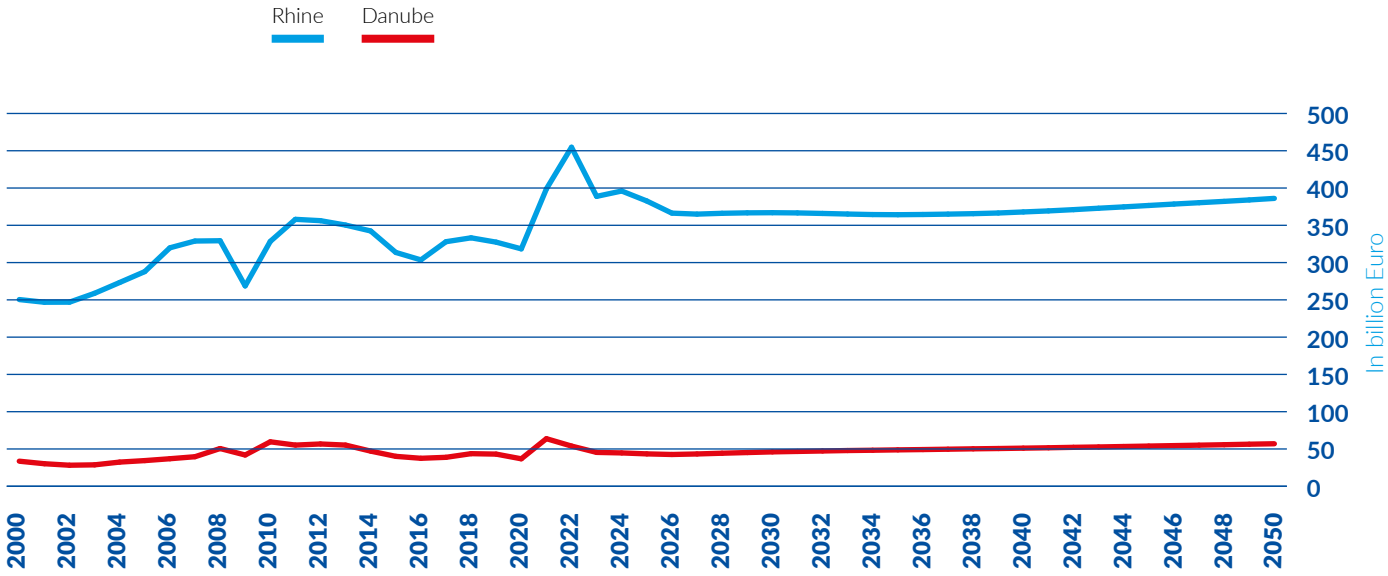
Real gross output of chemical production is expected to grow by +11% in France, by +50.2% in Switzerland, and by +20.8% in Belgium between 2025 and 2050. A rate of decrease of -12.4% is foreseen for Germany and of -3.5% for the Netherlands. The expected decrease in Germany and in the Netherlands is an alarming signal for the transport of chemicals on the Rhine, as these two countries' chemical industries are important clients of IWT. The development of chemical transport on the Rhine

will depend on the extent to which the chemical industry succeeds in decoupling its production from the burden of high energy prices, and the extent to which it will be able to make its production techniques greener. Furthermore, the European chemical industry might need active support by European economic policy, in order to counterbalance the active economic stimulation policy carried out by China.

The worldwide trend towards reindustrialisation and the strengthening of the EU's economic resilience is now set to be encouraged by the EC's Clean Industrial Deal and the newly proposed Industrial Accelerator Act[79]. This updated legislative framework aims to reverse recent industrial decline, setting a target for manufacturing to represent at least 20% of the Union's gross domestic product by 2035.

In Danube countries, chemical production is forecast to grow over all decades, with a growth rate of +31.3% from 2025 to 2050, especially in Hungary, Croatia, and Bulgaria, with only Romania experiencing a small decline during the period 2020-2030.

FIGURE 21: **REAL GROSS OUTPUT OF CHEMICALS IN RHINE AND DANUBE COUNTRIES** (2015 PRICES IN EURO)



Source: Oxford Economics
** Data were transformed from US-dollar into euro based on the US-dollar/euro exchange rate for the year 2015.*

TABLE 8: **GROWTH RATES OF CHEMICAL PRODUCTION IN RHINE AND DANUBE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	+0.9%	+15.2%	+0.3%	+4.9%
Danube	+31.3%	+25.2%	+11.0%	+11.6%

Source: CCNR calculation

[79] *Source: European Commission (EC), Industrial Accelerator Act, available on the EC website*

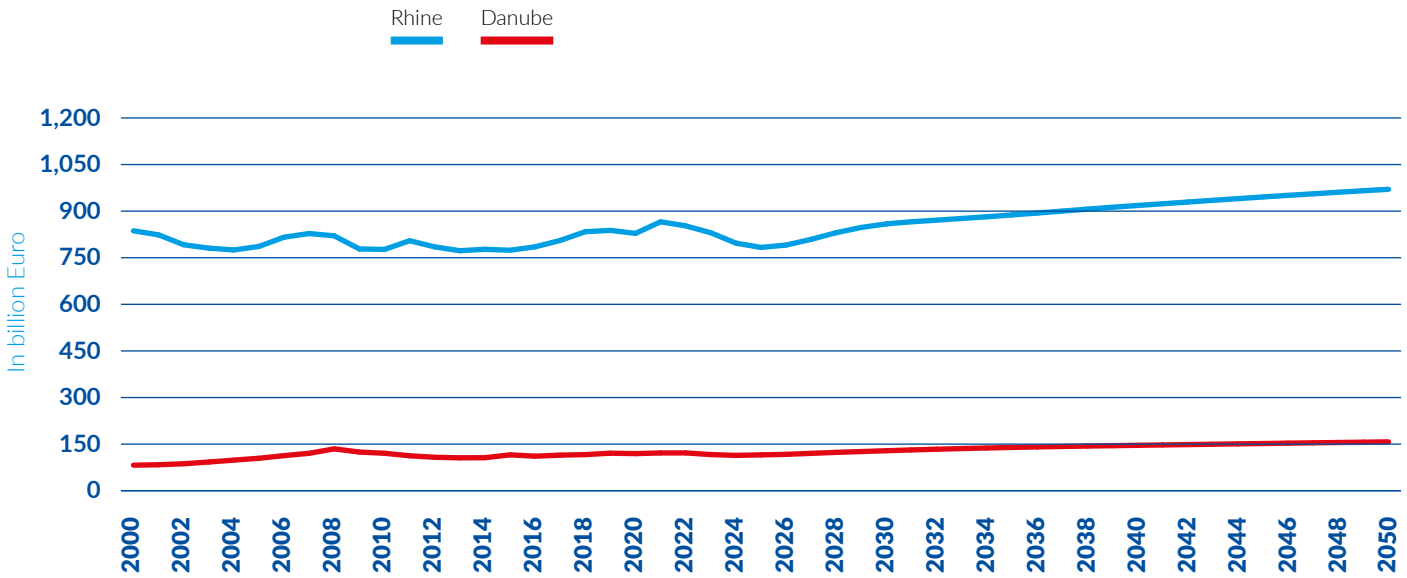
CONSTRUCTION MATERIAL, SAND, STONES, GRAVEL

According to a study conducted by Royal *HaskoningDHV*[80], the Dutch shippers believe that inland waterway transport will remain the main mode of transport for construction materials such as gravel, sands, stones and others. No major modal shift is expected, but as larger companies are being created by mergers and acquisitions, the number of smaller concrete mortar plants and smaller sand and gravel companies along small waterways is expected to diminish. Larger entities are concentrated along the waterways and look for more economies of scale. The upcoming years anticipate a surge in sand and gravel availability due to dredging efforts to expand waterways, coinciding with a growing demand for materials for dyke reinforcement in the face of climate risks.

The transport demand depends strongly on the activity of the construction sector. According to the outlook of Oxford Economics, the inflation-adjusted real output in Germany will grow by +39.4% between 2025 and 2050. For France, the expected growth rate of real output in the construction sector is +6.6%, +40.6% in the Netherlands, +23.1% in Belgium and +20.8% in Switzerland. The construction sector in Rhine countries is expected to recover after a challenging 2020s for Germany, with a steady growth of +23.9% projected across countries between 2025 and 2050.

However, a challenge lies in the declining number of small vessels in the Rhine region. This could negatively affect the inland waterway transport sector's ability to benefit from growth in the construction sector.

FIGURE 22: **REAL GROSS OUTPUT IN THE CONSTRUCTION SECTOR IN RHINE AND DANUBE COUNTRIES** (2015 PRICES IN EURO)



Source: Oxford Economics
** Data were transformed from US-dollar into euro based on the US-dollar/euro exchange rate for the year 2015.*

[80] *Source: Haskoning, Impact energietransities en wereldhandelstromen ingrijpend voor de binnenvaart, available on the Haskoning website*

TABLE 9: **GROWTH RATES IN THE CONSTRUCTION SECTOR IN RHINE AND DANUBE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	+23.9%	+3.7%	+6.9%	+5.7%
Danube	+36.3%	+7.8%	+13.5%	+7.6%

Source: CCNR calculation

PETROLEUM PRODUCTS AND COKING COAL

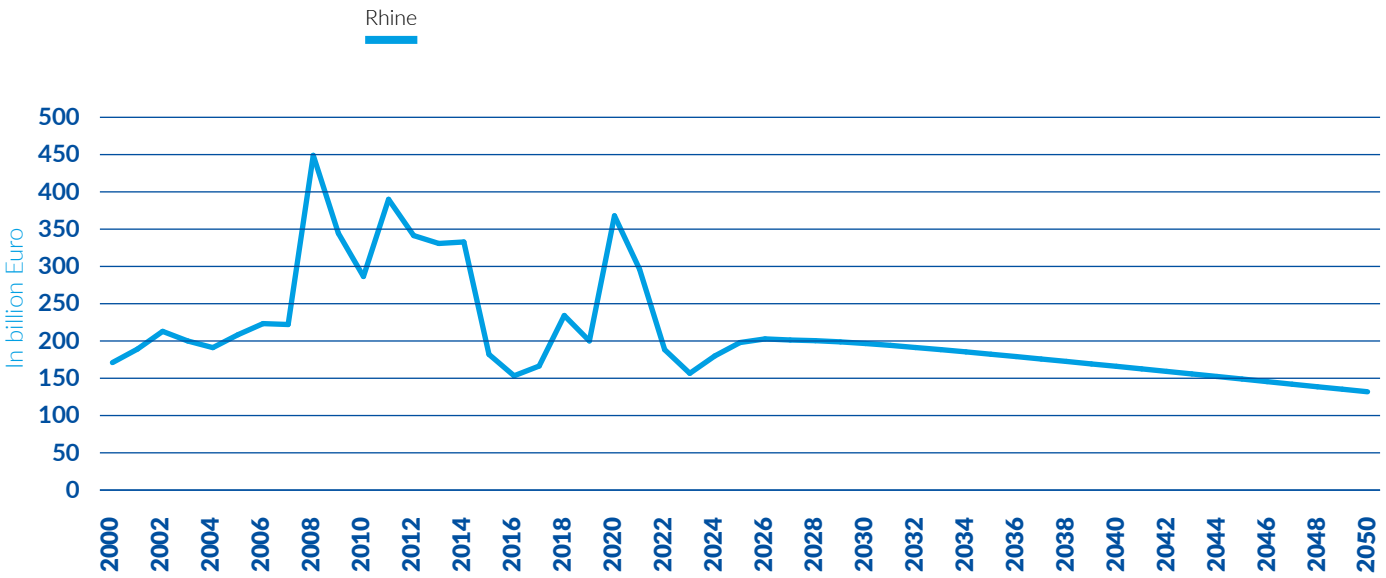
As countries progress through their energy transition, the demand for petroleum or mineral oil products is expected to continue its current modest downward trend, leading to a decline in its transport through inland waterways. The overall intensity of fossil fuel use has already been declining steadily since the mid-1970s[81]. Even though there are financial and technical barriers to the development of carbon neutral propulsion technologies, it is assumed that mineral oil products will gradually be phased out from the propulsion mix in the next two decades. This shift is currently being accelerated not only by the impulse of the EU legislation ETS2 (Emissions Trading Scheme, the EU trading system for CO_2 emissions) which is expected to drive the prices of fossil fuel upwards, but also by geopolitical shocks.

Concerning coking coal, a transition towards carbon free steel production is likely, which is also expected to lead to a decrease in the demand for coking coal in the future. While in the very short term, some economies might temporarily switch to energy sources such as coal to soften the immediate shock of oil and gas disruptions, this is not considered a permanent solution as it undermines longer-term decarbonisation targets.

For Germany, the outlook shows a decrease in the production of both products together of -29.7% until 2050. For France, a decrease of -53.7% is foreseen, a decline of -32% for the Netherlands and a decline of -23.4% for Belgium. Switzerland has a very low production level of petroleum products, which is the reason for rather high imports via the Rhine. The production of petroleum products and coke in Rhine countries shows a general decline of -33.3% after initial growth in some countries in the 2020s, reflecting the ongoing energy transition away from fossil fuels.

[81] *Source: Organisation for Economic Co-Operation and Development, Economic Outlook, March 2026, available on the OECD website*

FIGURE 23: **REAL GROSS OUTPUT OF COKE AND REFINED PETROLEUM PRODUCTS IN RHINE COUNTRIES** (2015 PRICES IN EURO)



Source: Oxford Economics
** Data were transformed from US-dollar into euro based on the US-dollar/euro exchange rate for the year 2015.*

TABLE 10: **GROWTH RATES OF THE SUM OF REAL IMPORTS AND EXPORTS OF GOODS IN RHINE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	-33.3%	-46.5%	-15.6%	-20.5%

Source: CCNR calculation

STEEL AND IRON ORE

In cases where steel production is located along inland waterways, a high waterborne method of transport for iron ore, coking coal and steel products is observed. Germany is the largest steel producing country in Europe and the Rhine is an important transport route for iron ore and steel products.

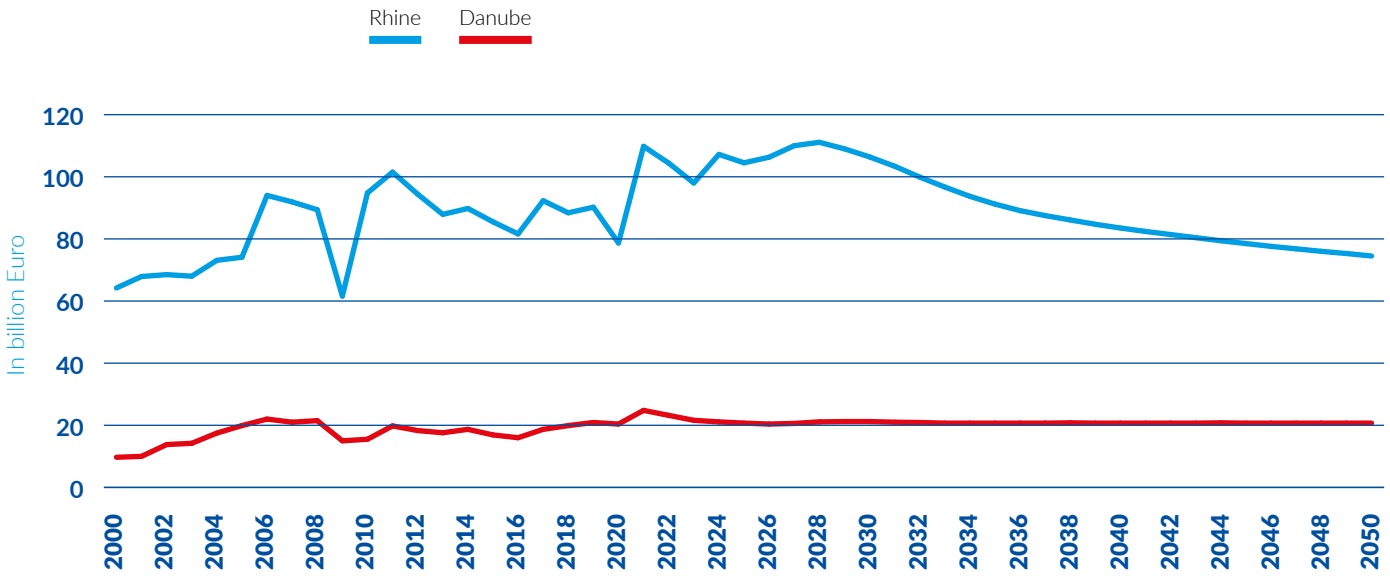
As a circular economy is expected to play a more important role in the future (study conducted by *Royal HaskoningDHV*), Dutch shipping companies have communicated strong opinions on higher metals recycling rates and a subsequent decline in steel demand and production across western Europe. This could cause a decline in the transportation of steel, but also iron ore, as it will likely be replaced by recycled steel and less emission intensive production technologies. However, this transition is not expected to result in a clear overall decline in steel demand in Europe, but rather a shift in production processes. The demand for high quality steel is expected to remain high not only in developed countries, but is thought to increase in developing countries, which could make steel remain an important product in the European industry.

However, between 2025 and 2050, the outlook for German steel gross output points to a decline of -18.3%. For France, a decrease of -65.8% is foreseen but based on a much lower absolute level of steel gross output. For the transport of iron ore and steel on inland waterways, the Belgian, French and German steel production is of high relevance as the steel industry in these countries is often located along inland waterways. This is not the case for Dutch and Swiss steel industry. Dutch steel production is located at the crossing of deep sea and inland waterways. Raw materials enter by sea, while products leave by inland waterways. The gross real output in this sector is foreseen to decrease by -28.7% between 2025 and 2050 in the Rhine region.

Austria is expected to remain an important player in the steel sector along the Danube, even though it experiences a predicted decline of -2.1% between 2025 and 2050. Romania's steel production is projected to experience a decline of -13.8% by 2050. The forecasts from Oxford Economics point to positive growth rates across other regions of central and eastern Europe, +10.9% for Hungary, and +9.5% for Slovakia.



FIGURE 24: **REAL GROSS OUTPUT OF IRON AND STEEL IN RHINE AND DANUBE COUNTRIES** (2015 PRICES IN EURO)



Source: Oxford Economics
** Data were transformed from US-dollar into euro based on the US-dollar/euro exchange rate for the year 2015.*

TABLE 11: **GROWTH RATES OF IRON AND STEEL PRODUCTION IN RHINE AND DANUBE COUNTRIES**

Countries	Growth rate 2025-2050	Growth rate 2020-2030	Growth rate 2030-2040	Growth rate 2040-2050
Rhine	-28.7%	+35.3%	-21.5%	-10.8%
Danube	+0.0%	+4.0%	-2.1%	+0.0%

Source: CCNR calculation

ABBREVIATIONS AND ACRONYMS

ARA REGION: Amsterdam-Rotterdam-Antwerp

DACH: Germany-Austria-Switzerland

DWT: deadweight

ESI: Economic Sentiment Indicator

ETS2: Emissions Trading Scheme

EU: European Union

EWL: equivalent water level

FARAG REGION: Flushing, Amsterdam, Rotterdam, Antwerp, Ghent

GDP: gross domestic product

IMF: International Monetary Fund

IWT: Inland Waterway Transport

IWW: Inland Waterways

LNG: liquefied natural gas

LNWL: low navigable water level

MIO: million

OECD: Organisation for Economic Co-operation and Development

TEU: twenty-foot equivalent unit

TKM: tonne-kilometre

TTF: Title Transfer Facility

GLOSSARY

ACTUAL DRAUGHT OF A VESSEL: the vertical distance between the bottom of the vessel's keel and the waterline at which the vessel is sailing. For a moving vessel, the actual draught comprises also the squat effect (see 'SQUAT EFFECT' in this glossary).

ACTUAL WATER LEVEL: a measurement indicated on a water level stick that is installed at or near the shore of a river at a gauge station. It does not measure the actual depth of the river, as rivers become deeper in their mid-section. Actual water levels are nevertheless needed to calculate the available draught for the navigation of a vessel on a particular river stretch.

AVAILABLE OR POSSIBLE DRAUGHT OF A VESSEL: the maximum depth to which the vessel may be safely immersed when loaded with cargo. For both inland and for seagoing vessels, this depth varies with the ship's dimensions. For seagoing vessels, it depends also on the time of the year and the mass density of the water encountered. The available draught of inland vessels sailing on free-flowing rivers takes into account several parameters that are specific to each river stretch and gauge station. It is calculated as follows:
Available draught = Minimum navigation channel depth + (Actual water level – Equivalent water level) – Under keel clearance.

AVERAGE UTILISATION RATE (OF A CARGO FLEET): relation between the utilised cargo carrying capacity (needed due to transport demand in a certain year) and the available capacity of the fleet in that same year, in percentage terms.

BACKWARDATION: a market situation where future prices are lower than current prices, reducing the incentive to store commodities over time.

CAPACITY UTILISATION (IN PASSENGER TRANSPORT): ratio of the number of passengers divided by the passenger capacity in a given year, in percentage points. The analysis of the capacity utilisation of a fleet makes it possible to provide a thorough overview of how the supply/demand relationship evolves throughout the years.

CENTRAL EUROPEAN WATERWAYS: Rhine, Main, Main-Danube Canal, Danube, Elbe-Oder

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

DANUBE SOLIDARITY LANES EU-UKRAINE: lanes aimed at facilitating the forwarding of agricultural produce from Ukraine, but also bilateral trade in goods and access of Ukraine to international markets and global supply chains making sure much needed cereals reach the world market.

DEADWEIGHT (DWT): it is the maximum loading capacity of a ship, therefore the maximum weight that it can carry (measured in tonnes). This weight includes cargo, fuel, fresh water, ballast water, provisions, passengers, and crew. It does not include the empty weight or lightweight of the vessel itself. The sum of deadweight and lightweight of a ship gives the maximum displacement (measured in tonnes).

ECONOMIC SENTIMENT INDICATOR (ESI): a composite indicator made up of five sectoral confidence indicators with different weights (industrial confidence indicator (40%); construction confidence indicator (5%); services confidence indicator (30%); consumer confidence indicator (20%); retail trade confidence indicator (5%)). It is published monthly by the European Commission.

EMISSIONS TRADING SCHEME (ETS): the EU trading system for CO_2 emissions

EQUIVALENT FLOW: equivalent flow values (indicated in the unit m^3/s) measured against the benchmark levels are recalculated every ten years as flows within a 100-year time series. The equivalent flow values are then used to recalculate the corresponding equivalent water level (EWL) values against the benchmark levels every ten years.

EQUIVALENT WATER LEVEL (EWL): refers to the water level occurring along the Rhine at an equivalent low water flow falling below the long-term average for 20 days per year.

EUROPE: European inland navigation in this report includes five countries that are not members of the European Union – United Kingdom, Republic of Moldova, Serbia, Switzerland and Ukraine.

EUROPEAN CRUISE FLEET: river cruise vessels with more than 39 beds operating in the EU and in Switzerland.

EUROPEAN TRADING HUB: a dynamic market area for gas trading in the heart of Europe.

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

G20: an intergovernmental forum comprising 19 sovereign countries, the European Union (EU), and the African Union (AU). It works to address major issues related to the global economy, such as international financial stability, climate change mitigation and sustainable development, through annual meetings of heads of state and heads of government.

GROSS DOMESTIC PRODUCT (GDP): basic measure of the overall size of a country's economy.

HEADLINE INFLATION: general increase in the consumer price of goods and services, including those that are often more volatile, such as energy and food prices.

INDUSTRIAL TRAFFIC: refers to the traffic that exists directly between the industries located in the port area (such as BASF, AIR LIQUIDE, EUROCHEM…) and the hinterland.

LOW NAVIGABLE WATER LEVEL (LNWL): refers to a low water level on the Danube under which the water levels do not fall below more than 22 ice free days per year.

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

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

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

MIDDLE RHINE: stretch of the Rhine between Bingen am Rhein and Bonn.

MINIMUM NAVIGATIONAL CHANNEL DEPTH: this corresponds to the minimum depth that should prevail in the fairway area (depth of the fairway box below the equivalent water level). This minimum depth is related to the equivalent water level, as it is the channel depth that should still be present, even if water levels drop to the level of the equivalent water level.

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.

NORTH SEA PORT: a port area crossing Belgium and the Netherlands and the result of the merger of three ports: Ghent (BE), Terneuzen (NL) and Flushing (NL)

NORTHERN RANGE: designates the concentration of European maritime ports located along the North Sea, most of which are among the most active in the world. These Northern Sea ports mainly refer to Antwerp, Rotterdam, Le Havre, Zeebrugge, Hamburg, and Bremen/Bremerhaven. Together, they give an indication of economic development in the northern Eurozone and Germany.

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

SMALL VESSELS: vessels with a loading capacity of up to 1,500 tonnes. According to an alternative definition, small vessels have a loading capacity of 650 tonnes or less.

SQUAT EFFECT: a hydrodynamic effect that is related to the velocity of the water flow under the vessel. The shallower the waterflow under a vessel, the higher is its flow velocity, and the higher is its dynamic pressure. Due to the Bernoulli principle, total pressure is a constant which implies that a higher dynamic pressure implies a lower static pressure. This lower static pressure leads to a lower resistance of the water towards the vessel and implies therefore a further sinking of the vessel into the water, thereby increasing the vessel's actual draught.

TITLE TRANSFER FACILITY (TTF): a virtual trading point for natural gas in the Netherlands. This trading point provides a facility for a number of traders in the Netherlands to trade futures, physical and exchange trades.

TONNE-KILOMETRE (TKM): 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 (EUROSTAT DEFINITION): it comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. It includes all duties and taxes on the goods or services invoiced by the unit, with the exception of the VAT invoiced by the unit to its customer and other similar deductible taxes directly linked to turnover; it also includes all other charges (transport, packaging, etc.) passed on to the customer. Price reductions, rebates and discounts, as well as the value of returned packing, must be deducted.

TWENTY-FOOT EQUIVALENT UNIT (TEU): a unit of cargo capacity for container transport. It is based on the volume of a 20-foot-long (6.1 m) intermodal container, a standard-sized metal box which can be easily transferred between different modes of transport, such as ships, trains, and trucks.

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.

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

UPPER RHINE: section of the navigable Rhine in the Upper Rhine Plain between Basel 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
GUS	Główny Urząd Statystyczny	Statistics Poland	Poland
INSSE	Institutul National de Statistica	National Institute of Statistics	Romania
OFS	Office fédéral de la statistique	Swiss Federal Office of Statistics	Switzerland
ŠÚ SR	Štatistický úrad Slovenskej republiky	Statistical Office of the Slovak Republic	Slovak Republic

BOOKS, JOURNAL ARTICLES AND STUDIES

Original Name	Country
Bačkalov I. et al., Evolution(s) of European Inland Vessel Fleets (2025)	Europe
Binnenschifffahrt, Hamburger Hafen wächst robust: Hinterlandverkehr stabil (17.11.2025), available on the Binnenschifffahrt website	Germany
Central Commission for the Navigation of the Rhine (CCNR), Roadmap for reducing inland navigation emissions, available on the CCNR website	Europe
Danube Commission, Yearbook of statistics 2023	Europe
Entreprises fluviales de France (E2F), Baromètre de l'activité tourisme fluvial (édition 2026), available on the E2F website	France
Eurofer, Economic and steel market outlook 2026-2027 (June 2026), available on the Eurofer website	EU
European Chemical Industry Council (CEFIC), Chemical Trends Reports, available on the CEFIC website	Belgium
European Commission (EC), Industrial Accelerator Act, available on the EC website	EU
Hader A, The River Cruise Fleet Handbook (April 2026)	Europe
Haskoning, Impact energietransities en wereldhandelstromen ingrijpend voor de binnenvaart, available on the Haskoning website	The Netherlands
IG River Cruise, The River Cruise Market 2025, available on the IG River Cruise website	Europe
International Monetary Fund (IMF), World Economic Outlook Database (April 2026), available on the IMF website	World
Luman R. (ING), Scheepvaart ziet de stroom veranderen (22.04.2026), available on the ING website	Europe

Original Name	Country
Organisation for Economic Co-Operation and Development, Economic Outlook (March 2026), available on the OECD website	World
Port of Rotterdam, Throughput in the port of Rotterdam shows a slight decline (26.02.2026), available on the Port of Rotterdam website	The Netherlands
RWI/ISL Container Throughput Index, available on the RWI/ISL website	Germany
UN Trade and Development (UNCTAD), Seaborne trade data (April 2025), available on the UNCTAD website	World
UN Trade and Development (UNCTAD), Global Trade Update (March 2026): Reforming trade rules to drive development, available on the UNCTAD website	World
U.S. Energy Information Administration (EIA), Short-Term Energy Outlook (April 2026), available on the EIA website	US
Verband der Chemischen Industrie e.V. (VCI), Quarterly Report (02/2025), available on the VCI website	Germany
Verschuur, J., Koks, E.E. & Hall, J.W. Ports' criticality in international trade and global supply-chains. Nat Commun 13, 4351 (2022), available on the nature communications website	World
viadonau, several annual reports, available on the viadonau website	Europe
Voies Navigables de France (VNF), En 2025, envolée des trafics céréaliers (+30 %) et record inédit des croisières sur le Rhin (28.04.2026), available on the VNF website	France

OTHER SOURCES

Original Name	English Name	Country
Administrația Canalelor Navigabile (ACN)	Administration of the Navigable Canals (ACN)	Romania
Administration de l'enregistrement, des domaines et de la TVA (AED)	Registration Duties, Estates and VAT authority (AED)	Luxembourg
AG Energiebilanzen e.V.	German Working Group on Energy balances	Germany
Association française des ports intérieurs (AFPI)	French association of inland ports (AFPI)	France
Banque CIC agriculture	CIC Bank agriculture	France
Bundesanstalt für Gewässerkunde (BfG)	German Federal Office for Hydrology (BfG)	Germany
Bundesbank	German Central Bank	Germany
CCNR/ZKR/CCR	Central Commission for the Navigation of the Rhine (CCNR)	Europe
Corporation Inland Tanker Barge Owners (CITBO)	Corporation Inland Tanker Barge Owners (CITBO)	Belgium
Department for Transport	Department for Transport	United Kingdom

Original Name	English Name	Country
Deutscher Wetterdienst (DWD)	German Meteorological Service (DWD)	Germany
Donaukommission	Danube Commission	Europe
Eidgenössische Steuerverwaltung (ESTV)	Federal Tax Administration (FTA)	Switzerland
European Central Bank (ECB)	European Central Bank (ECB)	EU
European Commission (EC)	European Commission (EC)	EU
European Steel Association (Eurofer)	European Steel Association (Eurofer)	Europe
EUROSTAT	EUROSTAT	EU
FranceAgriMer	FranceAgriMer	France
Gemeente Amsterdam	City of Amsterdam	The Netherlands
Insights Global	Insights Global	The Netherlands
Institut pour le Transport par Batellerie/ Instituut voor het Transport langs de Binnenwateren (ITB)	Institute for transport by skippers (ITB)	Belgium
Internationale Vereniging voor de behartiging van de gemeenschappelijke belangen van de binnenvaart en de verzekering en voor het houden van het register van binnenschepen in Europa (IVR)	International Association for the representation of the mutual interests of the inland shipping and the insurance and for keeping the register of inland vessels in Europe (IVR)	The Netherlands
International Monetary Fund (IMF)	International Monetary Fund (IMF)	World
International Sava River Basin Commission	International Sava River Basin Commission	Europe
Investing.com London	Investing.com London	UK
Land Niederösterreich	Federal State of Lower Austria	Austria
Ministero delle infrastrutture e dei trasporti	Italian Ministry of Transport	Italy
Ministerstvo dopravy České republiky	Ministry of Transport of the Czech Republic	Czech Republic
Moselle Commission	Moselle Commission	Europe
National administrations in Rhine countries	National administrations in Rhine countries	Europe
National fleet data	National fleet data	Europe
Organisation for Economic Co-operation and Development (OECD)	Organisation for Economic Co-operation and Development (OECD)	World
Oxford Economics	Oxford Economics	World
Panteia	Panteia	The Netherlands
Ports mentioned in the report	Ports mentioned in the report	Europe
R.A. Administratia Fluviala a Dunarii de Jos Galati (AFDJ)	Galati Lower Danube River Administration, A.A.	Romania

Original Name	English Name	Country
Rijkswaterstaat	Ministry of Infrastructure and Water Management	The Netherlands
Service de la statistique et de la prospective (SSP) du Ministère de l'Agriculture et de la Souveraineté alimentaire	Department of Statistics and Foresight Analysis (SSP) of the Ministry of Agriculture and Food	France
Statistikamt Nord	Statistical Office for Hamburg and Schleswig-Holstein	Germany
Swiss Rhine ports	Schweizerische Rheinhäfen	Switzerland
UK Department for Transport	UK Department for Transport	UK
Verein der Kohleimporteure (VDKI)	Association of German Coal importers (VDKI)	Germany
viadonau	viadonau	Austria
Voies Navigables de France (VNF)	Navigable Waterways of France (VNF)	France
Wasserstraßen-und Schifffahrtsverwaltung des Bundes (WSV)	German Waterways and Shipping Administration (WSV)	Germany
Wirtschaftsvereinigung Stahl	The German Steel Association	Germany

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