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IMAP INSIGHTS

IMAP NETHERLANDS' M&A PERSPECTIVE ON THE EUROPEAN INLAND SHIPPING MARKET



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50TH
ANNIVERSARY

IMAP

OUR M&A PERSPECTIVE ON THE EUROPEAN INLAND SHIPPING MARKET

INTRODUCTION

Inland Shipping is a key segment in the Transportation & Logistics industry. In recent years it has grown in strategic importance, positioning itself as a cost-effective and eco-friendly alternative to traditional modes of transport such as air, road, and rail. We believe the European Inland Shipping market is on the verge of a significant consolidation wave driven by several key factors:



CEES VAN VLIET



REMCO SCHOUTEN



GUILLAUME PETIT



STEVEN KLAREN



JONAH VAN RAVENZWAAIJ



RENS WISMAN

» **Sustainability:** The EU is looking to lower emissions significantly which requires large investments in greener technologies. Such large sustainability investments are relatively hard for small companies, as larger firms typically have better cash flows and more attractive financing options. This will push medium and large companies to grow further through acquisitions and small companies to sell.

Growing market: Due to the increase in transported volume, a consequence of the EU green policy, Inland Shipping, together with rail transport, are the most sustainable and effective transport modes. Greater demand will result in more M&A activity as companies seek to increase their capacity and leverage economies of scale.

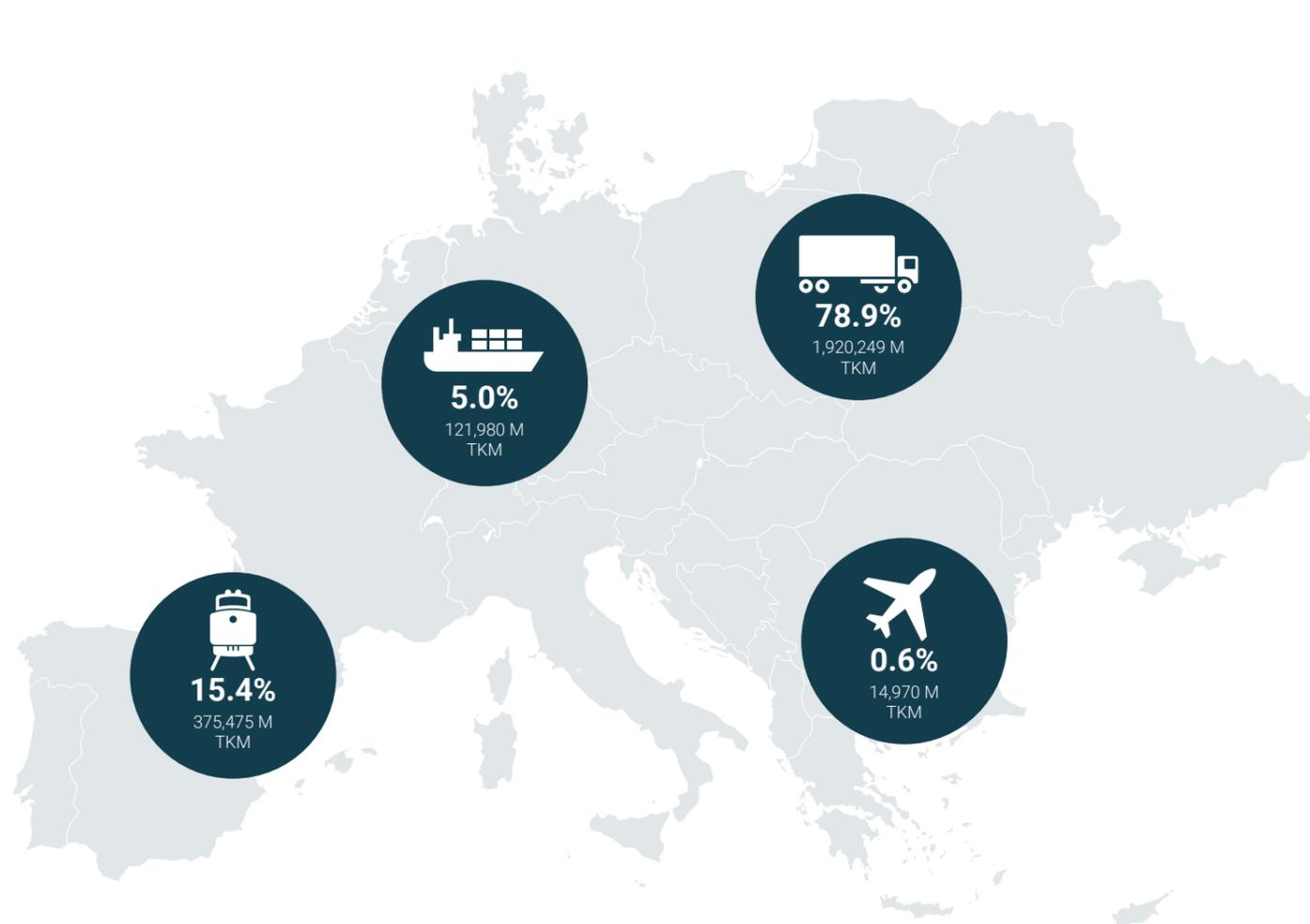
Supply chain: Influenced by other trends and geopolitical events. An example is the Russia-Ukraine war that has disrupted traditional transport routes and pushed transport prices of certain verticals through the roof, making Inland Shipping an appealing alternative while capitalizing on increased freight rates.

We foresee a consolidation wave in the Inland Shipping market. Driven by sustainability efforts, increasing demand, and geopolitical shifts, this consolidation could redefine the industry landscape. While this may result in inherent challenges, we believe it holds great growth potential.

OVERVIEW OF THE EUROPEAN MARKET

» In 2021, road transport was the most dominant mode of transportation in Europe, due to its geographic and historical diversity, comprising 77.6% of total inland cargo transport performance.

EU27 2021 Transport Performance Modal Split

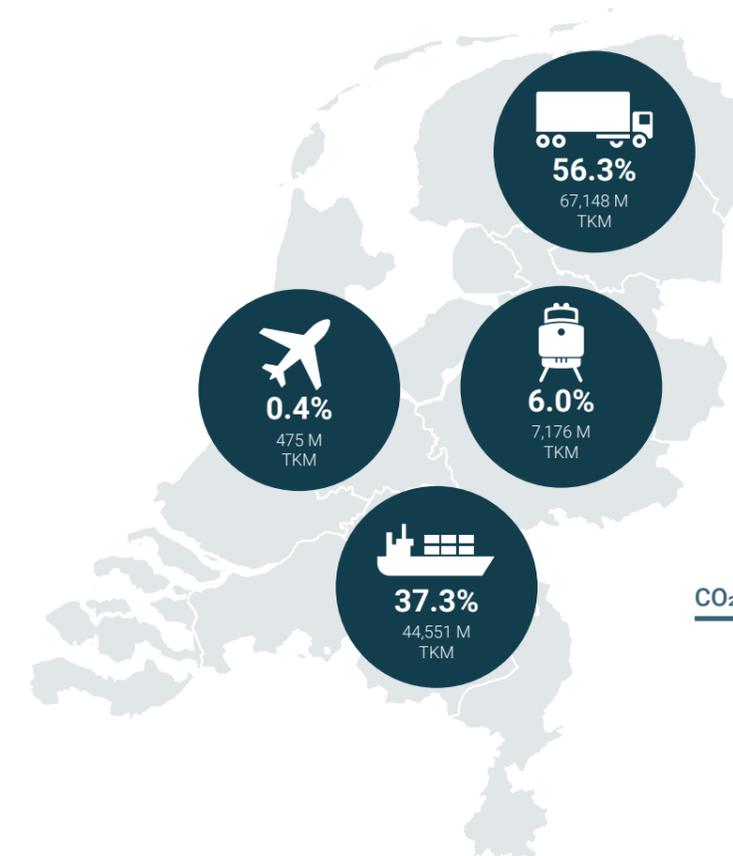


Sources: Eurostat

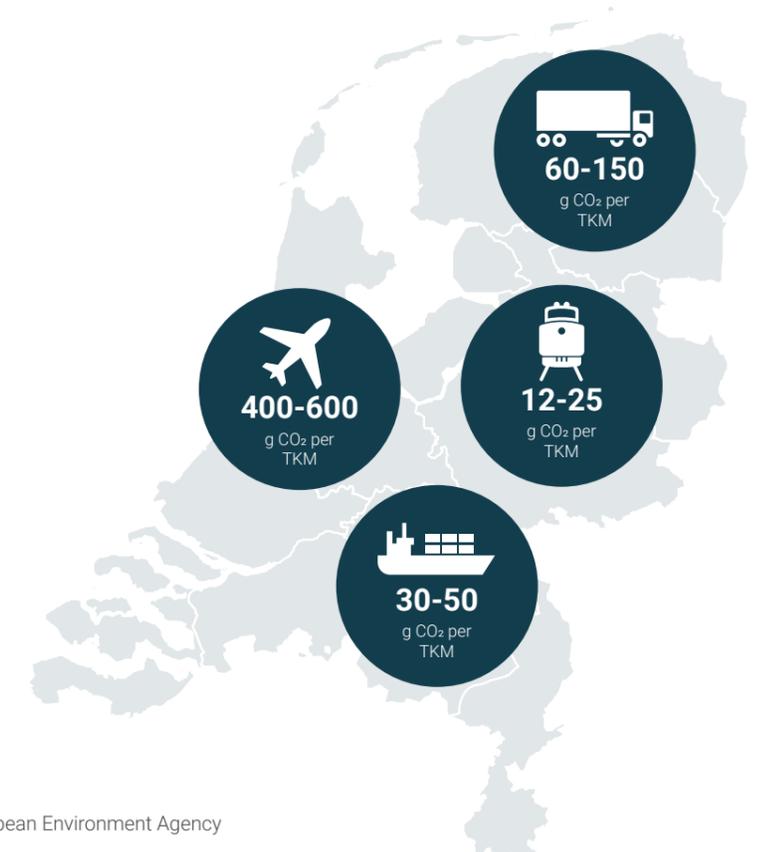
STRATEGIC IMPORTANCE OF THE NETHERLANDS

» Historically important in the Netherlands, Inland Shipping represented 37.8% of total inland cargo transport performance in 2021 and with increasing focus on sustainability, outperforms other mode in efficiency and CO₂ emissions.

Dutch 2021 Transport Performance Modal Split



CO₂ Emissions Modal Split



Sources: Eurostat, International Air Transport Association, European Environment Agency

INCREASING EXPOSURE IN THE PRESS

» The market is currently benefitting from increasing attention and focus on emission restrictions and sustainability.

ABN Amro: 'Inland shipping growth will continue in 2023'

DISRUPTED COMMODITY MARKET

Inland waterway transport will grow by 2% in 2023. Profit margins in both dry and liquid bulk shipping will also increase further next year. This means that inland shipping compares favorably with the entire transport sector, whose growth remains at 1%. This is what ABN Amro predicts in the Sector Forecast 2023.

RICKY COOK Nov 22, 2022 12:25 PM



FROM THE ROAD TO THE WATER

New tender for barge scheduled services in the context of a modal shift

The latest tender in a series to move freight transport from road to water has started. A total of five concessions are being put out to tender that should increase the number of scheduled services in inland shipping by reducing volume from the road.

Vincent Krabbendam Rotterdam, January 23, 2023, 5:25 PM

20 EUROS PER CONTAINER

The Ministry wants to increase the modal shift target by 300,000 containers per year

The Ministry of Infrastructure and Water Management is considering increasing the modal shift target by 300,000 containers per year. Minister Harbers and State Secretary Heijnen of Infrastructure and Water Management write this to the House of Representatives. The subsidy schemes are so popular that the original final goal has almost been achieved.

Jelmer Bastian The Hague, April 13, 2023, 12:53 PM

DIRECTLY OVERSUBSCRIBED

Stage V subsidy for inland shipping ends in lottery: 200 applications

On the first day, 200 subsidy applications were submitted for a new Stage V engine for inland vessels, the Netherlands Enterprise Agency reports. Thus, a lottery has become inevitable to determine who the lucky ones are.

Jelmer Bastiaans The Hague, 13 February 2023, 15:09

CRITICAL STAFF SHORTAGE

Double-digit growth for inland shipping for five consecutive quarters

In the third quarter of 2022, inland shipping saw its turnover in domestic transport increase by 47.5% compared to the same period last year. Transport by water therefore showed the greatest growth within the entire transport sector, together with aviation.

Vincent Krabbendam The Hague, December 13, 2022, 7:50 PM

WeBarge launches first semi-autonomous River Drone

Inland shipping operator WeBarge has launched the River Drone I, the first of three new hybrid inland shipping vessels. The ship can sail semi-autonomously. The Stage V diesel engine can be replaced later by alternative propulsion.

Editorial Antwerp, Apr 07, 2023, 1:09 PM

MARKET FORECAST

ING: Inland shipping freight rates in 2023 much higher than before 2022

Freight rates in inland shipping will drop slightly in 2023, but will remain considerably higher than in the years before 2022. However, the same applies to the gas oil price, ING predicts in its new market outlook, based on data from multi-year transport contracts.

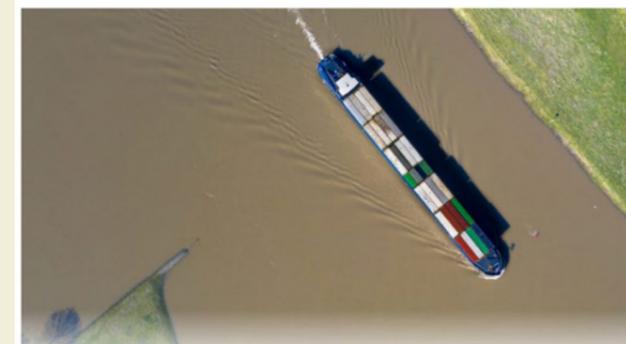
Robin vanden Bovenkamp Amsterdam, 09 February 2023, 13:28

'Price incentives' are intended to encourage inland shipping to become greener more quickly

FUTURE VISION

Minister Mark Harbers calls on ports and shippers to encourage inland shipping to become more sustainable with price incentives. Such an incentive could consist of, for example, a discount on port dues for ships that are labeled as sustainable, or denying access to polluting ships.

RICKY COOK December 7, 2022 09:25



Another 16 million extra subsidy for greener inland shipping

STAGE V MOTOR

Over the next two years, a further 16 million euros in additional subsidies will be available for greener engines for inland vessels. That money is in addition to the 10 million previously announced for this year. Minister Harbers writes this in a letter to the House of Representatives.

RIENEKE KOK 28 October 2022 12:07



House of Representatives: faster transition to hydrogen and methanol in inland shipping

February 8, 2023



Source: Nieuwsblad Transport, Binnenvaartkrant, Schuttevaer, Transport Online

TRENDS & DRIVERS

» There are a variety of global, European, and Dutch trends characterizing the market:

\$18.6 B

Global Inland Shipping market

4.1%

CAGR worldwide Inland Shipping market

Dry Bulk

Most transported good worldwide

\$10.2 B

EU Inland Shipping market

5.0%

CAGR EU Inland Shipping market

Asia-Pacific

Fastest growing market for Inland Shipping



49 B TKM

Transported over the Rhine

35 B TKM

Transported over the North-South Axis

22 B TKM

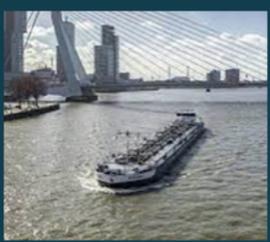
Transported over the Danube

Rotterdam

Biggest harbor in Europe

16.3%

Europe's share of world Inland Shipping market



55%

Dutch share of EU27 Inland Shipping companies

9.1%

CAGR of fastest growing vertical Agri-food

20,000

New employees needed until 2030 in the Netherlands

3,185

Dutch Inland Shipping companies

44.6 B TKM

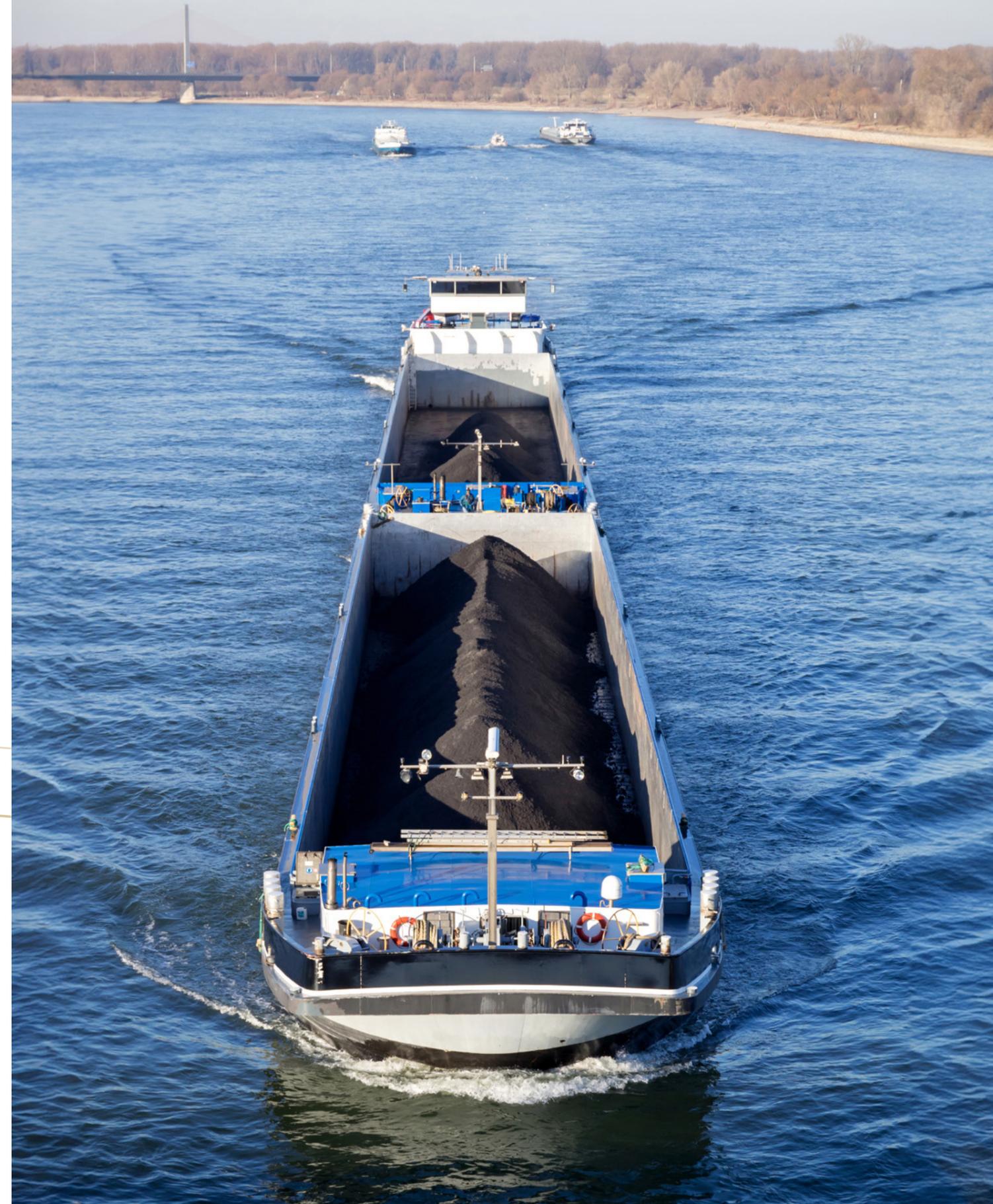
Transported by Dutch companies



~1,000

Truck combinations to move from road to Inland Shipping

INLAND SHIPPING MARKET



MARKET FUNDAMENTALS

» The Inland Shipping market is witnessing significant growth and increasing momentum within the freight transport industry.



Global Inland Shipping*

€18.6 B

The global Inland Shipping market was estimated at \$18.6 billion in 2022 and is expected to reach \$22.8 billion in 2027.



CAGR Global Inland Shipping

4.1%

The global Inland Shipping market is expected to grow with a CAGR of approx. 4.1% from 2022–2027.



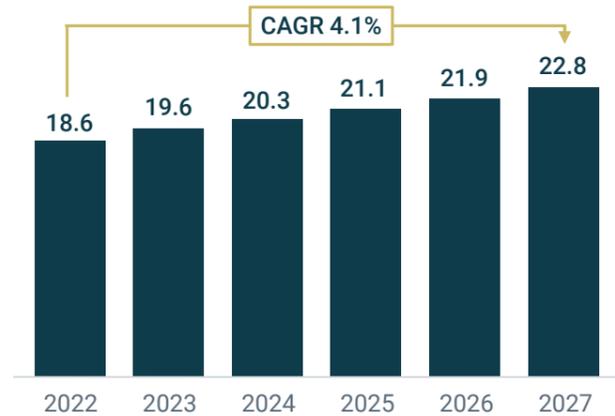
Most Transported Cargo Type

Dry Bulk

Dry bulk dominates Inland Shipping cargo and is estimated to comprise roughly 60-70% of the total amount of cargo transported over the global inland waterway infrastructures.



Global Inland Shipping Market (in \$ Billions)



» Transport performance across the globe is substantial, making use of the efficient inland waterways.



Transport Performance*

837 B

The global Inland Shipping market performance is calculated to be approx. 837 billion TKM.



Europe's Performance Share

16.3%

EU27's share in the global Inland Shipping performance was hovering around 16.3% in 2021, placing it second globally.



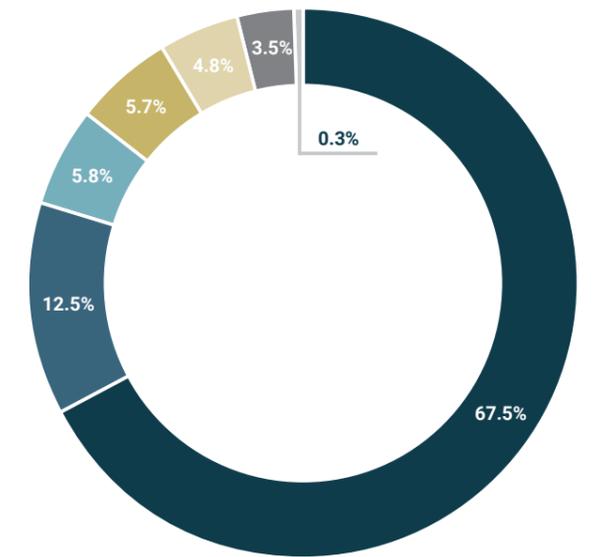
Fastest Growing Market

Asia-Pacific

The fastest growing market for Inland Shipping is Asia-Pacific due to increased river connectivity.



Share in Global Inland Shipping Performance (in %)*



United States, Russia, Germany, Netherlands, Rest of EU27, Canada, Rest of the world

Sources: The Business Research Company, United Nations, Eurostat, IMAP Analysis
*The market values are derived from different data sources which can result in inconsistencies

Sources: The Business Research Company, Mordor Intelligence, United Nations, Eurostat, IMAP Analysis
*For calculations the last available year and/or estimates are used



» Compared to other regions, the market in Europe is experiencing faster growth.

» The major waterways of Europe; Rhine, North-South Axis, and Danube, are responsible for a vast share of the European transport performance.



EU Inland Shipping Market*



\$10.2 B

Expected to be \$10.2 billion in 2023, growing to \$13 billion in 2028.

CAGR Inland Shipping Market



5.0%

Estimated to grow 5% annually in the EU, outpacing the global growth perspective partly due to the EU's focus on sustainability.

Dutch Dominance



59%

Of all 5,518 EU27 registered Inland Shipping companies in 2020, 59% are registered in the Netherlands, responsible for 41% of the 23,897 employees.

European Inland Shipping Market (in \$ Billions)*



EU Inland Shipping Transport



122 B

In 2021, total inland waterway transport performance in EU27 amounted to 136 billion TKM.

Flourishing Freight Flow



49 B

The Rhine leads the busiest EU inland waterways with 49 billion TKM, followed by the North-South Axis with 35 billion TKM, and the Danube with 22 billion TKM.

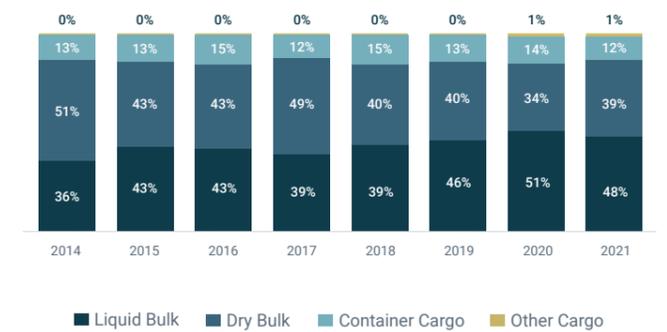
Dutch Transportation Share



37%

The Netherlands counts for more than a third of all EU27 transport performance, partly due to its rich geography filled with waterways.

Cargo Types Being Transported Through EU27 (in % of TKM)*



Sources: Eurostat, Statista, CCNR, Mordor Intelligence, IMAP analysis
*The market values are derived from different data sources

Sources: Eurostat, Statista, CCNR, Mordor Intelligence, IMAP analysis
*Only 26% of TKM denominated cargo is specified



» An extensive network of inland waterways support the three main European waterways, connecting all major ports for freight transport by vessel.

Transport Performance in Main EU River Basins (in Billions TKM), Totaling 122 Billion TKM



Source: CCNR Annual Report 2023



NETHERLANDS HUB

» An important hub for international trade, the Netherlands play a key role in the market.



Dutch Shipping on the Rise

43%

2022 Dutch Inland Shipping revenues increased 43% compared to the year before, primarily due to increased prices.



Destination of Goods

36%

Most of the cargo transported on the Dutch inland waterways is destined for export (36%) closely followed by inland transport (33%) with the remainder consisting of import (18%) and transit (13%).



! Inland transport is shipping within a country; transit is passage through one country to another.

Modal Shift in Transportation

2,200

The ministry of infrastructure and water management is looking to increase the IWT by 2,200 containers yearly from 2021-2025.



Quarterly Dutch Inland Shipping Revenue, YoY Change (in %)



Sources: CBS, Eurostat, Rijksoverheid

» The Netherlands is a major player in all facets of the market.



Inland Shipping Performance

44.5 B

Dutch Inland Shipping achieved a performance of 47.4 billion TKM, transporting 345 million tonnes of cargo in 2022.



Dutch Inland Shipping Market

54%

The biggest share of transportation performance in the Dutch Inland Shipping market is dry bulk. It amounted to 54% of the 2022 transportation performance.



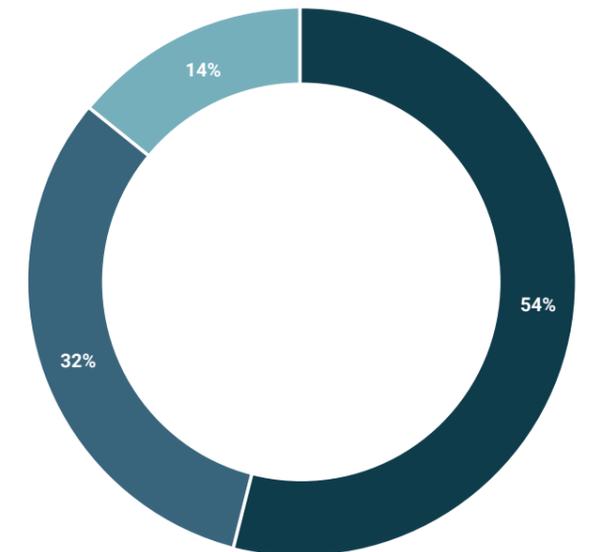
Dutch Inland Shipping

3,185

In the first quarter of 2023, the Dutch Inland Shipping sector boasted 2,765 companies, demonstrating a vibrant and thriving market.



Cargo Types Transported Through the Netherlands (in % of 2022 TKM)



■ Dry Bulk ■ Liquid Bulk ■ Container Cargo

Sources: CBS, Eurostat, Rijksoverheid



» There are three major cargo types being transported in the Netherlands:

DRY BULK



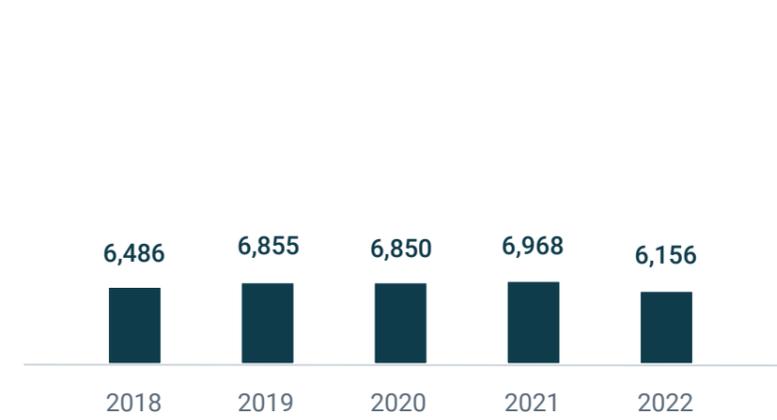
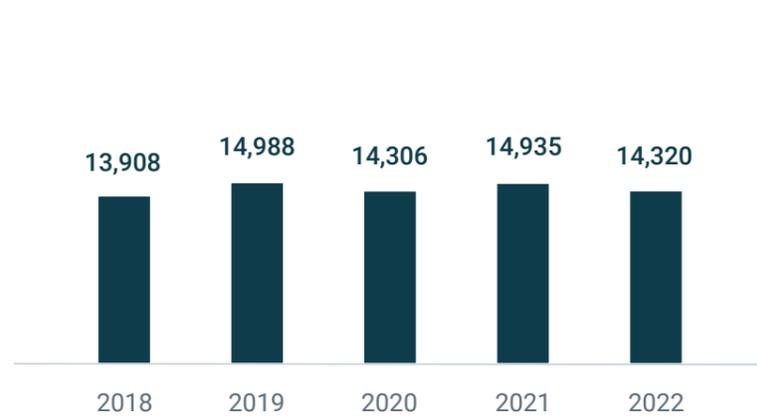
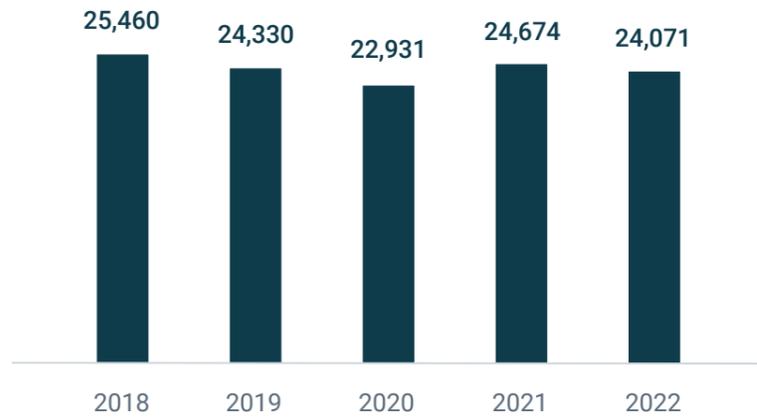
LIQUID BULK



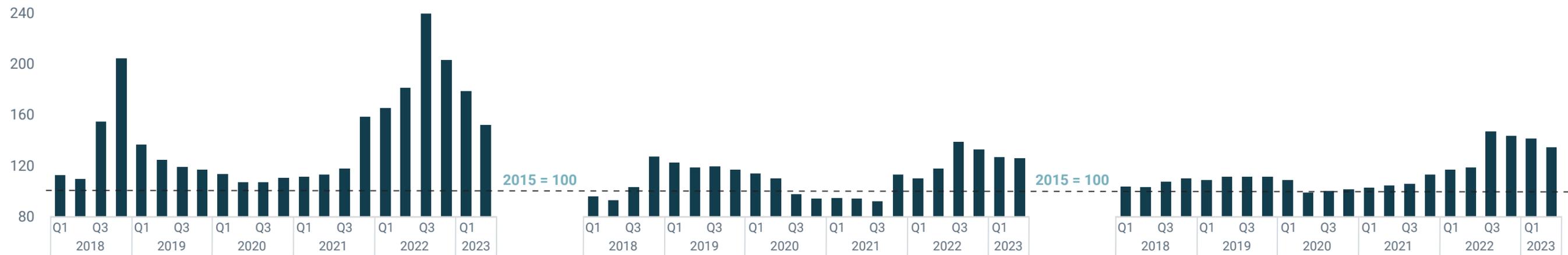
CONTAINER CARGO



TKM Development



Spotprice Index



Sources: CBS

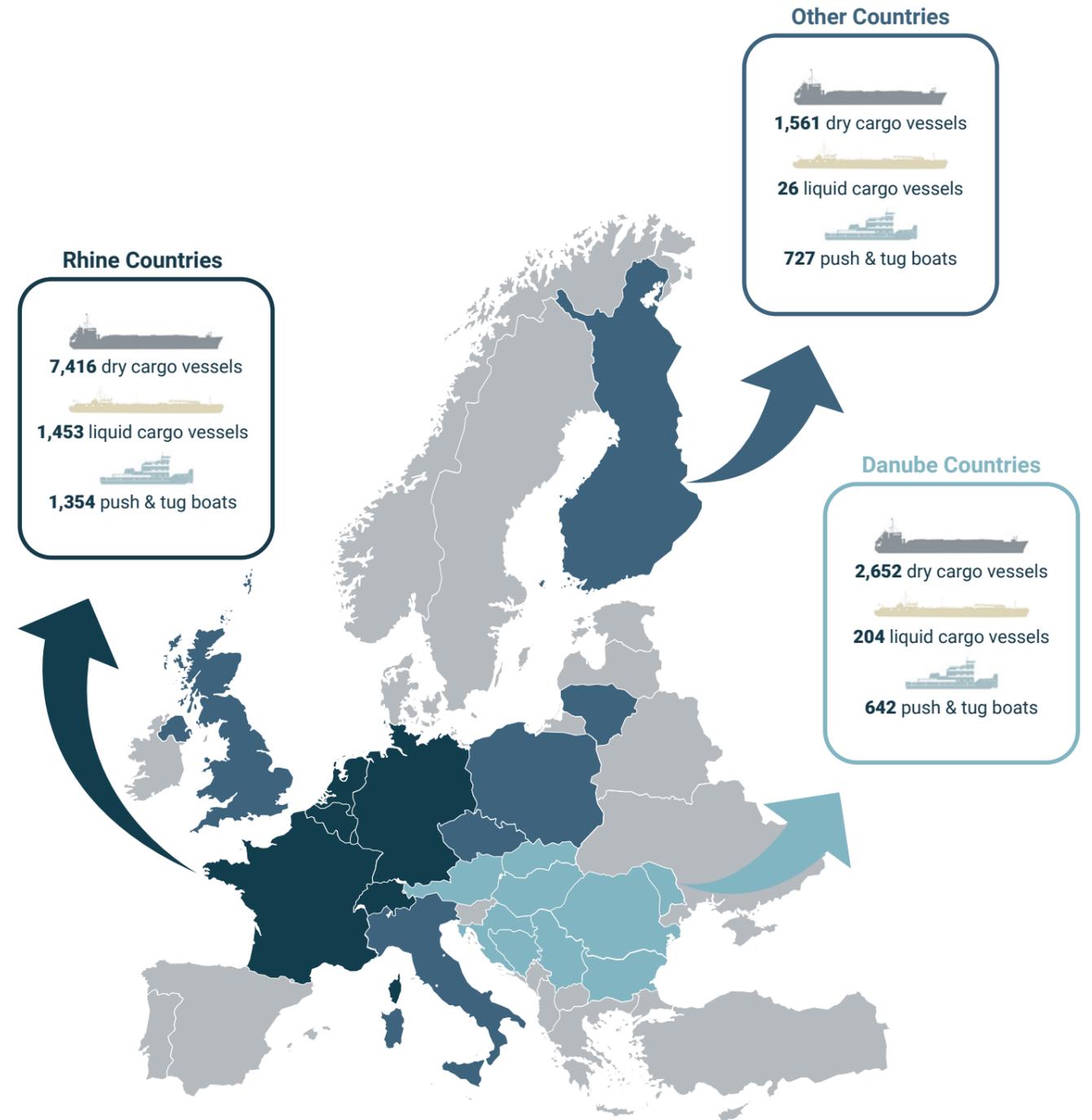


FLEET OVERVIEW



MARKET FUNDAMENTALS

Together, the European countries account for a significant fleet of vessels*

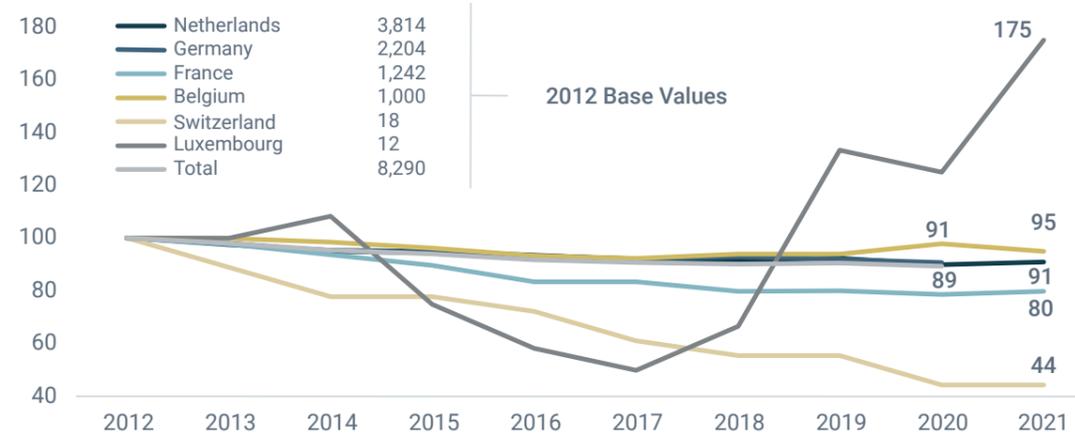


*Fleet numbers based on last available years per country



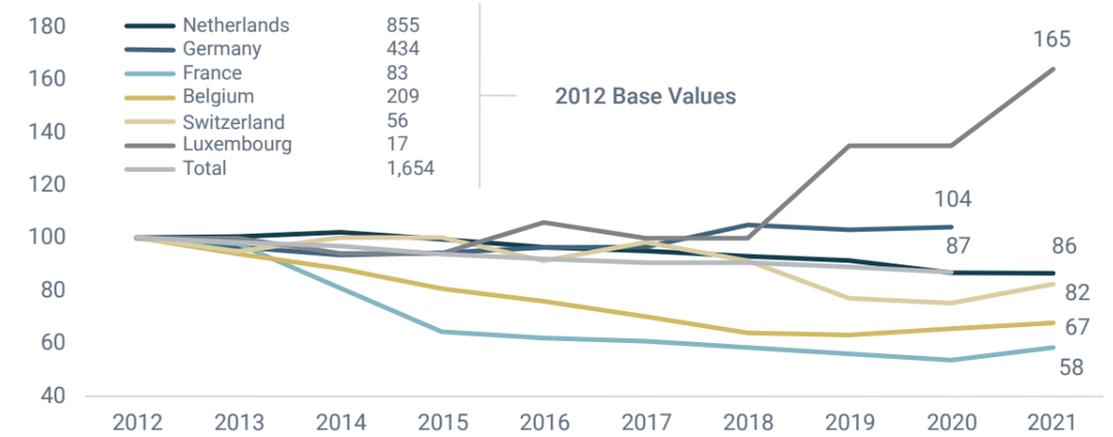
» The fleet consists primarily of dry bulk vessels in the Rhine countries. While numbers have been decreasing over the past few years, their size is in fact, increasing.

Index of Dry Bulk Cargo Fleet in the Rhine Countries, Including Base Year Values (2012 = 100)*



» A similar trend is playing out in the liquid bulk vessels.

Index of Liquid Bulk Cargo Fleet in the Rhine Countries, Including Base Year Values (2012 = 100)*



Rhine Countries' Distribution of Dry Bulk Cargo Vessel Tonnage Capacity



Rhine Countries' Distribution of Liquid Bulk Cargo Vessel Tonnage Capacity



HIGHLIGHTS

- The dry bulk cargo fleet in the Rhine countries (excluding Luxembourg) has decreased between 5-20% from 2012-2021.
- Luxembourg stands out as an outlier in the first graph, indicating a different trend in their fleet.
- The second graph shows a shift in the Rhine countries' dry bulk cargo vessels tonnage capacity distribution between 2016-2020.
- The share of smaller vessels (<1,000 tonnes) in the Rhine countries has been decreasing, suggesting a decline in demand for such vessels or a shift towards larger vessels.
- The share of larger vessels (>3,000 tonnes) in the Rhine countries has been gradually increasing, indicating a growing preference or demand for larger tonnage capacities.
- The observed trends suggest that vessels are moving from the Rhine countries to the Danube countries, which coincides with sentiment in the market.
- The shift towards larger vessels and the redistribution of vessels between the Rhine and Danube countries could result in cost and operational efficiencies for the Inland Shipping industry, impacting the strategic outlook for companies operating in these regions.

HIGHLIGHTS

- Germany bucks the trend among the Rhine countries, with its liquid cargo fleet experiencing a 4% increase between 2012-2020, while the other Rhine countries (excluding outlier Luxembourg) witnessed declines.
- In contrast to Germany, the other Rhine countries saw their liquid cargo fleets decrease by approx. 15% to 40% in the same period.
- A shift in the tonnage capacity distribution of the liquid cargo vessels in the Rhine countries is apparent, exhibiting patterns akin to those observed for dry bulk cargo vessels.
- The declining share of smaller liquid cargo vessels (<1,000 tonnes) indicate a reduced demand for these vessels or a strategic move towards larger vessels.
- Conversely, an increasing share of larger liquid cargo vessels (>3,000 tonnes) highlights a growing preference for higher tonnage capacities in the Rhine countries.
- These trends are partly driven by liquid cargo vessels relocating from the Rhine countries to other regions in pursuit of new opportunities or more advantageous market conditions.
- The strategic implications of these shifts for the Inland Shipping industry include potential cost and operational efficiencies and a reevaluation of growth prospects for companies operating in the Rhine countries.

Sources: CCNR, Schuttevaer
*For Germany only data until 2020 is available

Sources: CCNR, Schuttevaer
*For Germany only data until 2020 is available



UNDERLYING MARKETS

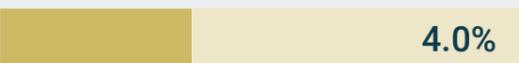
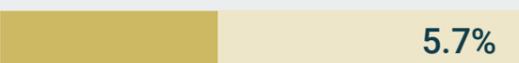
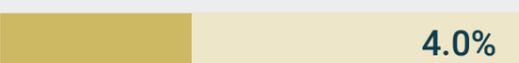


MARKET FUNDAMENTALS

Verticals Driving the Inland Shipping Market:

			Market size
	AGRI-FOOD	e.g., cereal grains, meat products, dairy products	\$12.2 T
	CHEMICALS	e.g., petrochemicals, industrial gases, fertilizers	\$4.7 T
	STEEL	e.g., iron, coils, plates, pipes	\$1.3 T
	COAL	e.g., steam coal, metallurgical coal, anthracite	\$615 B
	AGGREGATES	e.g., sand, crushed stone, gravel	\$507 B
	CONTAINERS	e.g., electronics, apparel, machinery parts	\$11.3 B
	MINERAL OILS	e.g., gasoline and other petroleum products	\$3.4 B

» The Inland Shipping market is driven by fundamental developments in the following verticals, each with their own characteristics:

Vertical	Forecast Period	CAGR	Highlights:
1  Agri-food	'22 – '27	 9.1%	The Russia-Ukraine war has disrupted Ukrainian and Russian exports of agri-food products. Nevertheless, grain exporters, such as the middle Danube region and Northern France are noticing an increase in demand and exports for agri-food products.
2  Chemicals	'22 – '27	 7.8%	The global chemicals market was valued at approx. €4 trillion in 2021, of which the EU market share amounted to approx. 19%. Germany, France, Italy, and the Netherlands are responsible for 51.5% of all EU chemicals sales.
3  Steel	'22 – '28	 4.0%	War-related disruptions, a poor demand outlook, and rising energy prices and production costs halted the positive trend in the steel market in 2022. Apparent steel consumption is expected to mildly drop in 2023 and recover from 2024 onwards.
4  Coal	'22 – '27	 1.4%	The energy crisis following from the Russia-Ukraine war has caused a surge in coal demand. The global market for coal is expected to grow in the coming years, even though the IEA's goal is to reduce energy-related CO ₂ emissions to net zero by 2040.
5  Aggregates	'22 – '30	 5.7%	Growth in the aggregates market is fueled by construction demand and housing shortages. The global aggregates market is expected to grow from \$507 billion in 2021 to \$837 billion in 2028, at a CAGR of 5.7%.
6  Containers	'22 – '28	 5.7%	Container shipping was hit hard by the COVID-19 pandemic due to its transcontinental nature and complexity. Port closures, congestions, labor shortages, and lack of new shipping containers have driven prices, and profits, up.
7  Mineral Oils	'21 – '29	 4.0%	Mineral oils are widely used in the Pharmaceutical industry. In 2020, this sector witnessed massive disruptions due to COVID-19. This segment, together with the Personal Care and Cosmetics sector is expected to witness substantial growth.

AGRI-FOOD

Whereas the Agri-food sector is expected to grow along with the global population, trade lanes in Europe have been disrupted by the Russia-Ukraine war.

Global Agriculture Market

\$12.2 T

Was estimated at approx. \$12.2 trillion in 2022.

EU27 Cereal Production

+8.4%

The EU27 is expected to produce 290 million tonnes of cereals in 2023, an 8.4% increase.

Rhine

10%

Of all cargo transport on the Rhine is related to the Agri-food sector.



CAGR Agriculture Market

9.1%

The global agriculture market is expected to grow at a CAGR of 9.1% to approx. \$19 trillion in 2027.

Trade Balance

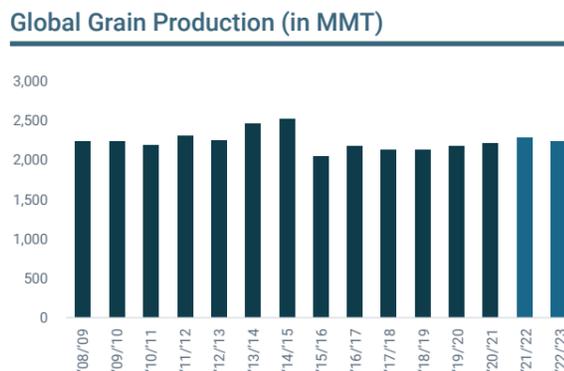
47.9 M

In the '21/'22 season, EU27 member states exported approx. 47.9 million tonnes of cereals versus 22.1 million tonnes in imports.

Danube

23%

Of all cargo transport on the Danube is related to the Agri-food sector.



HIGHLIGHTS

Developments & Drivers

- The Agri-food sector proved resilient during the COVID-19 pandemic and didn't experience extreme price movements. However, bottlenecks in transport and logistics resulted in increased shipping costs.
- Trade in Agri-food products has grown strongly over the last two decades and is becoming "global".

Trade

- Approx. 10% of all cargo on the Rhine and 23% of all cargo on the Danube is related to the Agri-food sector.
- The Russia-Ukraine war has disrupted Ukrainian and Russian export of agri-food products. Other grain exporters, such as the middle Danube region and Northern France, are noticing an increase in demand and exports.
- There are an abundance of Ukrainian products in Eastern Europe due to lifted import duties and the Black Sea being blocked. EU27 member states are currently only accepting Ukrainian products intended for transit.

Sources: Statista, OECD, U.S. Bureau of Labor Statistics, The Business Research Company, European Commission

CHEMICALS

The market for chemicals continues to grow, with a concentrated European market.

Global Chemicals Market

\$4.7 T

Was valued at approx. EUR 4.7 trillion in 2021.

Global Chemical Production

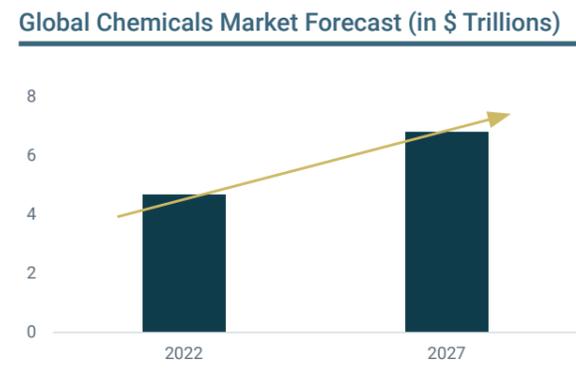
2.9%

In 2023, it is expected to expand at a rate of 2.9%.

Rhine

11.6%

In 2021, 11.6% of all cargo transport on the Rhine was related to chemicals.



CAGR Global Chemicals Market

7.8%

The global chemicals market is expected to grow at a CAGR of 7.8% from approx. \$4.7 trillion in 2022 to approx. \$6.9 trillion in 2027.

EU Chemicals Market

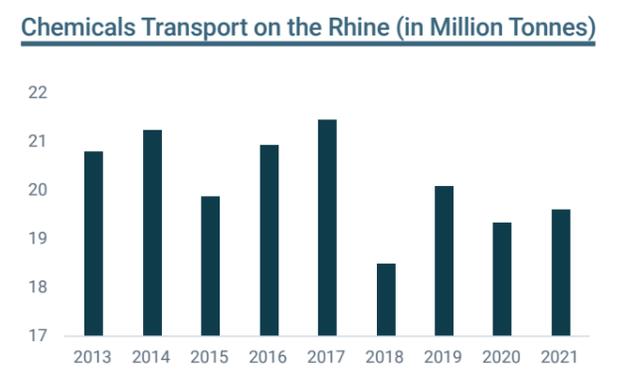
€761 B

Was valued at approx. €761 billion in 2021.

Danube

10.8%

In 2021, 10.8% of all cargo transport on the Danube was related to chemicals.



HIGHLIGHTS

Developments & Drivers

- The global chemicals market was valued at approx. €4.7 trillion in 2021, of which the EU market share of €0.7 trillion amounted to approx. 19%.
- With a transport share of approx. 11% on the major EU waterways, Inland Shipping of chemicals is expected to grow significantly alongside the global chemicals market.
- Due to the energy intensity of the Chemicals industry, production costs have risen sharply since the Russia-Ukraine war.
- Germany, France, Italy, and the Netherlands account for 51.5% of all European chemicals sales.

Trade

- Approx. 11.6% of cargo transport on the Rhine is related to the Chemicals sector. For the Danube this share is approx. 10.8%.
- In 2022, over 95 M tonnes of hazardous substances were transported by inland vessels in the Netherlands. Flammable liquids make up for around 70% of all hazardous substances transported on inland waterways.

Sources: American Chemistry Council, European Chemical Industry Council, Statista, CCNR, CBS



STEEL

While the market for steel is experiencing difficulties in the value chain, it maintains growth trajectory.

Global Steel Market

\$1.3 T
Amounted to approx. \$1.27 trillion in 2022.



CAGR Global Steel Market

4.0%
Is expected to grow at a CAGR of 4.0% to approx. \$1.61 trillion in 2028.

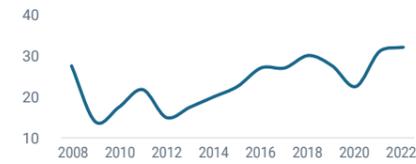


Import in the EU27

30.3 M
In 2021, a total of 30.3 million metric tonnes of finished steel products were imported into the EU27.



Steel imports EU27 (in MMT)



Rhine

25%
Approx. 25% of all cargo transport on the Rhine is related to steel production.

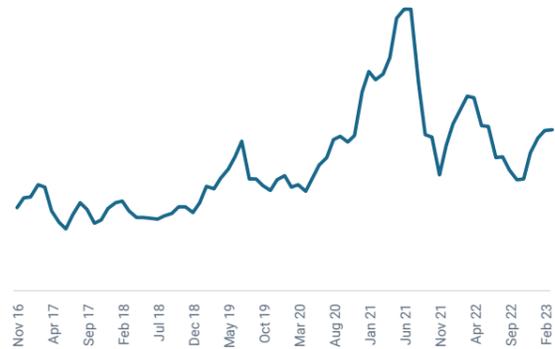


Danube

40%
Approx. 40% of all cargo transport on the Danube is related to steel production.



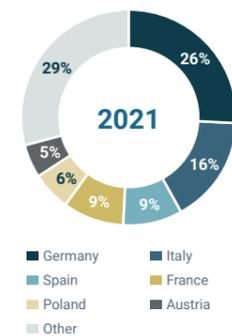
Iron Ore Price Index



Steel Consumption EU27



Crude Steel Production EU



COAL

The market for coal is strongly affected by the Russia-Ukraine war, energy crisis, and energy transition.

Global Coal Market

\$615 B
Amounted to approx. \$615 billion in 2022.



CAGR Global Coal Market

1.4%
Is expected to grow at a CAGR of 1.4% to approx. \$659 billion in 2027.



EU27 Coal Consumption

+6.0%
Coal consumption rose by 6.0% in the EU27 in 2022, while global coal consumption rose by 1.2%.



Port of Rotterdam

-44%
In the period 2015-2020, coal transshipment decreased by 44%.



Port of Rotterdam

24.6 M
In 2021, 24.6 million tonnes of coal were transhipped.



Port of Rotterdam

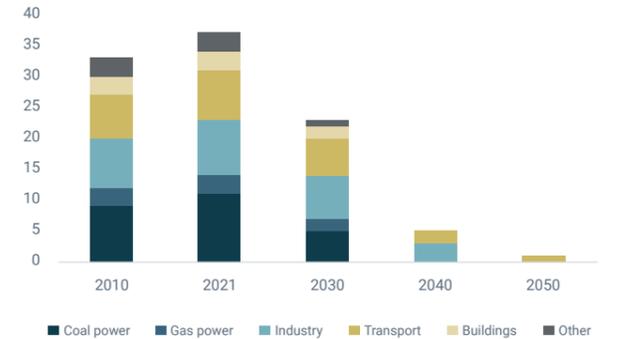
90%
90% of the coal entering the port is shipped to Germany.



Coal Price Index



CO2 Emissions (in GtCO2)



HIGHLIGHTS

Developments & Drivers

- After a significant drop in steel consumption due to the COVID-19 pandemic in 2020, the apparent steel consumption in the EU27 showed a positive post COVID-19 trend in 2021.
- War-related disruptions, a poor demand outlook, and rising energy prices and production costs halted the positive trend in 2022. Apparent steel consumption is expected mildly drop in 2023 and, subject to more favourable geopolitical developments, to recover in 2024.
- Steel-using sectors have shown to be resilient. In Q3 2022 the output of steel-using sectors in the EU27 marked a seventh consecutive quarterly year-on-year growth since Q3 2020.
- The output from steel-using sectors is expected to mildly decrease (-0.6%) in 2023 and to recover again (+1.8%) in 2024.

Trade

- Total steel imports in the EU27 have always been highly volatile and have recorded historically high levels in 2021.
- Approx. 25% of all cargo transport on the Rhine is related to steel production. For the Danube this percentage is approx. 40%.

Sources: Statista, Eurofer, Expert Market Research, CCNR

HIGHLIGHTS

Developments & Drivers

- Coal remains a key fuel for electricity generation and a range of industrial processes in many countries.
- The Russia-Ukraine war has caused a surge in coal demand, especially in Europe.
- The energy crisis following the war has increased the urgency of the transition from fossil fuels to sustainable alternatives.
- Coal is the largest single source of energy-related CO2 emissions. The IEA's goal is to reduce energy-related CO2 emissions to net zero by 2040.

Trade

- In the period 2015-2020, coal transshipment decreased by 44% from 30.7 to 17.3 million tonnes in the Port of Rotterdam. In 2021, following rises in gas prices, more coal was being demanded for electricity production with 24.6 million tonnes transhipped. 2022 also saw an increase.
- Of all coal entering the Port of Rotterdam, 10% remains in the Netherlands and 90% is shipped to Germany.
- Coal prices showed a significant increase from late 2021 through 2022 and decreased in the first quarter of 2023.

Sources: IEA, Statista, Ember Climate, The Business Research Company, Port of Rotterdam



AGGREGATES

>> The aggregates market is expected to grow due to construction demand and housing shortages.

Global Aggregates Market

\$507 B

Was estimated at approx. \$507 billion in 2021.



CAGR Aggregates Market

5.7%

Expected to grow at a CAGR of 5.7% to approx. \$837 billion in 2030.



Transport Share

30%

30% of transport on the river Main is related to the Construction sector.



Sand Exports

\$177 M

In 2021, Germany exported \$177 million in sand, making it the 4th largest exporter in the world.



Transport

75%

In the Netherlands, 75% of all aggregates transport takes place through Inland Shipping.



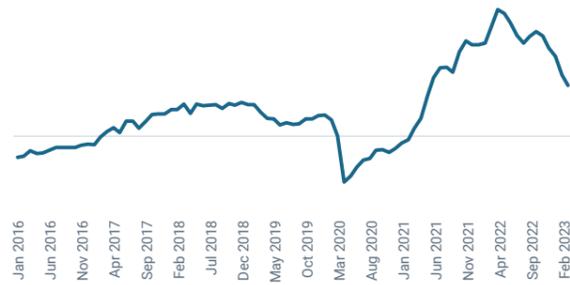
Rhine

25.8 M

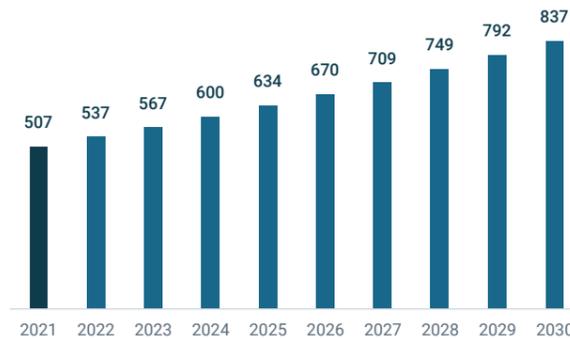
In 2021, a total of 25.8 million tonnes of sand, stones, and gravel were shipped on the Rhine.



Construction Price Expectations Index



Global Aggregates Market (in \$ Billions)



HIGHLIGHTS

Developments & Drivers

- Growth in the aggregates market is fueled by construction demand and housing shortages.
- Crushed stones accounts for approx. 59% of the global aggregates market while sand and gravel make up 24% and 17% respectively.
- The expectations for construction prices in the EU27 had been increasing after dropping sharply at the start of COVID-19 and reached a peak value in April 2022. Since then, price expectations have been falling.

Trade

- In 2021, Germany was the 4th largest exporter of sand in the world. The main destinations of German sand are the Netherlands (32%), Switzerland (12%), Belgium (9%), United Kingdom (8%), and Austria (6%).
- 30% of all transports on the river Main is related to the Construction sector.
- In the Netherlands, approx. 75% of all aggregates transport takes place through Inland Shipping.
- In 2021, a total of 25.8 million tonnes of sand, stones and gravel were shipped on the Rhine.

Sources: Precedence Research, Statista, NVLB, OEC

CONTAINERS

>> Port closures, congestion, labor shortages, and a lack of containers are heavily impacting the container shipping market.

Container Shipping Market

\$11.3 B

Was estimated at approx. \$11.3 billion in 2021.



Container Shipping Market

5.7%

Expected to grow at a CAGR of 5.7% to approx. \$15.8 billion in 2028.



Container Throughput

3.6%

The global container throughput in ports is expected to grow at a CAGR of 3.6% from 2021-2025.



EU27 Container Transport

13 B

In 2021 a total of 13 billion TKM container cargo was transported on EU27 inland waterways.



EU27 Container Transport

9.6%

Container transport represents 9.6% of the total IWW transport performance in the EU27.



Rhine Container Transport

99.9%

99.95% of container transport performance in the EU27 takes place in Rhine countries.



Container Freight Rate Index



Global Container Throughput at Ports (in TEU Millions)



HIGHLIGHTS

Developments & Drivers

- The global container throughput in ports is expected to grow from 849 million TEU in 2021 to 978 million TEU in 2025.
- Container freight rates have risen sharply since the COVID-19 outbreak. Container shipping was hit hard by the pandemic due to its transcontinental nature and complexity. Port closures, congestion, labor shortages, and lack of new shipping containers have driven prices, and profits, up.

Trade

- In total, 13 billion TKM of container cargo was transported on EU27 inland waterways in 2021, representing 9.6% of the total IWW transport performance in the EU27.
- Of the EU27 container cargo, almost all takes place in Rhine countries and approx. 85% in the Netherlands.

Sources: Statista, Inland Navigation Market, Port of Antwerp-Bruges



MINERAL OILS

» Demand driven by underlying sectors is fueling the market for mineral oils.

Global Mineral Oils Market

\$3.4 B
Was estimated at approx. \$3.4 billion in 2021.

Mineral Oil Prices

+448%
Prices for mineral oils rose by 448% between April 2020 and June 2022.

Rhine

27.3 M
In 2021, a total of 27.3 million tonnes of mineral oil products was shipped on the Rhine.

Mineral Oils Price Index



CAGR Mineral Oils Market

4.0%
Expected to grow at a CAGR of 4.0% to approx. \$4.6 billion in 2029.

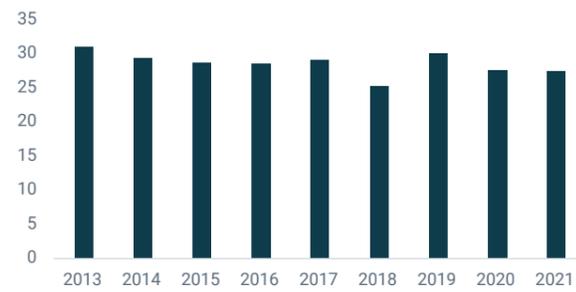
Mineral Oil Imports

35.4 M
In 2022, Germany imported 35.4 million tonnes of mineral oil products.

Danube

+6.6%
Mineral oils transport on the Middle Danube grew at a CAGR of 6.6% in the period 2013-2021.

Mineral Oils Transport on the Rhine (in Millions Tonnes)



HIGHLIGHTS

Developments & Drivers

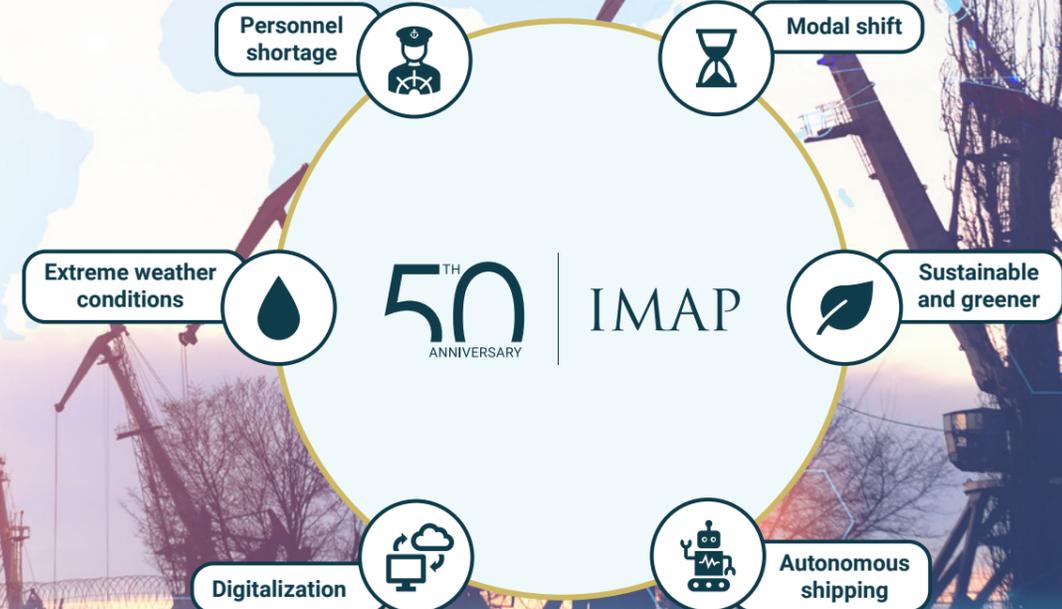
- The Mineral Oils industry, especially petroleum (like) products, is essential to bulk transportation due to high-volume needs.
- Additionally, mineral oils are widely used in the Pharmaceutical industry. In 2020, this sector witnessed massive disruptions due to COVID-19 but is now expected to witness substantial growth.
- Growth in the Cosmetic and Personal Care industry will also stimulate growth in mineral oils.
- After dropping at the start of 2020, prices for mineral oil products showed an upward movement from Q1 2020 through Q2 2022 and have been declining ever since.

Trade

- Germany is a major importer of mineral oil products and imported 35.4 million tonnes in 2022.
- In 2021, a total of 27.3 million tonnes of mineral oil products was shipped on the Rhine.
- Mineral oils transport on the Middle Danube grew at a CAGR of 6.6% from 2013-2021.

Sources: U.S. Bureau of Labor Statistics, Data Bridge Market Research, Statista

MARKET TRENDS



Modal shift

The government is joining forces with the logistic sector to realize a *modal shift* and move container freight to Inland Shipping.

Sustainable and greener

Several technical solutions for a more *sustainable and greener* Inland Shipping industry are entering the market, approaching net zero emissions with lightning speed.

Autonomous shipping

The trend of *autonomous shipping* in the Inland Shipping industry is gaining traction as technology continues to advance.

Digitalization

The Inland Shipping industry is embracing *digitalization* to optimize operations and efficiency.

Extreme weather conditions

Extreme weather conditions form a fundamental threat to the Inland Shipping industry.

Personnel shortage

A *personnel shortage* is being experienced by the industry.

Sources: Rabobank, CCNR, World of Inland Shipping, Schuttevaer, Nieuwsblad Transport, Rijkswaterstaat

MARKET TRENDS – MODAL SHIFT

» Governments are promoting Inland Shipping as a green alternative to road transport.



MODAL SHIFT

- Inland Shipping is considered a real solution for the current congestion problem. The government is joining forces with the Logistics sector to move container freight to Inland Shipping. The market share of truck transport is expected to decline significantly while the Inland Shipping sector is expected to grow.
- Modal Shift is a program in the Netherlands that aims to transform container transport by road to Inland Shipping and rail, with the goal of reducing pressure on the road network and lowering CO₂ emissions.
- Dutch infrastructure is facing a huge renovation task, and road closures will lead to reduced road capacity, making the road a less reliable mode of transport for freight. From 2018-2030, the government will allocate €19 billion for new roads and tackling bottlenecks.
- Within 5 years, ~1,000 truck combinations must move daily from road to Inland Shipping.
- The Dutch government invests €22.5 million into the modal shift of freight transport and provides a €20 subsidy per structurally moved container or equivalent in the case of bulk.
- The European Commission tabled in June 2021 a 35-point action plan called NAIADES III to boost the role of inland waterway transport in our mobility and logistics systems. The core objectives are to shift more cargo over Europe's rivers and canals and facilitate the transition to zero-emission barges by 2050.

~1,000 

Truck combinations move from road to Inland Shipping.

€22.5 M 

Investment of the Dutch government in modal shift.

€20 

Subsidy per container or equivalent in bulk.

External costs of freight transport can fall due to modal shift measures

News item | 23-03-2023 | 13:30

Modal shift control

Approval from the EU for EUR 22.5 million in aid to the transport sector

Today the Netherlands received approval from the European Commission to invest 22.5 million euros in a modal shift of freight transport. The money is intended to encourage transporters to transport their goods via inland waterways and rail instead of road. This is good for the reduction of traffic on the road, road safety and the reduction of CO₂ emissions.

Cabinet presents modal shift premiums: 20 euro support per container

SUBSIDY

'Investments in modal shift still the fastest way to green'

ENERGY TRANSITION IN THE PORTS

MARKET TRENDS – SUSTAINABILITY

»» The sector is actively moving towards a more sustainable value chain.



SUSTAINABILITY



- Since early 2022, new-build ships must comply with Stage V standards.



- The Central Commission for Navigation on the Rhine (CCNR), with Belgium, Germany, France, the Netherlands, and Switzerland as member states, has adopted the goal of being climate neutral by 2050.



- The Inland Shipping sector is already a key solution for dealing with climate change problems, and its role is expected to become even more important with vessels rapidly approaching a zero-emissions future.



- The Emissions Trading System (ETS) will be phased in from 2024 for vessels heavier than 5,000 tonnes.



- From 2024, ship operators with ships above 5,000 gross tonnes must purchase certificates for their emissions. Vessels between 400-5,000 gross tonnes must purchase emission certification from 2026.



- All European inland ports are required to have a shore power facility, while the European Commission wants to further improve the shore power infrastructure throughout Europe.

ENERGY TRANSITION | SHIPPING — 30 Nov 2022 | 16:51 UTC

EU's ETS for shipping to start from 2024, include methane in emissions accounting

INTERCHANGEABLE CONTAINERS

Project Condor follows the example of ZES: 'Fifty hydrogen ships within 10 years'

Project Condor aims to have 50 ships run on hydrogen within 10 years. The working method has many similarities with that of Zero Emission Services (ZES), known for its battery packs. More than 40 parties have now joined the hydrogen project.

By Jelmer Bastian | Rotterdam, March 31, 2023, 09:11

Climate change: Shipping industry calls for new global carbon tax

By Jonathan Josephs | Business reporter, BBC News

© 21 April

AMBITIOUS GOALS

World first: shipping in Europe will irrevocably reduce emissions

On 23 March, European politicians reached a final agreement on the FuelEU Maritime Initiative. This is a new climate law that forces seagoing vessels (>5000 tons) to green. By 2050, maritime shipping in Europe must have achieved a CO2 emission reduction of 80%, starting with a reduction of 2% in 2025 and 6% in 2030. Every five years thereafter, the emission ceiling will become lower and lower. Inland shipping could also fall under this ceiling in the future. We will talk to MEP Vera Tax (PvdA), who negotiated the law on behalf of the European Social Democrats.

Bullet through the church: from 2024 emissions trading European shipping

EU ETS

Not yet next year, but from January 1, 2024, Brussels will gradually apply the European emissions trading system (EU ETS) in the shipping sector. The European Commission, the European Parliament and the European Council of Heads of Government have reached a provisional agreement on this. In the middle of this month there will be new talks in which the parties involved will try to reach a final agreement.

Shipping reacts as EU splinters global environmental regulations

By Sam Chambers | July 15, 2021 | 2,419 | 2 minutes read

The European Commission on Wednesday proposed adding shipping to the bloc's carbon market for the first time, a move international shipping has been bracing for for a number of years.

Under the EU plan, shipping would be added to the European Union Emissions Trading System (ETS) gradually from 2023 and phased in over a three-year period.

We need urgent action but action

Brussels votes for emission trading system for road transport and shipping

FUEL TAX

The European Parliament approved on Tuesday the extension of the emissions trading system (ETS) to road transport and shipping.

By ROEL VAN DER MAAS | Apr 18, 2023 3:04 PM

MARKET TRENDS – DIGITALIZATION & AUTONOMOUS SHIPPING

» Digitalization and autonomous shipping are promoting efficiency and growth.



DIGITALIZATION

- Inland Shipping is undergoing a digitalization trend as the industry embraces new technologies to optimize operations and increase efficiency.
- This includes the use of smart sensors, automation, and data analytics to monitor vessel performance, optimize routing, and reduce fuel consumption.
- A European-wide Basic Data Sharing Infrastructure will be set up in the coming years. This will lead to higher efficiency and cost savings.
- In 2025 the European electronic Freight Transport Information (eFTI) regulation will be implemented. This regulation obliges public parties to accept digitally available information from private parties. An important step towards document-free logistics.

2025

Implementation of electronic Freight Transport Information regulation (eFTI)

KBN and NVB: 'Inland shipping must remain in charge of its own data'
INLAND SHIPPING

KBN: inland shipping takes control of digitization itself
March 27, 2023

KBN is developing future prospects for digitization
News March 23, 2023



AUTONOMOUS SHIPPING

- The trend of autonomous shipping in the Inland Shipping industry is gaining traction as technology continues to advance.
- Self-driving vessels have the potential to increase efficiency, reduce costs, and improve safety in the transportation of cargo along rivers and canals.
- It is expected that inland ships will sail autonomously with human assistance by 2030. This means that the shipper is on land and checks the ships similarly to an air traffic controller.

Increase Efficiency

Decrease Costs

Improve Safety

smash! predicts rapid emergence of autonomous ships

Inland shipping will reach the third level of automation in 2030: this means that the ship will sail autonomously with human assistance. This is predicted by Smash!, the Dutch forum for Smart Shipping, which published a so-called roadmap for autonomous shipping up to 2030 at the Europort trade fair in Rotterdam on 3 November.

✍️ Robin vanden Bovenkamp © ROTTERDAM, 03 November 2021, 15:30



MARKET TRENDS – WEATHER CONDITIONS & PERSONNEL SHORTAGE

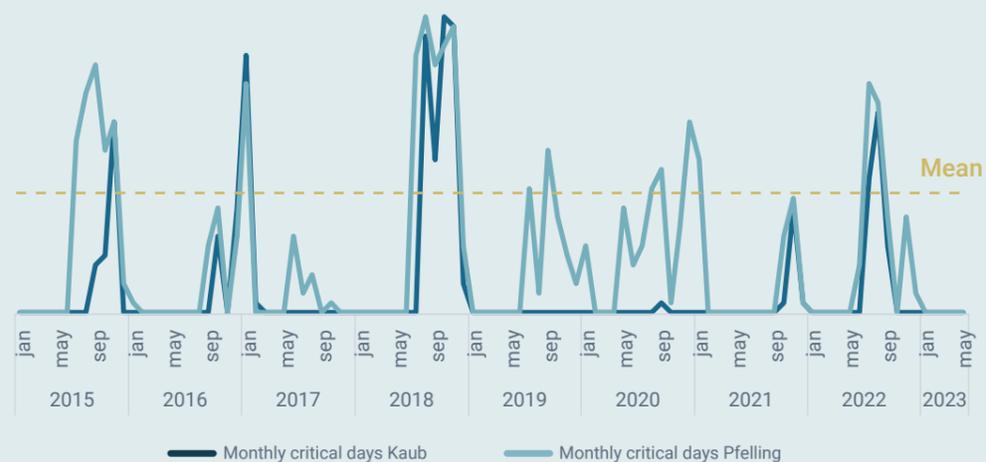
» Weather conditions and a shortage of personnel are more detrimental developments.



EXTREME WEATHER CONDITIONS

- Extreme weather conditions such as low-water levels and storms with heavy wind will continue to form a threat for the Inland Shipping market.
- The Rhine and the Danube have thwarted the shipping industry in the past due to low water-levels that slowed the market’s growth potential, averaging 12.6 dry days per month with critical water levels.
- At the Kaub gauge a water level less than 78 cm means barges can carry less cargo to navigate, compared to 290 cm for the Pfelling gauge.
- In 2018 the Rhine waterway had 108 days of less than critical water level due to severe drought, compared to 149 days for the Danube. The low water level of the Rhine, caused a loss for the German industrial output of almost €5 billion.

Lowest Monthly Critical Days Water Level in Kaub (Rhine) and Pfelling (Danube)



PERSONNEL SHORTAGE

- Inland Shipping is facing a significant shortage of personnel.
- This shortage is attributed to both aging and greening, as many current workers are reaching retirement age while new regulations require more environmentally friendly shipping practices.
- It is expected that in the period from 2023-2030, a total of 20,000 new employees are needed in the Inland Shipping industry.
- As much of the staff are brought from Eastern Europe this creates a language barrier and many workers do not always bring the right level of experience or skills.

Looking for 20,000 new employees until 2030

March 14, 2023

20,000



New employees needed until 2030

Koster: 'Staff shortage sea shipping is getting worse, but the tide can be turned'

INTERVIEW

The shortage of personnel in the shipping industry is so acute that the Royal Association of Dutch Shipowners (KVNR) is sounding the alarm. 'Finding and keeping good workers must become the main goal of our members,' says director Annet Koster. 'We are in a downward spiral, but the tide can still be turned.'

ROBIN VANDEN BOVENKAMP January 5, 2023 8:51 AM



RECENT TRANSACTIONS

»» Further consolidation is taking place, resulting in ample M&A activity.

A Selection of Peer Transactions

Buyer	FELBERMAYR	RHENUS LOGISTICS	CONTARGO [®] trimodal network	HGK SHIPPING	VOLHARDING GROUP	IMAP	INTERRIJN Since 1971	WAGRAM	INTERRIJN Since 1971	CONTARGO [®] trimodal network
Target	RiJNMOND LOGISTICS B.V.	RIETLANDEN TERMINALS B.V.	Honkoop Barging	BeKa HGK	koole TERMINALS	danser	EB	UNITED RIVERS	AGRITRANS	BARGE LINE TODAY The Inland Carrier
Date	Oct-23	Sep-23	Jan-23	Dec-22	May-22	Mar-22	Feb-22	Sep-21	Dec-20	Jul-20

TRANSACTION RATIONAL



CapEx
New regulations require large investments in new more sustainable engines and ships.



Economies of Scale



Digitalization



Capacity



Horizontal Integration

Sources: Mergermarket, Binnenschiffahrt, Nieuwsblad Transport, Binnenvaartkrant



»» Each acquisition is driven by its own specific strategic rationale.

IMAP

1

2



acquired



- Koole Terminals has sold its shipping division to Volharding Tankrederij BV, a shipping company.
- Koole Terminals specializes in storage, processing, and logistics of large volumes of renewable fuels and edible oils.
- The acquisition of Koole Terminals' shipping division allows Volharding Group to expand its product offering, tap into a niche market, and make further strides in sustainability.



acquired



- Blue Ocean Capital (BOC) has acquired Danser Group, a container logistics provider in North-West Europe.
- Danser offers multimodal logistics solutions and transported over 1.6 million TEU in 2021.
- BOC plans to help Danser expand, invest in a zero-emission fleet, and increase service offerings.



acquired



- Contargo took over the activities of the Dutch company, Honkoop Barging.
- Honkoop Barging is a well-known provider of barge transport services in the area of the ARA ports.
- With this acquisition, Contargo aims to further expand its activities in the Benelux.



acquired



- The German container operator Contargo took over the activities of Dutch company, Barge Line Today.
- Barge Line Today, located in Moerdijk, is primarily active in the ARA area. This includes daily container services between the various terminals in Rotterdam and to and from Dordrecht and Moerdijk.
- This acquisition enables the expansion of the service portfolio in the Benelux, specifically in the Rotterdam region.



acquired



- Interrijn has acquired the activities of Eurokor Barging.
- Eurokor Barging is a European river-barge transport provider, via the Northwest-European inland rivers and canals.
- This acquisition means a wider range of cargo types, sailing area, and more transport guarantees for customer and security for the skippers.



acquired



- The Interrijn Group has taken over Inland Shipping charterer, GVR Agritrans.
- GVR Agritrans transports agricultural products, minerals, containers, and building materials, among other things.
- Through this acquisition, the Interrijn Group wants to obtain economies of scale, expansion of transport security, and a broader portfolio.

Sources: Mergermarket, Schuttevaer, Scheepsvaartkrant, Company websites



OUTLOOK

IMAP Netherlands sees an upcoming consolidation wave in the market driven by several factors:



We anticipate a significant consolidation wave in the Inland Shipping market, fueled by key drivers as identified throughout this report.

Sustainability initiatives are leading the charge, with efforts such as the Stage V engine standards and the Emissions Trading System pushing the industry towards a greener future. These environmental commitments are likely to catalyze consolidation, favoring larger firms better positioned to make the necessary investments.

The increasing demand for Inland Shipping, known for its emissions efficiency, is another significant factor that stimulates consolidation as companies seek to meet this demand and capitalize on economies of scale.

Geopolitical events, exemplified by the Russia-Ukraine war, have influenced freight rates and volumes of regularly transported goods while shedding new light on the Inland Shipping industry, encouraging consolidation in response to the shifting circumstances.

Emerging industry trends present both opportunities and challenges driving companies towards M&A activities as a means to achieve growth and remain competitive.

In essence, IMAP Netherlands anticipates a consolidation wave which will redefine the market landscape and drive progress in the Inland Shipping market.

INDEX

Key to Abbreviations

#	Number
Approx.	Approximately
B	Billion
B.V.	Besloten Vennootschap
CAGR	Compound annual growth rate
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
e.g.	Exempli gratia
EU	European
EU27	European Union
EUR	Euro
EV	Electrical vehicle
F	Forecasted
FTE	Full-Time Equivalent
GtCO ₂	One billion tonnes of carbon dioxide
k	Thousands
km	Kilometer
KPI	Key Performance Indicator
LTM	Last twelve months
LE	Latest estimate
M	Million
m	Meters
m ²	Square meters
MMT	Million Metric Tonnes
M&A	Mergers and Acquisitions
MW	Megawatt
NL	The Netherlands
Q	Quarter
T	Trillion
TEU	Twenty Foot Equivalent Unit
TKM	Tonne-kilometer
USD	US Dollar
YoY	Year-over-Year

ABOUT IMAP

INTERNATIONAL MERGERS & ACQUISITION PARTNERS

Consistently ranked among the Top 10 middle market M&A advisors worldwide

450+

TEAM OF IMAP PROFESSIONALS WORLDWIDE



ENTREPRENEURIAL SPIRIT

- IMAP is a partner-driven, client-focused and independent M&A advisory.
- Senior experience and hands on involvement in deals – 230 Senior Transaction/Transaction Advisors.
- Worldwide IMAP team comprising 450+ professionals.

50

YEARS OF M&A EXPERIENCE IN THE MIDDLE MARKET



MIDDLE MARKET FOCUS

- Sell-side advisory for primarily privately held companies and spin-offs from large groups.
- Strategic acquisitions for international corporates.
- "Sweet –spot" Transaction Values \$20 – 250 million.
- Strong PE and Family Office Coverage.

60+

OFFICES IN 49 COUNTRIES



GLOBAL REACH

- Proven cross-border advisory practice.
- Global sector & project teams across 15 sector groups.
- Leveraging local knowledge and corporate access in all relevant international markets.

\$130bn

TRANSACTION VALUE LAST 10 YEARS



EXECUTION EXPERIENCE

- IMAP has closed over 2,200 transactions valued at \$130 billion in the last 10 years.

GLOBAL PERFORMANCE 2022

251

M&A TRANSACTIONS

\$26bn

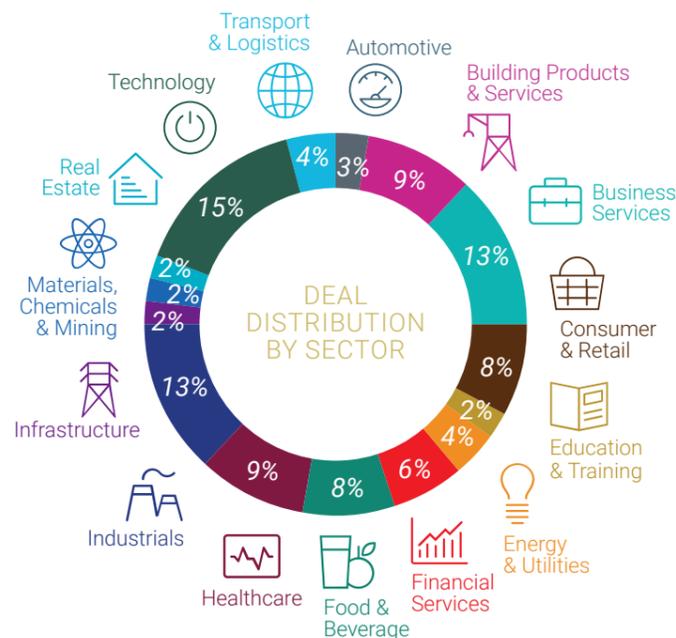
TRANSACTION VALUE

26%

CROSS-BORDER DEALS

8th

IN THE WORLD



GLOBAL PERFORMANCE

- 1 PwC
- 2 Houlihan Lokey
- 3 KPMG
- 4 Rothschild
- 5 EY
- 6 **IMAP**
- 7 Deloitte
- 8 Oaklins
- 9 Lazard
- 10 UBS

Ranking based on number of transactions closed in Q1-Q3 2023. Undisclosed values and values up to \$500 million. Source: Refinitiv and IMAP internal data.

GLOBAL REACH

Our cross-border experience extends across Europe, the Americas, Middle East, Asia and Africa



Region	Countries
North America	New York, Tampa, Boston, Chicago, Dallas, Denver, Detroit, Greenville, Irvine, Naples
Latin America	Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Panama
Africa	Congo, Egypt, Ghana, Mauritius, Morocco, Senegal, South Africa, Uganda, Zimbabwe
Asia	China, India, Japan, Thailand, Bahrain, Kuwait, Oman, Qatar, United Arab Emirates
Europe	Italy, Netherlands, Belgium, Bosnia & Herzegovina, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, United Kingdom

IMAP Netherlands

Javastraat 8
3016 CE Rotterdam, The Netherlands

De Entrée 238A, 7e etage
1101 EE Amsterdam, The Netherlands

www.imap.com/nl-nl/partners/netherlands

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