



# Shipping and Shipbuilding Markets



Annual Review

# 2024



# Contents

Cover Image:  
A painting by the famous Pont-Aven painter  
Hervé Avner symbolising climate change and  
the response of the maritime community...

*In a landscape of hellish beauty, under an  
incandescent sky, on a boiling sea full of dangers, a  
ship equipped with powerful Fletner rotors skims  
through the air and cuts its way across the waves.*

<b>Editorial</b>	5
<b>Prospective Journey to 2050</b>	8
<b>Carbon</b>	16
<b>Shipbuilding</b>	24
<b>Ship Finance</b>	58
<b>Dry Bulk</b>	64
<b>Tanker</b>	78
<b>Specialized Tankers</b>	96
<b>Gas</b>	108
<b>LNG</b>	120
<b>Offshore &amp; Renewables</b>	132
<b>Cruise</b>	146
<b>Container</b>	154
<b>MPP</b>	176
<b>Ro-Ro</b>	182
<b>Car Carrier</b>	188
<b>Mercy Ships</b>	194





BRS Group is focused on the world, people and technology through its two main affiliate companies, **BRS Shipbrokers** ([www.brsshipbrokers.com](http://www.brsshipbrokers.com)), an international shipbroking company, and **AXSMarine** ([www.axsmarine.com](http://www.axsmarine.com)), a maritime data and software provider delivering decision support services.

650

Employees  
worldwide

100

Assets  
transactions  
per year

250

Shipbrokers

5,500

Chartering  
transactions  
per year







# Out of Control

Wars, climate changes, new geopolitical considerations would have torn away the shipping industry except for its incredible degree of resilience and flexibility.

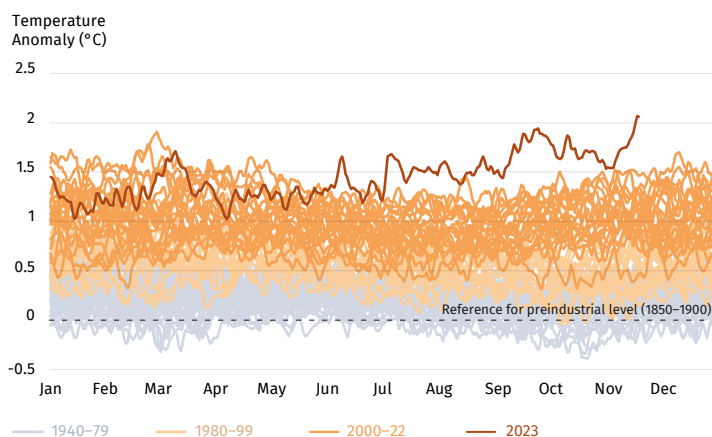
There was no shortage of bleak news in 2023.

The war in Ukraine continued unabated, another one started brutally in the Middle East and threatens to expand. Ships in the Red Sea now have to zigzag to avoid the rain of drones and missiles falling on them or find solace on a longer path via the Cape of Good Hope while avoiding acts of piracy around the horn of Africa.

All the while, unprecedented global heat fueled deadly extreme weather events. According to the World Meteorological Organization, last year was about 1.45°C warmer than pre-industrial temperatures, thereby defying the target set by the Intergovernmental Panel on Climate Change of limiting the global temperature rise to not more than 1.5°C by... 2050, the target which sustains the IMO's policies on decarbonizing the maritime sector. Scientists issue regular dire warnings that 2024 may be worse still. Meanwhile the world's carbon pollution keeps rising.

Wars, climate change, new geopolitical considerations would have torn away the shipping industry except for its incredible degree of resilience and flexibility.

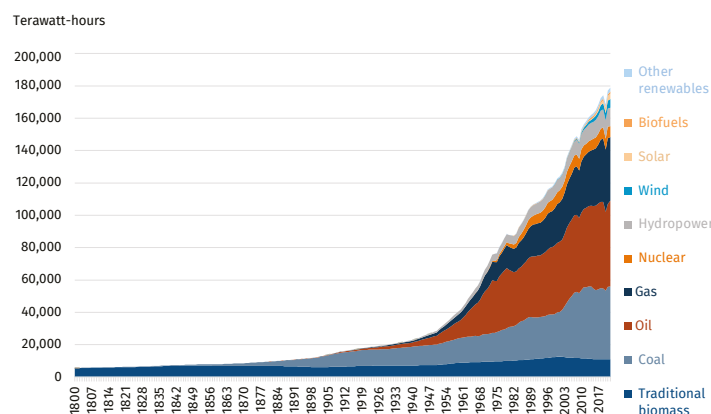
## Daily Global Surface Air Temperature Anomaly



Source: ERA5 1940-2023 ; Reference period: 1850-1900; Credit: C3S/ECMWF

We should not fool ourselves either with the concept of the energy transition. Humankind needs more and more energy, and despite the rise of renewable energy, fossil fuels remain a key part of the energy mix. As a matter of fact, if we thought that oil had replaced coal just look at the below charts and you will see there is no such thing.

## Global Primary Energy Consumption by Source



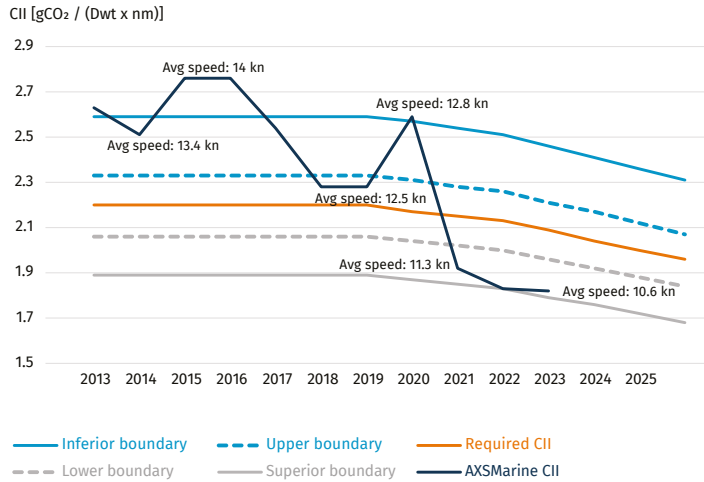
Source: Energy Institute – Statistical Review of World Energy (2023)

In the past we have advocated widespread slow steaming since a 20% reduction in service speed would cut the carbon emissions of shipping by 50%, thereby making it possible to immediately reach the previous IMO target of achieving such a cut by 2050. Although this target is now more ambitious, calling for at least a 70% cut by 2040, slow steaming should remain a huge part of the solution. However, this simple solution continues to find little backing from governments and international regulators. Still, and maybe, humanity needs to go through a more sophisticated and cumbersome process to achieve the same results. Indeed, data show that an efficient way to improve a ship's CII is simply to... reduce speed. If we ever needed proof, we have it now.



### AXSMarine CII VS Required CII for an anonymous 2007 built and 230,000 Dwt Bulker

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>AXSMarine CII</b>	2.63	2.51	2.76	2.76	2.54	2.28	2.28	2.59	1.92	1.83	1.82
<b>CII Rating</b>	(E)	(D)	(E)	(E)	(D)	(C)	(C)	(E)	(B)	(B)	(B)
<b>Average speed (kn)</b>	13.82	13.38	13.99	14.01	13.29	12.84	12.53	12.75	11.25	10.98	10.57

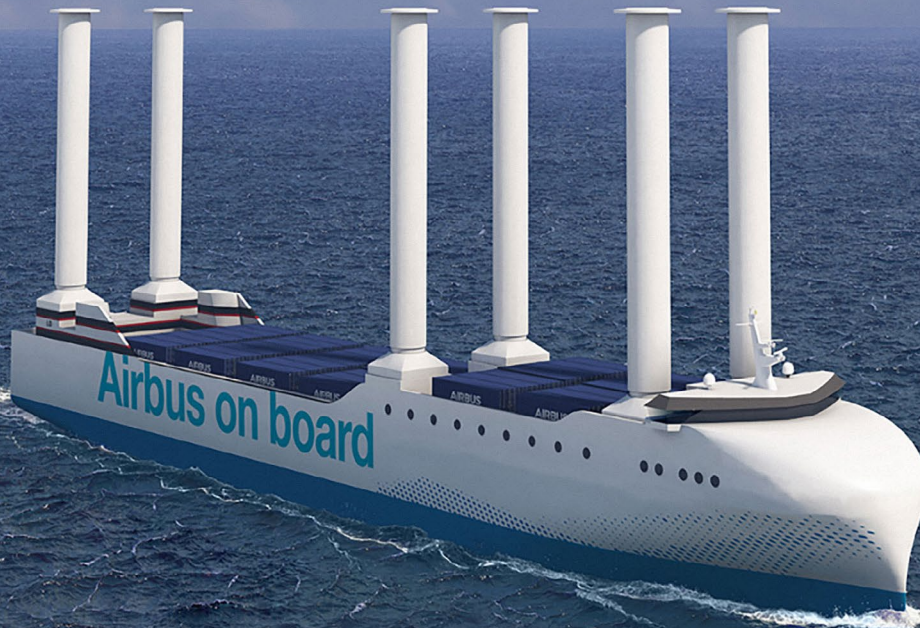


Source: AXSMarine

A reduction in speed would also make it easier and less expensive to instal dual fuel propulsion as well as wind-assisted propulsion especially in the 21<sup>st</sup> century where weather forecasts and weather routing have made tremendous progress and were not existing in the 19<sup>th</sup> century, making it now possible to offer reliable solutions to the ‘just in time’ industry. Interesting to note that Airbus and Louis Dreyfus Armateurs decided to adopt a dual fuel (methanol) propulsion together with a set of six powerful Fletner rotors wind to reduce the CO<sub>2</sub> emissions by 50% on a new design of Ro-Ros that will carry parts and sections of Airbus planes on transoceanic voyages between Europe and the US.

Last year, we advocated the banishment of heavy fuel oil (HFO), a danger to human health almost exclusively used in the shipping industry due to its attractive price and the sector’s lower environmental standards. The use of this fuel continues to present an aberration. Although shipping is now undoubtedly on a greener path as many shipowners strive to find cleaner alternatives based on molecules that could be manufactured using renewable electricity (solar, wind, hydro) or

Image: Wind assisted dual fuel methanol Ro-Ro vessel ordered by Louis Dreyfus Armateurs (Lda) at CSSC Wuchang Shipyard against long term employment from Airbus Industrie.



geothermal electricity and existing CO<sub>2</sub>, today, dirty fuel remains the fuel of choice.

The banishment of HFO is a simple measure that did not find much echo. Again, this comes down to economics. HFO will always be cheaper than cleaner, high-grade fuels simply because it is a toxic residue that is left at the end of the refining process. This race to the bottom needs to be stopped and the playing field levelled to enable cleaner molecules to compete with the economics of HFO. This can only come from international regulators, and now is the time for putting policies in place which will nurture this environment, rather than merely setting tougher goals.

Bill Gates advocated in his latest book 'how to avoid a climate disaster', that we need to get to zero rather than simply reducing emissions. It seems that he was heard as the IMO decided in 2023 to commit resolutely to this path calling for a 100% reduction by 2050 with new milestones in 2030 and 2040, although indicative and non-binding.

It is time that a tremendous and worldwide initiative be pushed by IMO on to oil majors and research centers to propose to the transportation industry (planes, cars, trucks, trains, ships) a new zero carbon fuel that can satisfy all needs. Shipowners may take individual initiatives, but they will not address the extent of the problem. It will take a tremendous amount of time to renew the fleet along these lines as we can see from the number of dual fuel ships in service including dual fuel 'ready' ships that hardly meet the new reality. Most of these shipowners do not have the economic power to address the challenge and nobody seems to have the right and final solution.

All of a sudden it resembles a trial-and-error mechanism that the world cannot afford anymore.

Although full wind propulsion or nuclear or ammonia or hydrogen propulsion might look as distant or chimeric solutions, they need to be seriously investigated and engineered together with synthetic green fuels based on the CO<sub>2</sub> and the H<sub>2</sub>O that need to be extracted from the atmosphere.

Back in 2020, the scientific community rapidly produced a vaccine against an unknown disease, Covid. That was a colossal and planetary effort. Would that be so difficult to do the same thing for such a pressing matter?

**François Cadiou**  
*Chairman*



# Prospective Journey to 2050





H<sub>2</sub>

Hydrogen

Hydrogen



# What Will Ships Be Carrying in 2050?

While there is much focus on the energy transition of the shipping industry itself, there is less focus on the cargoes. With the whole world undergoing an energy transition, what will ships be transporting in 2050?

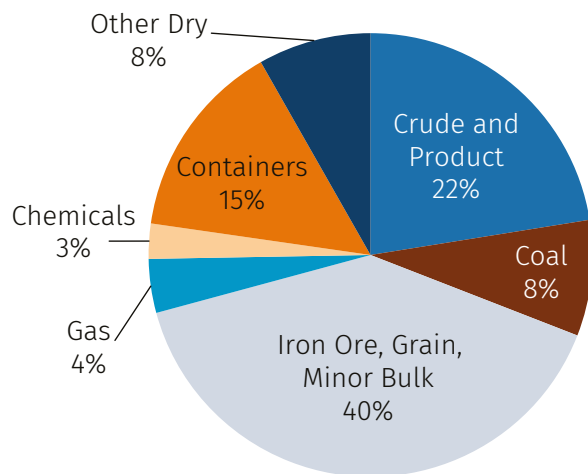
To reply to this question, we embarked on a prospective journey which we are pleased to detail below.

## Starting Point

The starting point of our modeling exercise are the shipping demand statistics for 2022.

That year, the demand per cargo type in tonnes per nautical mile is estimated as follows:

### Shipping Demand in bn Tonne Miles



On the one hand, a number of cargoes such as coal and oil are due to come under pressure in the context of the energy transition. On the other hand, the need to reduce carbon emissions may lead to new cargo opportunities. In order to have an idea of what the energy transition could look like, we base our forecast on a macro scenario which illustrates a pathway to net zero emissions from the energy sector by 2050: the IEA Net Zero scenario.

## Underlying Macro Scenario

The IEA Net Zero 2050 (NZE) scenario was first published in 2021 and last updated in October 2023.

The objectives of the IEA NZE 2050 scenario is to provide a roadmap to limit global warming to 1.5°C.

The scenario defines a pathway for the global energy sector to achieve net-zero CO<sub>2</sub> emissions by 2050. Its main assumptions include: a steep reduction in coal, natural gas and oil demand, while at the same time ensuring economic growth. It is assumed that the combination of energy efficiency measures and clean energy will facilitate the decline in fossil fuel demand. Apart from renewables, the scenario assumes an uptick in the deployment of carbon capture and storage and demand for biofuels and hydrogen-based fuels.

The key inputs and data points used for the forecasting and extracted from the IEA NZE 2050 scenario include:

	2022–2030	2030–2050
<b>World GDP CAGR</b>	3%	2.5%

	2022	2030	2050
<b>Coal demand (Mtce)</b>	5,800	3,250	500
<b>Natural Gas demand (bcm)</b>	4,150	3,400	900
<b>Biogas demand (bcm)</b>	28	195	417
<b>Hydrogen demand (Mt)</b>	0.6	70	420
<b>CCUS (Mt)</b>	42	1,024	6,040
<b>Oil demand (Mb/day)</b>	100	77	24
<b>Biofuels demand (Mt)</b>	95	263	263

The IEA NZE 2050 scenario is theoretical, subject to change, and in reality may differ from this scenario.

## Shipping Tonne-mile Demand Forecast

In our forecasting exercise, we do not assume any significant changes in trade patterns for the existing commodities, compared to what has been the case over the past ten years. For new fuels, we make some assumptions on a case-by-case basis.

In the sections below, we detail the high-level approach we followed to get an idea of what ships would carry in 2050.

## Bulkers

Bulkers primarily carry iron ore, grains, coal and minor bulk. Each of these cargoes belongs to a different underlying market, with different demand drivers.

### Iron Ore

Iron ore is primarily used for steel production. Demand for steel is dependent on the growth of the construction and transportation sectors' which are correlated with GDP growth.

Historical data shows that iron ore transport previously expanded at a faster rate than GDP, although these growth rates have become closer over time, and this trend should continue as GDP continues to be driven more by the service industry. For the forecasting period to 2050, it is assumed that iron ore transport demand increases in line with GDP growth.

## Grain

Grains refer to a variety of agricultural products such as wheat, rice, soy or sorghums. Demand for grains depends on population growth as well as increase in per capita income, which is in turn correlated to GDP growth.

Data for the past 20 years indicate that overall grain transport growth is correlated with GDP growth. For the forecasting period to 2050, it is assumed that the grain transport demand increases in line with GDP growth.

## Coal

Coal can be divided into steam coal used to generate heating or electricity and coking coal used for steel production.

Current coal demand reaches around 5,800 million tonnes per annum. The IEA forecasts coal demand to reach 3,250 million tonnes per annum by 2030 and 500 million tonnes per annum by 2050.

Historically, seaborne coal trade represented around 20% of total coal demand. However, this is unevenly split between coking coal and steam coal, as seaborne coking coal represents only 10% of total coking coal demand, while this ratio reaches around 30% for steam coal.

In order to account for the expected steeper decrease in thermal coal demand compared to coking coal, the share of coal demand which is traded gradually reduces from 20% to 10% until 2030. After which it is then fixed at 10% in line with coking coal historical ratios for the rest of the forecast period.

## Minor Bulks

Minor bulk cargoes refer to a variety of different bulk cargoes which are carried in lower volumes than those commodities previously presented. Examples of minor bulks include various ores such as nickel or manganese, bauxite, alumina, fertilizers or wood chips. Each of these products belongs to a different underlying market.

Over the past 20 years, minor bulk transport growth has increased by around 3% per annum, which is close to the GDP forecast in the IEA NZE 2050 scenario. For the forecasting period to 2050, it is assumed that minor bulk transport demand increases in line with GDP growth.

## Crude and Product Tankers

Oil tankers transport either crude oil, natural gas condensate or refined petroleum products. Oil demand is a major demand driver for the seaborne transportation of oil products.



The IEA NZE 2050 scenario assumes that oil demand will decrease from 100 mb/d in 2022 to 77 mb/d in 2030 and 24 mb/d in 2050.

Over the past 20 years, around 65% of global oil demand was transported by sea, either in its crude or refined form. The same is assumed for the forecasting period.

## Containerships

Container vessels carry finished or semi-finished goods in shipping containers. Demand for container transport is correlated to consumer demand, which is itself related to GDP growth.

Containerization developed in the 1950s and contributed to facilitate international trade by significantly reducing transportation costs and allowing intermodal transport. Therefore, historical growth rates for this market have been above GDP growth, with multipliers of sometimes up to 2–3 times.

As the containerization matures in certain areas and GDP growth becomes increasingly reliant on services, historical GDP growth multipliers are no longer valid.

In order to take into account the containerization potential of middle and low income countries, and the maturity of the containerization in high income countries, a weighted average approach with different GDP multiplier paths for each country category is followed. The resulting GDP growth multiplier evolves from 1.2x to 0.9x over the forecasting period.

## Chemical Tankers

Chemical tankers are dedicated to transporting a variety of cargoes such as petrochemicals, alcohols, vegetable oils, sulphur, acids etc... The larger chemical tanker segment is porous with the MR product tanker segment and can be referred to as Chemical/Oil product tankers. These units carry petrochemicals, vegetable oils and biofuels in large quantities. The upcoming rise in the seaborne transport of biofuels is attributed to this segment for forecasting purposes.

The compound annual growth rate (CAGR) of chemical transportation from 2000 to 2022 is 4% and is evenly split over the first ten years and the years since 2010, despite changes in GDP growth rates.

For the forecasting period to 2050, it is assumed that chemical transport demand increases in line with the GDP growth assumed by the IEA which is in the 2.5%–3% range.

As per the IEA, biofuel demand represented 95 million tonnes in 2022, and is expected to increase to 263 million tonnes by 2030 with no

further growth thereafter. Due to a lack of a historical benchmark, it is assumed that the seaborne trade of biofuels represents 10% of the demand in 2022, growing to 20% by 2030 as the market develops and grows. It then remains at 20% of the estimated demand until 2050.

## Gas Tankers

Liquefied gas tankers carry various gases in liquefied form. The liquefied form is maintained either by pressure or low temperature or a combination of both.

Structural changes triggered by global decarbonization efforts are creating demand or supply of new products, which are potential new cargoes for shipping. These include biogas, hydrogen and CO<sub>2</sub>. All of these potential new cargoes are attributed to the liquefied gas tanker fleet, as they are suitable for transportation in liquefied form onboard vessels.

For forecasting purposes, demand for the transport of the following cargoes is attributed to liquefied gas tankers: LNG, biogas, LPG, hydrogen and its derivatives and CO<sub>2</sub>.

### LNG

The IEA NZE 2050 scenario assumes that natural gas demand will decrease from 4 150 bcm in 2022 to 3 400 bcm in 2030 and 900 bcm in 2050.

Although traditionally transported by pipelines, the share of natural gas demand traded on vessels continues to rise and has averaged 12.5% over the past 5 years. The same is assumed for the forecasting period.

### Biogas

Biogas is produced from the decomposition of organic waste and is primarily composed of methane and carbon dioxide. The IEA forecasts demand for biogas to increase from 28 bcm in 2022 to 195 bcm in 2030 and 417 bcm in 2050. While current biogas trade is limited, it is assumed that with growing supply and demand a market will be formed which will create demand for its seaborne transportation.

There are no historical patterns to refer to. It is assumed that the seaborne trade of biogas grows linearly from representing 1% of demand in 2030 to 10% of demand in 2050.

### LPG

Liquid petroleum gas (LPG) is a by-product of oil and natural gas production. Demand for LPG transport is triggered by the availability of LPG in the market, which itself depends on oil and gas production.

The IEA NZE 2050 scenario provides forecasts for oil and gas demand,

which are used as a proxy for the supply of oil and gas. As stated previously, both of these are projected to decline in the IEA NZE 2050 scenario.

Over the past 5 years, LPG trade represented an average of 1.5% of oil and gas demand. The same is assumed for the forecasting period.

## Hydrogen and Derivatives

The IEA NZE 2050 scenario assumes that global hydrogen demand will reach 70 million tonnes by 2030 and 420 million tonnes by 2050.

This growth in supply and demand is assumed to create a trading market, which will trigger demand for the seaborne transportation of hydrogen or derivatives of hydrogen such as ammonia.

It is assumed that the seaborne trade of hydrogen and derivatives grows linearly from representing 1% of demand in 2030 to 10% of demand in 2050.

## CO<sub>2</sub>

The IEA NZE 2050 scenario assumes the increased deployment of carbon capture utilization and storage (CCUS) units in order to decarbonize several industries, such as power and industrial plants.

Capacity is expected to soar from 42 million tonnes in 2021 to 1,024 million tonnes in 2030 and 6,040 million tonnes in 2050.

Carbon can be carried in its liquefied form onboard vessels, and it is assumed that the growing availability of CO<sub>2</sub> will create demand for its seaborne transportation, either for further use or for sequestration.

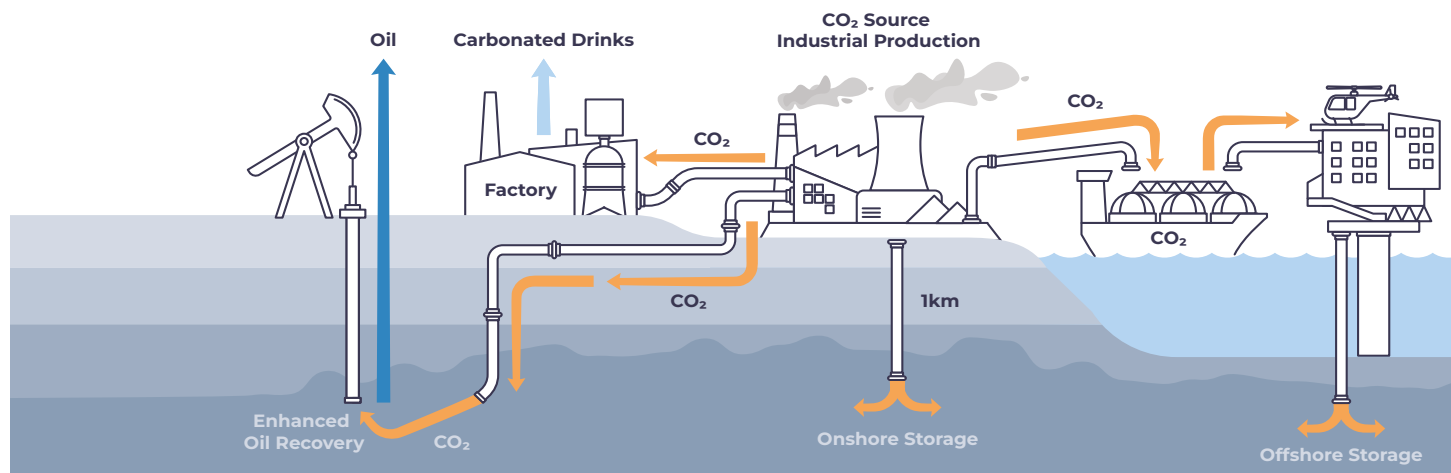


It is assumed that the seaborne trade of CO<sub>2</sub> grows linearly from representing 1% of the CO<sub>2</sub> available in 2030 to 10% of the CO<sub>2</sub> available in 2050. A multiplier of 1.5 is used to obtain CO<sub>2</sub> tonne-mile demand from estimated seaborne trade in million tonnes. This is less than half that witnessed in many other sectors which takes into account that CO<sub>2</sub> is likely to travel shorter distances.

## Other Dry

This includes a wide variety of cargo types. Over the past 20 years, shipping demand for these grew on average by 1%, with very limited correlation to GDP growth. For the forecasting period, we thus assume a yearly growth rate of 1%.

## Carbon Capture Utilization and Storage





The first finding of this exercise, is that the steep reduction in the use of fossil fuels as assumed in the IEA NZE 2050 scenario has an impact on shipping, limiting the growth in global shipping demand by 2030.

# Conclusion

When breaking down the various sectors, predictably the share of crude and product cargos, as well as coal reduces significantly, while the shares of other bulk commodities, containers and chemicals increase.

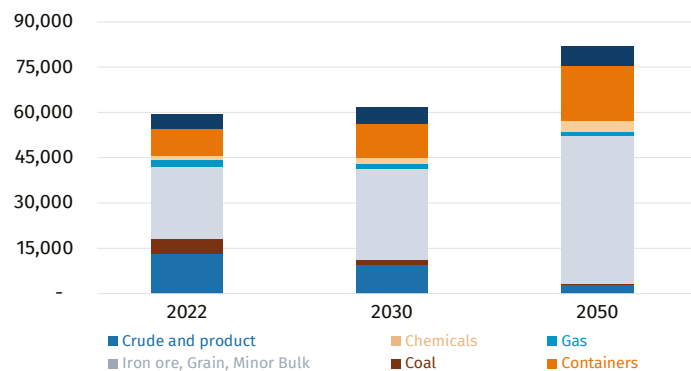
The exercise illustrates that new fuels do not completely offset the lost fossil fuel cargoes, thereby leading to a decrease in the share of energy cargoes in the overall shipping cargo mix. By 2050, the demand for liquefied gas tankers is roughly split 55% CO<sub>2</sub>, 30% LNG+biogas, 10% hydrogen and derivatives and 5% LPG.

To put this exercise into perspective, it is interesting to compare our findings to other similar exercises, as well as observe industry

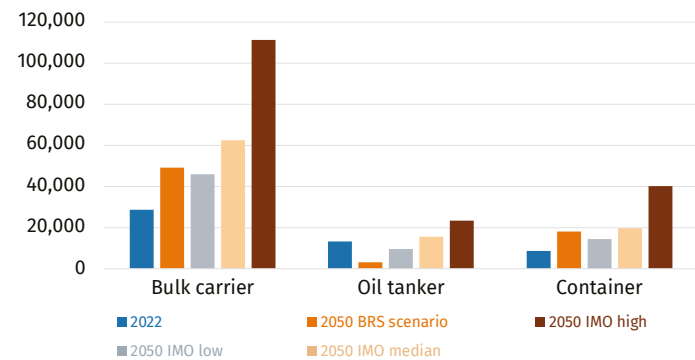
developments and the likelihood that the latest IEA NZE 2050 scenario will occur.

Below we compare the results of our analysis to the multiple scenarios presented in the IMO 4th Greenhouse Gas Study. While our forecasts broadly stand in a consistent range for containers and dry bulk commodities, there is a significant discrepancy regarding oil tankers. This reflects the rapid phase out of fossil fuels assumed by the IEA NZE 2050 scenario.

Shipping Demand in bn tonne miles



Scenario Comparisons in bn tonne miles



So, while the energy transition is estimated to curb the demand to ship energy by sea, the timing will probably be pushed back compared to what we forecast here. In turn, this will lead to a slower decrease in fossil fuel cargoes than suggested by the current IEA NZE 2050 scenario.



# Carbon







For the first time in history, the maritime industry is facing a direct monetary carbon tax through its inclusion in the scope of Europe's Emission Trading System (EU ETS), EU's key climate tool to cut emissions from power intensive industries, aviation and from this year, shipping.

# From Theory to Practice

Shipowners, ship managers and charterers are now actively discussing clauses and negotiating contracts that state which entity will be held responsible to comply with the EU ETS regulation; both in terms of emission reporting and EUA surrendering.

In the meantime, from this year onwards, the Carbon Intensity Indicator (CII) must be calculated based on the data of the previous year collected by IMO's fuel data collection system. Finally, the FuelEU maritime regulation starts its monitoring year, with the first cut in greenhouse gas intensity of fuels used by ships to happens in 2025.

Shipping plays an essential role in the EU economy and is one of the most energy-efficient modes of transport, carrying around 90% of world trade. However, it is also a large and growing source of greenhouse gas emissions. The latest IMO greenhouse gas study (Fourth IMO GHG Study 2020) calculated that the sector emitted 1,076 million tonnes of CO<sub>2</sub> by the sector in 2018 and the OECD estimated for 2022 the emissions to be around 858 million tonnes or 2.5% of global emissions. To significantly reduce greenhouse gas (GHG) emissions from international shipping, effective global measures are desirable.

**858**  
Million tonnes of CO<sub>2</sub>  
in 2022

**2.5%**  
Global CO<sub>2</sub> emissions





# 2024 marks the official inclusion of shipping in the EU ETS, but other regulations are right around the corner.

As part of the European Commission’s legislative proposals to deliver the European Green Deal – the “Fit for 55” package – published on 14 July 2021, several proposals addressed the climate impact of maritime transport. The legislative process took years and went through several revisions, but on the 25 of April 2023 EU legislators finally confirmed the inclusion of the sector in the Europe’s Emission Trading Scheme from 2024. In May, amendments to both the EU ETS Directive (2003/87/EC) and the Monitoring, Reporting and Verification Regulation (2015/757) were formally published in the EU official journal, with the relative delegated and implementing act approved in late 2023. The FuelEU Maritime Regulation followed a similar legislative process, and was approved and published in the journal in September 2023.

## Climate Policies Under the Fit for 55 Package

Market-based measures	<ul style="list-style-type: none"> <li>• EU ETS : review + inclusion of shipping</li> <li>• EU ETS-2 for road transport and buildings</li> <li>• Carbon border adjustment mechanism (CBAM)</li> <li>• Energy taxation directive: review</li> </ul>
Legislations	<ul style="list-style-type: none"> <li>• Renewable energy directive (RED): review</li> <li>• Energy efficiency directive (EED): review</li> <li>• Sustainable aviation fuels : ReFuelEU</li> <li>• Cleaner shipping fuels: FuelEU Maritime</li> <li>• Effort sharing regulation (ESR): review</li> <li>• Strengthened emission standards for cars and vans</li> <li>• Alternative fuel infrastructure</li> <li>• EU forest Strategy for 2030</li> <li>• Land use, land use change and forestry regulation</li> </ul>
Support measures	<ul style="list-style-type: none"> <li>• Modernization and innovation fund: enhancements</li> <li>• Social climate fund</li> </ul>

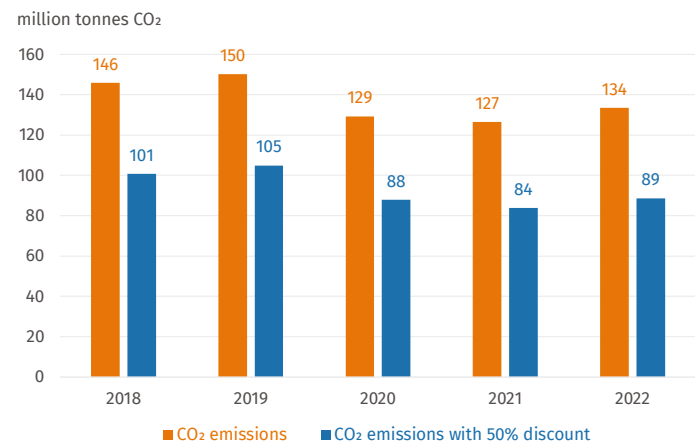
Source: BRS

## The EU ETS

Europe’s monitoring reporting and verification (MRV) system collects emission data from ships that have called at European ports from 2018 onwards. The figures reveals that emissions in the European maritime industry have not yet returned to 2019 levels, with a relatively modest increase compared to 2021. In 2022, a total of 12,235 vessels larger than 5,000 Gt called ports located in the European Economic

Area, collectively emitting 133.6 million tonnes of CO<sub>2</sub> showing a +5.6% increase from 2021 but remaining 11.1% below 2019 levels.

### MRV Emission Data



Source: BRS

From January of this year, ships larger than 5,000 Gt affected to the transportation of passengers or cargo for commercial purposes will see their emissions caught under the scope of the EU ETS as soon as they perform a “port of call” in a port located in the European Economic Area (EU + Iceland, Liechtenstein, Norway). Shipping companies will have to acquire and surrender enough “European allowances” (EUA), which represent the right to emit one tonne of CO<sub>2</sub>, to cover their emissions on an annual basis. Port of call means the port where a ship stops to load or unload cargo or to embark or disembark passengers, or the port where an offshore ship stops to relieve the crew.

The following stops are not considered to a “port of call” pursuant to the ETS Directive:

- refuelling,
- obtaining supplies,
- relieving the crew other than an offshore ship,
- going into dry-dock or making repairs to the ship or its equipment,
- stop because the ship needs assistance or in distress,

- ship-to-ship transfers carried out outside ports,
- stops for the sole purpose of taking shelter from adverse weather or rendered necessary by search and rescue activities,
- stops of containerships in a neighbouring container transshipment port. At the time of writing (January 2024) the list includes Tanger Med and East Port Said.

MRV and compliance responsibility fall by default under the shipowner, but the Commission acknowledged in November that the parties can contractually decide which entity will be entrusted with the ETS obligations if they notify their administering authority with a document that clearly designates the responsible entity.

### Main Rules of the EU ETS

Cargo/passenger ships larger than **5,000 Gt** calling ports in the European Economic Area (EEA).

Threshold lowered to **400 Gt** if approved from 2026 onwards.

**Offshore ships** larger than 5,000 Gt from 2027.

**40%** of the verified emissions fall under the ETS obligation in 2024, **70%** in 2025 and **100%** from 2026 onwards.

First compliance deadline in **September 2025**.

**CO<sub>2</sub>** from 2024.

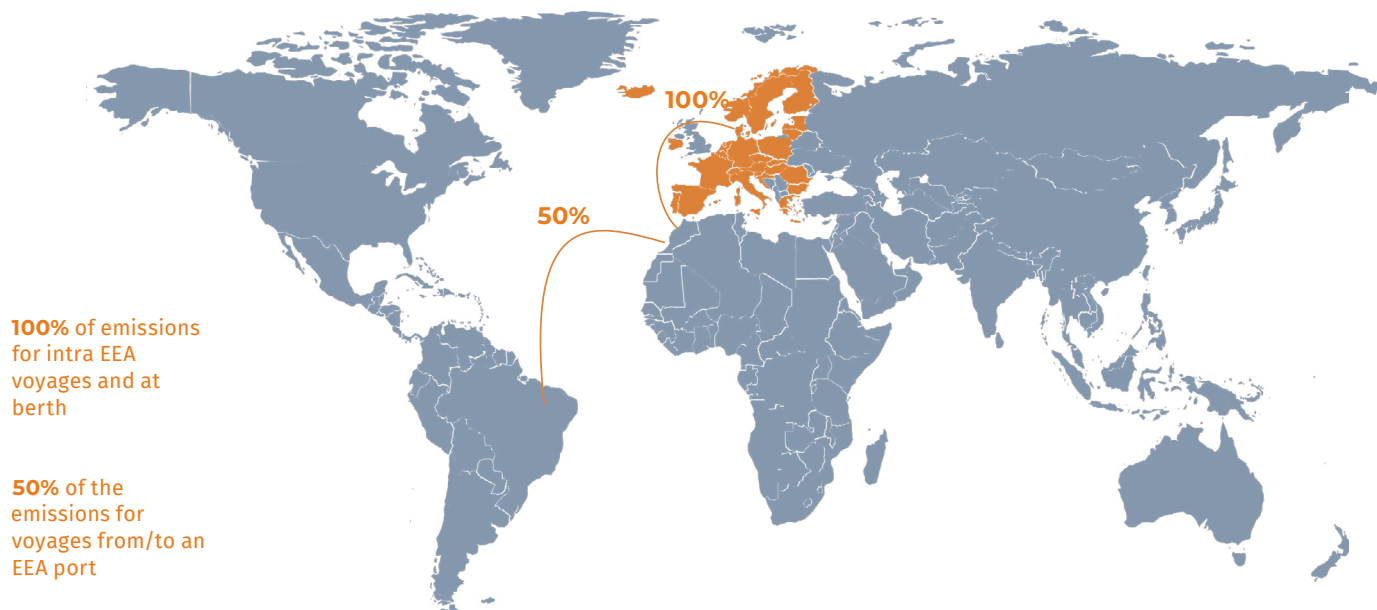
**CH<sub>4</sub>** and **N<sub>2</sub>O** from 2026 after a two-year monitoring period.

## EUA Price Developments

2023 has been another record year for the carbon market, reaching a new all-time high in February, and entering the 3-digit territory for the first time since its launch in 2005. The prolongation of the war in Ukraine and the beginning of a new conflict in the Middle East, the finalisation of the Europe's massive climate package known as Fit for 55, movements of correlated markets (gas in particular) and the wider economic context played a role in influencing the price of carbon in 2023, even though it eventually closed the year at an average of €85.25/mt, just four Euros above 2022's average.

The European carbon market started 2023 with a substantial upward move in January and February, supported by positive progress on the policy front as the EU lawmakers finalised its ambitious Fit for 55 package and the EUA DEC-23 contract hit the highest value ever for a benchmark contract of €101.25/mt on 21 February. In March, the banking turmoil started in the US spread to Europe, triggering a broader crisis of confidence in the resilience of banks and financial markets across the continent. Some investors were then forced to offload their EUA holdings to cover margin calls and the EUA DEC-23 fell 15 Euros to €85/mt by mid-March. However, the last-minute buying spree from industrials and aviation companies ahead of the April compliance deadline pushed the carbon price close to €100/mt before dropping steadily back to the magnetic 80-Euro level by the end of May.

Gas prices having steadily come down in 2023, encouraged the fuel switch in the power sector which is responsible for over 60% of the emissions in the EU ETS and thus the primary buyer of EUA. The European benchmark gas contract (TTF) from €80/MWh at the start of 2023 to as low as €23/MWh in June and moved around the 30–40 Euro mark since then. In 4Q23, the low gas price, the almost full storages facilities, and the mild and windy winter limited the running hours of





coal-fired power plants. As a result, the EUA demand from that sector remained low. This was reflected in the overall weaker daily auction results, clearing sometimes with very large discounts to the secondary market. The stagnating industrial demand in the final two months and the overall bearish macroeconomic sentiment pushed the EUA DEC-24 to the yearly low of €65.99/mt on 14 December before recovering in the last two trading weeks and closing the year at €80.37/mt, almost 5 Euros below the yearly average.

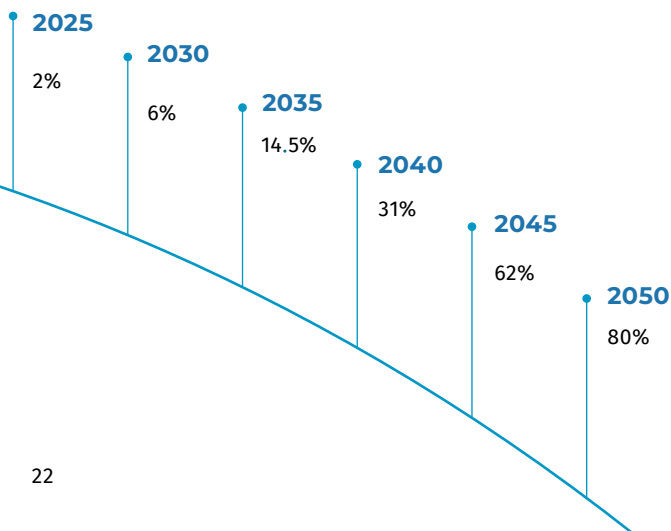
Looking ahead to 2024, the European carbon price could find support on the reduced EU ETS Cap as the linear reduction factor increases from 2.2% to 4.3%, the first one-off reduction of 90 million EUA to the EU-wide quantity of allowances and buying from new participants because of the inclusion of the maritime industry.

## FuelEU Maritime

Despite progress in recent years, the maritime sector still relies almost entirely on fossil fuels and therefore is a significant source of greenhouse gases and other harmful pollutants. The goal of the FuelEU Maritime regulation is to promote the use of renewable and low-carbon fuels in maritime transport to reduce the greenhouse gas intensity of the energy used by ships by up to 80% by 2050.

From 1 of January 2024, the FuelEU maritime regulation requires ships to measure the yearly average greenhouse gas intensity of the energy used on board, measured as GHG emissions per energy unit (g CO<sub>2</sub>e / MJ). The regulation then sets well-to-wake greenhouse gas emission intensity requirements on energy used on board ships calling ports in the EEA from 2025 and mandates the use of on-shore power supply or zero-emission technology for container ships and passenger ships in ports from 2030. Ships will have to gradually reduce the GHG intensity of the energy they use on board below the 2020 level of 91.16 grams of CO<sub>2</sub>e per MJ by 2% in 2025 up to 80% in 2050.

**Ships will have to gradually reduce the GHG intensity of the energy they use on board below 2020 level of 91.16 grams of CO<sub>2</sub>e per MJ by:**



## Main Rules of the FuelEU Maritime

Measure GHG intensity from 2024, reduction targets applicable from 2025.

Ships larger than **5,000 Gt** calling ports in the European Economic Area (EEA).

GHG intensity requirements applies at **100%** to voyages between two EEA ports or at berth, and at **50%** for voyages which departed/arrived in an EEA port.

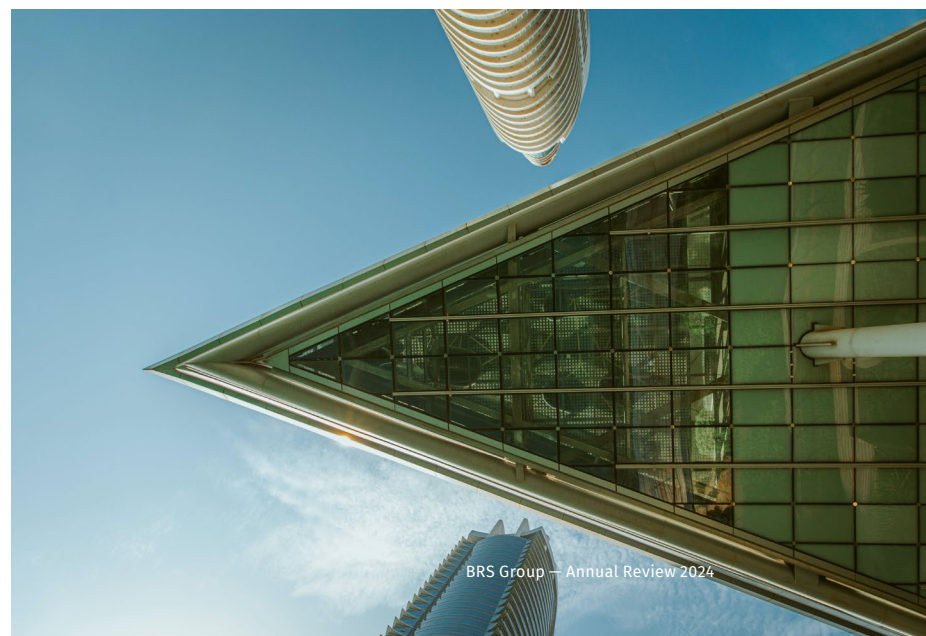
**CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O** covered.

From 2030, container ships and passenger ships are required to connect to **on-shore power supply** when at berth for more than two hours in a Trans-European Transport Network (TEN-T) port. From 2035, the requirement applies to all ports where shore power is available (with some specific exceptions).

**Banking and borrowing** of compliance surplus between reporting periods possible.

**Pooling** of vessels allowed, even between different companies.

Using the well-to-wake approach means that the measurements must include emissions from extraction, cultivation, production and transportation of the fuel, in addition to the emissions generated during the combustion. By comparison, the EU ETS takes a tank-to-wake approach in the calculation of the emissions falling under its scope. The directive also encourages the uptake of renewable fuels of non-biological origin (RFNBO) by rewarding ships that use it and if needed, setting a sub-target of a 2% share of RFNBO in the total yearly energy used on board by January 2034.



## The UK ETS

The United Kingdom’s Emissions Trading Scheme (UK ETS) replaced the country’s participation in the European Union Emissions Trading Scheme (EU ETS) on 1 January 2021 after the UK left the European Union.

In a consultation response published on 4 of July, the UK’s Department for Energy Security and Net Zero adopted a review of the national UK ETS which would include the emissions of domestic shipping as of 2026, making it the second ETS system in the world to include the shipping sector after the EU ETS.

### Main Rules of the UK ETS

Commercial ships larger than **5,000 Gt** calling ports in the United Kingdom.

Starting in **2026**

Threshold lowered to **400 Gt** in the future.

**100%** of the verified emissions fall under the UK ETS obligation with no gradual phase in.

**CO<sub>2</sub>** from 2026

**100%** of emissions for intra UK voyages and at berth

**50%** of the emissions for voyages from Northern Ireland to UK



### Summary of the Environmental Regulations Affecting Shipping

	...	2023	2024	2025	2026	2027	2028	...
<b>EU ETS</b>								
Ships larger than 5,000 Gt from/to/between EU ports and at berth								
Cargo/passenger ship		MRV	40%	70%			100%	
Offshore vessels					MRV		100%	
Cargo/passenger and offshore (400 – 5,000 Gt)					MRV		100% (under deliberation)	
<b>FuelEU Maritime</b>								
Ships larger than 5,000 Gt from/to/between EU ports and at berth								
Any ship except fishing and military			Monitor GHG fleet	GHC reduction targets more and more ambitious				
<b>UK ETS</b>								
Ships larger than 5,000 Gt between UK ports and at berth								
Ships performing commercial activity			MRV				100% (details under deliberation)	
Ships larger than 400 Gt may join later							MRV ?	
<b>IMO's CII rating</b>								
All cargo, RoPax and cruise vessels (+ 5,000 Gt)								
	Verification	CII rating assigned			Corrective action to be taken in case of D or E rating			



# Shipbuilding



Image:  
Artists impression of a DF Ammonia VLCC being built for Euronav in Qingdao Beihai Shipbuilding.





SUSTAINABILITY  
POWERED BY **NH<sub>3</sub>**

**EURONAV**

**H**  
HAZARDOUS



There was no respite for the newbuilding market in 2023.

Shipyards worldwide consolidated their orderbooks for the third year in a row beyond the three to four-year time horizon, a line where both shipowners and shipbuilders usually feel uncomfortable to commit.

# China Widens the Gap, While Tankers Rebound Against All Odds

Meanwhile, higher prices and late deliveries did not discourage shipowners to invest and to compete from time to time for the few earlier slots that popped up here and there on the market. Accordingly, the amount of tonnage ordered increased from 100.5 million Dwt in 2022 to 116.5 million Dwt in 2023.

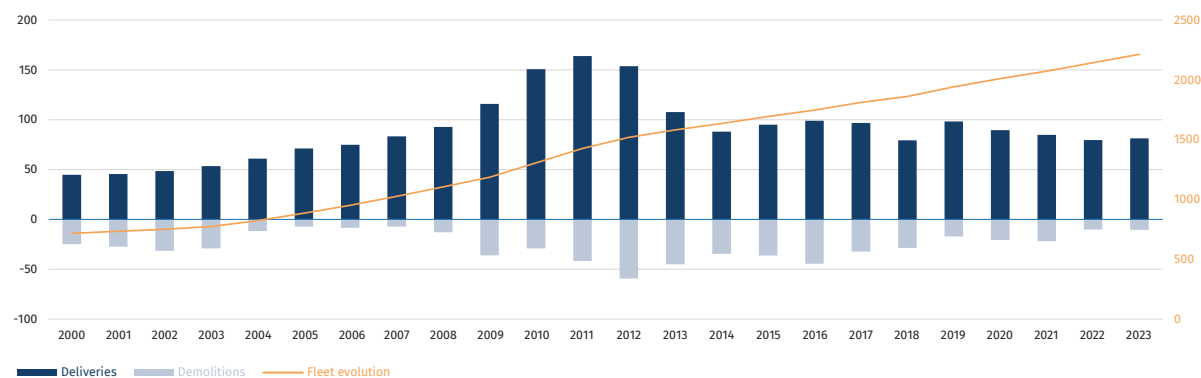
The demand for tankers that, in 2022, had sunk to its lowest level (10.7 million Dwt) in a decade tripled to 35 million Dwt, its second highest level since 2014. This reflected a persistently strong charter market, as tankers outperformed the rest of the merchant fleet. Dry bulker demand firmed from 35.6 million Dwt to 43 million Dwt. If the demand for container carriers fell logically from 30.7 million Dwt to 18.3 million Dwt together with the fall in the freight market, new orders remained surprisingly strong. Similar to 2022 but to a lesser extent, 2023 was

characterized by a firm demand for the ‘other types of ships’ which reached the second highest of the decade as orders equating to 17.7 million Dwt were placed. This was driven by an unabated demand for LNG carriers (7.4 million Dwt) and LPG carriers (5.4 million Dwt).

China cemented its position as the top shipbuilding nation thanks to a formidable leap forward in newbuilding orders from 52.9 million Dwt to 78.8 million Dwt (+50% y-o-y) bringing its orderbook from 122.9 million Dwt to 161.1 million Dwt and its market share from 50.6% to 58.1%. Meanwhile, both South Korea and Japan took fewer orders than in 2022 and saw their market shares slide from 27.9% to 23.5% (Korea) and from 16.1% to 13.5% (Japan).

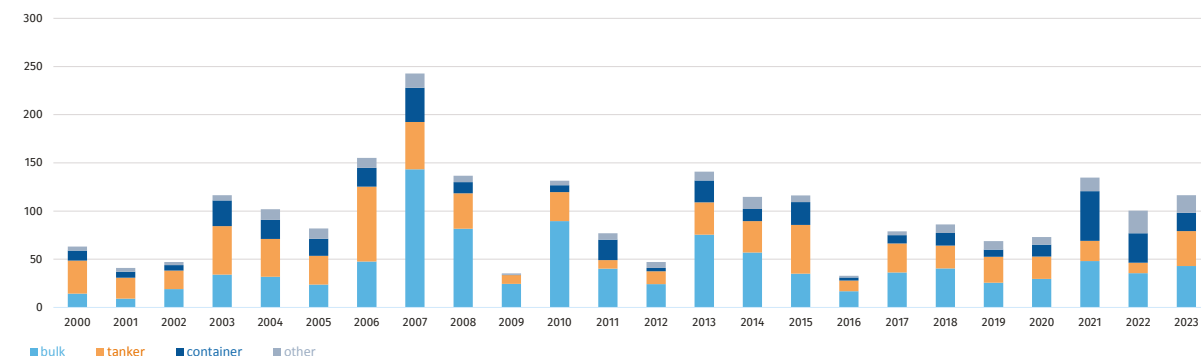
Due to the robust activity in shipbuilding, prices for newbuildings

Deliveries vs Demolitions (million Dwt)



Fleet Evolution (million Dwt)

Orders (million Dwt)





remained on their upward trend that commenced in 2021. This ascent persisted throughout most of the year, with prices only showing signs of stabilizing in the final quarter, albeit subject to variations based on the type and size of the vessels commissioned. Notably, the tanker sector witnessed continual price increases throughout the year, propelled by sustained demand.

The search for early slots has also helped prices to strengthen especially when some mothballed shipbuilding facilities in China were reactivated, or when shipyards made available earlier slots that they had earlier put aside in anticipation of future higher prices for the soon-to-be scarce commodity.

Newbuilding deliveries inched up slightly both in deadweight and number of ships terms in 2023 to 81.1 million Dwt (1,301 ships) versus 79.1 million Dwt (1,294 ships) in 2022. Reflecting the imbalance between deliveries and newbuilding orders, the global orderbook increased from 243 million Dwt at end-2022 to 277.3 million Dwt at end-2023 to represent 12.5% of the active fleet. Meanwhile, the world fleet of ships of over 3,000 Gt continued its uninterrupted growth since 1999, as it increased to 2,212 million Dwt (42,735 ships) at end-December 2023 from 2,144 million Dwt (41,787 ships) one year earlier.

2023 also saw a remarkable number of transactions in the second hand market as approximately 3,805 (205 million Dwt) changed hands. This was slightly less than in 2022 where 4,301 ships (216 million Dwt) were sold and purchased but remained comfortably above average. This activity supported second hand prices.

The question of propulsion remained a conundrum for most shipowners. However, the number of dual fuel vessels ordered continue to soar from 174 ships in 2020 (or 15% of new orders) to 370 ships in 2021 (or 18%

of new orders) and then 496 in 2022 (or 29% of new orders) including LNG carriers and LNG bunker vessels and now 509 in 2023 (or 27.6% of new orders). It is interesting to note two trends:

Firstly, that bulkers and tankers, that largely avoided from dual fuel propulsion are now part of the trend. Secondly, that dual fuel methanol and wind assisted propulsion gained some traction in 2023.

Finally, 2023 will be remembered as a new swing year with an accumulation of legislation to fight against climate change and in particular the IMO decision to commit towards a 100% reduction in the GHG emissions of shipping by 2050.



Image:  
MV DELPHIS GDANSK (hull n° N265) (IMO n° 9780653),  
1,924 teu container vessel, by HJ Shipbuilding to  
DELPHIS (CMB Group), delivered in January 2017.

	2022			2023		
	Gt	Dwt	N°Ships	Gt	Dwt	N°Ships
<b>Market Sales</b>	138,560,438	220,718,086	4,309	134,198,543	218,487,709	3,968
<b>Demolition Sales</b>	6,848,277	11,217,504	244	7,030,725	10,489,267	309
<b>NB Resales</b>	16,608,607	22,916,025	256	12,534,523	15,672,255	192

Summary		2022	2023
Orders	m Dwt	100.5	116.5
	ships	1,715	1,809
Deliveries	m Dwt	79.7	81.1
	ships	1,294	1,301
Orderbook	m Dwt	243.0	277.3
	ships	3,890	4,369
Active Fleet	m Dwt	2,143	2,213
	ships	41,794	42,801
Orderbook/activeFleet	m Dwt	11.4%	12.5%
	ships	9.3%	10.2%

Orderbook		2022	2023
China	Market Share	50.6%	58.1%
	m Dwt	122.9	161.1
South Korea	ships	1,971	2,415
	Market Share	27.9%	23.5%
Japan	m Dwt	67.8	65.2
	ships	705	731
Europe	Market Share	16.1%	13.5%
	m Dwt	39.2	37.4
ROW	ships	674	645
	Market Share	1.9%	1.7%
Europe	m Dwt	4.6	4.7
	ships	310	333
ROW	Market Share	3.5%	3.2%
	m Dwt	8.5	8.8
ROW	ships	230	245

# World Economy, Maritime Trade and Freight Rates

## World Economy

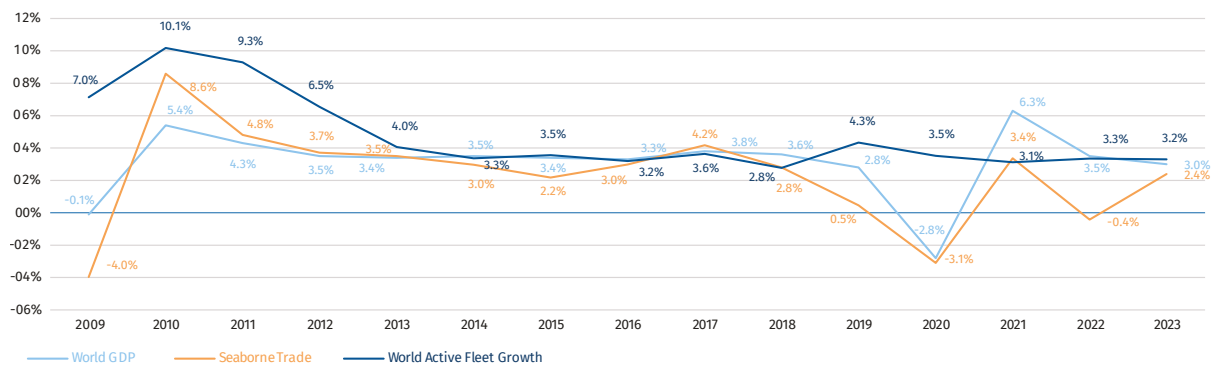
Global economic growth slowed from 3.5% in 2022 to 3.0% in 2023 well below the historical (2000–19) average of 3.8% and is expected to slow down even further in 2024 with 2.9%. This can be viewed as a reflection of resurgent inflation, and the negative impact of persistent sanctions and almost-permanently simmering geopolitical tensions amid the ongoing war in Ukraine and the one which started brutally in the Middle East and which now threatens to expand.

## Maritime Trade

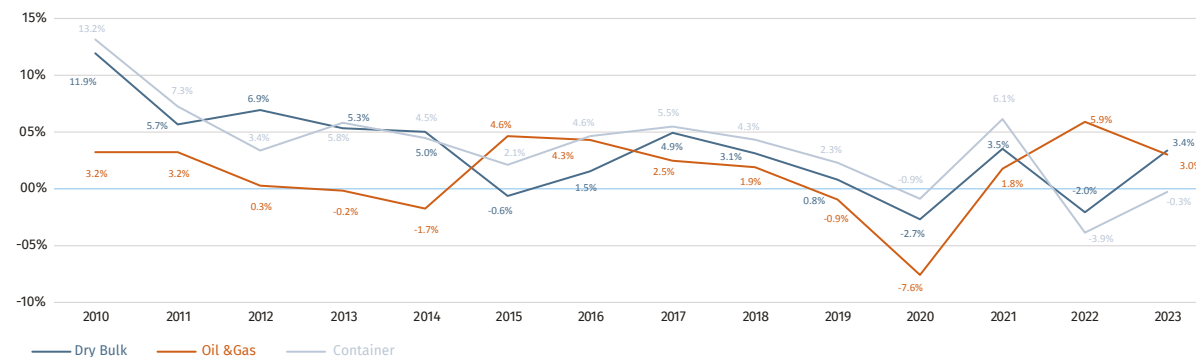
Despite this subdued economic environment, maritime trade fared reasonably well benefitting from increased ton-miles as trade flows shifted which is estimated to have grown by 4.1% y-o-y in 2023. Indeed, 2023 saw more and more ships deviating from their established trade routes in order to avoid attacks in the Red Sea or because of insufficient waters in the Panama Canal. This outlines if that was ever necessary the importance of flexible shipping in a global context.

Both dry bulk and tanker demand witnessed growth in 2023. Dry bulk trade contracted by 2.8% in 2020, rebounded by 3.6% in 2021 before contracting again by 2% in 2022. Last year it witnessed an increase of 3.4%. After a sharp fall in 2020 (-7.4%), tanker trade rose by 1.7% in 2021, surged to 5.9% in 2022, before coming back to a figure of 3% in 2023. Likewise, container throughput that had contracted by 1.4% in 2020 and rebounded spectacularly by 6% in 2021 before falling to -3.9%, contracted further by -0.3% in 2023.

**Global Trade, World GDP and active Fleet Growth (million Dwt)**



**Maritime Trade Growth (million tonnes)**





## Freight Rates

### Dry Bulk

In 2023, the BDI continued to contract, a trend which had been ongoing since the remarkable year of 2021 when it reached an all-time high over the decade at 2,943. Last year it averaged 1,378 compared to the 1,943 averaged in 2022, close to the 10-year average of 1,366.

As has been the case in previous years, the dry bulk market was volatile. The BDI started the year at 1,250 and sank to 530 by mid-February. It then climbed almost continuously to peak at 1,600 by mid-March and hovered within a band of 1,000 to 1,500 until mid-September before climbing above 3,000 by the beginning of December. However, it then lost momentum to finish the year at 2,094.

Time charter averages plunged for Supramaxes and Kamsarmaxes, However, those for Capesizes remained relatively stable with the one-year time charter average at close to \$16,000/day. Nonetheless, the spread between the annual low and high values fluctuated from roughly 2,000/day to 54,000/day.

The average 1-year time charter rates illustrate not only the decrease in earnings between 2022 and 2023, but also the significant variations between vessel sizes and importance of timing in decision making in the shipping industry.

Average 1-year Time Charter rates were as follows:

- Supramax (50-60,000 Dwt): \$22,152 in 2022 and \$11,240 in 2023
- Kamsarmax: \$20,736 in 2022 and \$12,854 in 2023
- Capesize: \$16,177 in 2022 and \$16,389 in 2023

During 2023, 1-year Time Charter rates fluctuated within the following bands:

- Supramax: between \$6,874 and \$17,213/day
- Kamsarmax: between \$7,277 and \$21,966/day
- Capesize : between \$2,246 and \$54,584/day

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>BDI</b>	1,608	1,217	1,137	2,617	4,510	3,371	3,180	7,070	6,390	2,617	2,758	1,549	920	1,206	1,105	718	673	1,145	1,353	1,353	1,066	2,943	1,934	1,378

	2020			2021			2022			2023		
	Average	Low	High	Average	Low	High	Average	Low	High	Average	Low	High
<b>Baltic S10 (Supramax)</b>	8,189	4,208	11,631	26,770	11,242	39,860	22,152	11,685	33,366	11,240	6,874	17,213
<b>Baltic P5 (Kamsarmax)</b>	9,923	4,681	16,415	26,898	12,272	38,952	20,736	10,956	30,746	12,854	7,277	21,966
<b>Baltic C5 (Capesize)</b>	13,070	1,992	34,896	33,333	10,304	86,953	16,177	2,505	38,169	16,389	2,246	54,584

### Tanker

2022 had seen an important rebound in the tanker market as both the BDTI and BCTI annual averages surged to ten-year highs of 1,391 and 1,231 points, respectively. In 2023, the BDTI retreated somewhat down to 1,150, still the second-best year over the decade. Meanwhile, the BCTI dropped by about 50% from 1,231 to 801. Regardless, this figure remained the second-best year over the previous decade.

Despite the lower spot market, time charter rates for both clean and crude tankers increased significantly, by about 30% on the clean side and by about 50% on the crude side. It is worth noting that the maximum charter rates in 2023 were on par with those of 2022.

The discrepancy is due to the easing of the chaos concerning Russian oil flows which peaked in 2022 and drove spot rates lower afterwards.

Meanwhile, time charter rates reflected expectations for a stronger market from 2024 onwards as the anaemic tanker delivery schedule in 2024 and in 2025 is anticipated to tighten tonnage. Such a disconnect (between spot rates on the way down and TC rates on the way up) took place previously, notably in 2019, ahead of the introduction of the global 0.5% sulphur cap for marine fuels, when despite a lethargic spot market, charterers were looking to charter in tonnage ahead of the expected shift in oil flows, injecting additional ton-miles.

The surge in demand for crude oil tankers was a surprise probably to many that had voiced that crude oil shipping will soon be obsolete. The strong tanker market made tankers one of the hottest commodities in the shipbuilding market.

Unfortunately, and without any doubt, the good fortune of the tanker market came on the back and suffering of the Ukrainian people.

Last year saw a further polarization of tanker markets as, reflecting sanctions placed on Russia, Russian oil was mostly hauled by the so-called 'grey fleet'.

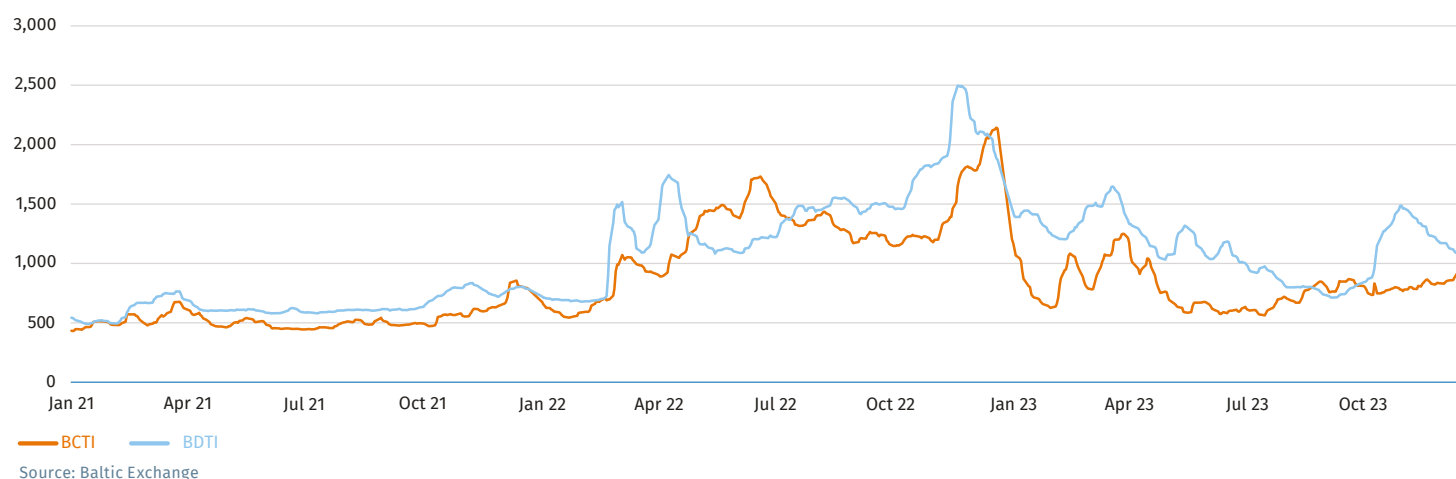
In the clean segment, the BCTI started 2023 at 1,205, peaked at 1,248 on 31 March, then sank to a nadir of 563 on 17 July before finishing the year at 960. Across the year it averaged at 1,150, compared with 1,391 in 2022.

	BDTI		
	Average	Low	High
2022	1,391	679	2,496
2023	1,150	713	1,648

	BCTI		
	Average	Low	High
2022	1,231	543	2,143
2023	801	563	1,250

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BDTI	1,636	1,161	830	1,333	1,783	1,497	1,287	1,124	1,510	581	896	782	719	642	777	821	726	787	798	855	721	644	1,391	1,150
BCTI	1,077	1,114	738	1,042	1,229	1,318	1,112	974	1,155	485	732	720	641	605	601	638	487	606	579	607	585	532	1,231	801

### BCTI and BDTI



Average 1-year Time Charter rates were as follows respectively in 2022 and 2023:

- MR2: \$24,428 in 2022 and \$30,285 in 2023
- LR1: \$29,673 in 2022 and \$37,040 in 2023
- LR2: \$34,413 in 2022 and \$46,160 in 2023

During 2023, 1-year Time charter rates on eco-tankers fluctuated within the following bands:

- MR2: between \$26,000 and \$34,000/day
- LR1: between \$35,000 and \$44,000/day
- LR2: between \$43,000 and \$54,000/day

In the crude segment, the Baltic Exchange Dirty Tanker Index (BDTI) started 2023 at 1,465, peaked to 1,642 on 22 March, then sank to a nadir

of 713 on 8 September before finishing the year at 1,200. Across the year it averaged at 1,150, compared with 1,391 in 2022.

Average Time charter rates on eco tankers were respectively in 2022 and 2023:

- Aframax: \$30,462 in 2022 and \$46,620 in 2023
- Suezmax: \$31,096 in 2022 and \$46,620 in 2023
- VLCC: \$35,135 in 2022 and \$48,280 in 2023

During 2023, 1-year Time charter rates on eco tankers fluctuated within the following bands:

- Aframax: between \$41,000 and \$52,000/day
- Suezmax: between \$43,000 and \$53,000/day
- VLCC: between \$42,000 and \$57,000/day



Annual Average (ECO)							
Date	VLCC	Suezmax	Aframax	LR2	LR1	MR2	MR1
2021	27,817	21,731	18,567	20,154	15,889	14,457	12,538
2022	35,135	31,096	30,462	34,413	29,673	24,428	19,837

Minimum (ECO)							
Date	VLCC	Suezmax	Aframax	LR2	LR1	MR2	MR1
2021	26,000	20,000	16,000	18,500	15,000	14,000	12,000
2022	24,500	21,000	20,000	21,000	16,000	14,750	13,000

Maximum (ECO)							
Date	VLCC	Suezmax	Aframax	LR2	LR1	MR2	MR1
2021	29,500	23,000	21,000	21,500	16,500	15,750	13,000
2022	58,000	50,000	50,000	54,000	46,000	34,000	29,500

## Container

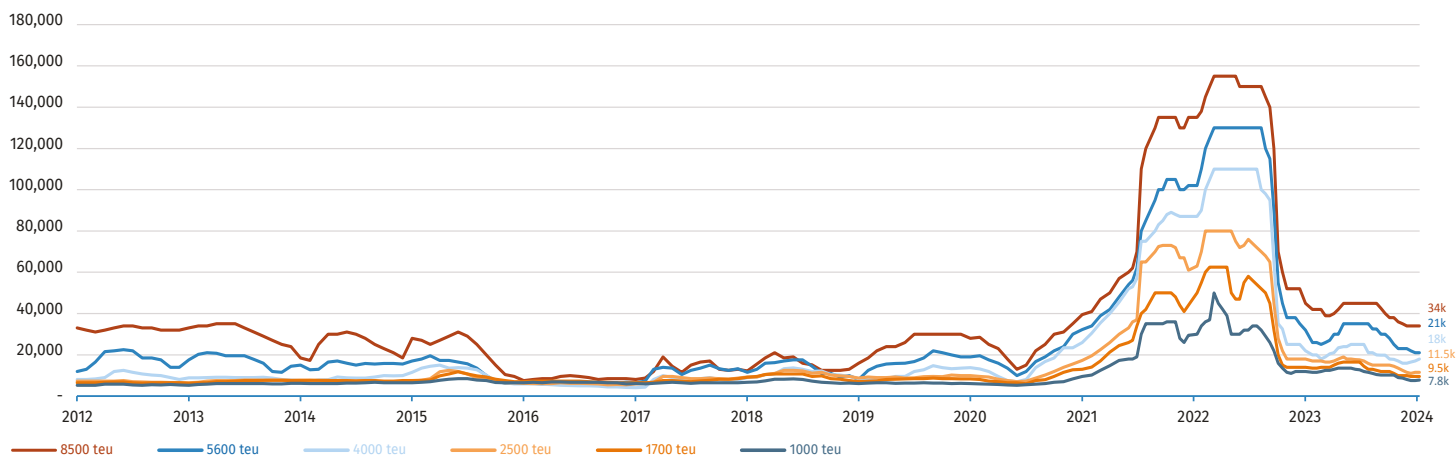
After having risen by more than 300% in 2021, the Alphaliner Charter Rate Index continued its ascension as it increased by 35% in 2022 to reach record highs. The incredible and sudden change of fate that took place in 2021 certainly came from the clash of the post-Covid recovery in demand with continuing supply chain disruptions as port congestion impeded the long, lean supply chains that the market had grown accustomed to in pre-Covid times. The opposite occurred in 2022 when port congestion disappeared, and cargo volumes slumped in the wake of soaring inflation and the associated economic downturn.

The hard landing of the container shipping industry was confirmed in 2023, ending an incredibly euphoric 24-month period where rates, profits and values defied the laws of gravity. The significant downturn in charter rates across all vessel sizes from smaller feeder vessels to the mammoth container ships, was on average over 70%, one of the most remarkable adjustments ever in commodity markets.

Average 1-year Time charter rates were as follows respectively in 2022 and in 2023:

- 1,700 teu: \$44,348 in 2022 and \$13,250 in 2023
- 4,000 teu: \$83,646 in 2022 and \$20,400 in 2023
- 8,500 teu: \$124,458 in 2022 and \$41,000 in 2023

## Containership Freight Rates (\$/day)



Source: Alphaliner

Size	Avg 2018 \$/day	Avg 2019 \$/day	Avg2020 \$/day	Avg2021 \$/day	Avg2022 \$/day	Avg2023 \$/day	Change 2022/2023
8,500 teu	15,538	25,875	24,425	90,792	124,458	41,000	-6.7%
5,600 teu	13,708	16,633	18,354	70,479	102,417	29,000	-72%
(Panamax) 4,000 teu	11,163	11,088	13,792	61,458	83,646	20,400	-76%
2,500 teu	10,792	9,275	10,027	46,900	59,558	15,700	-74%
1,700 teu	9,646	8,096	8,242	33,460	44,438	13,250	-70%
1,000 teu	7,242	6,283	6,125	23,696	28,771	11,200	-61%
Alphalinerindex	68.1	72.3	76.5	312.7	421.3	123.1	-71%

# Orders and Orderbooks

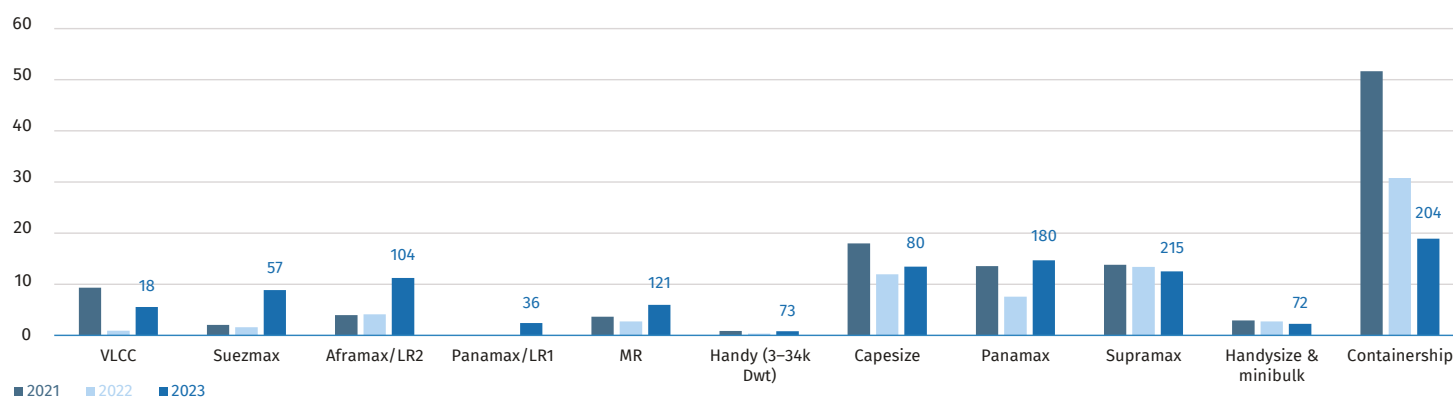
## Orders and Orderbooks for Standard Vessels (Bulkers, Tankers, Container Carriers)

In 2023, newbuilding orders increased from 100.5 million Dwt to 116.5 million Dwt. If the shipyards had profited on a container carrier boom in 2021 and 2022, the relative contraction of the container market in 2023 was an opportunity for them to focus on the more traditional segments of tankers and bulkers.



Image:  
MT BOCHEM HOUSTON, 25,000 Dwt stainless steel chemical tanker, built by China Merchants Jinling Shipyard (Yangzhou) Dingheng to CMB N.V., delivered in 26 June 2023.

### New Orders for Standard Vessels per Year (million Dwt)



### New Orders

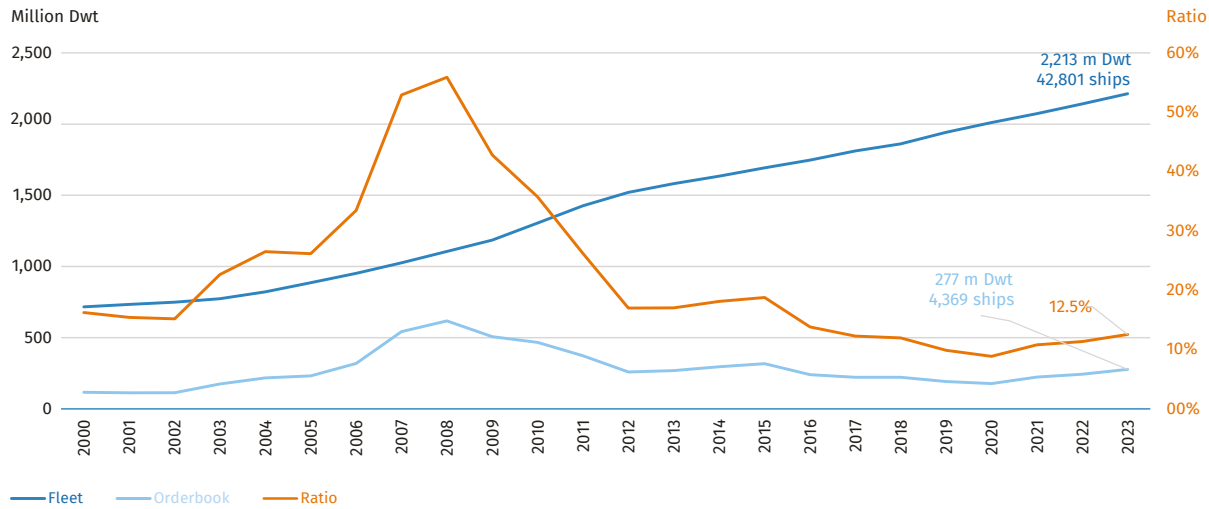
mdwt	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bulk	89.5	40.3	24.2	75.5	57.1	35.2	16.8	36.4	40.5	25.6	29.6	48.2	35.6	43.0
Tanker	30.0	8.9	13.3	33.6	32.5	50.5	11.2	30.1	23.7	27.0	23.3	20.8	10.7	36.4
Container	7.3	21.1	3.5	22.7	12.5	23.6	3.2	8.6	13.0	7.4	12.4	51.6	30.8	18.9
Other	4.6	6.8	6.0	9.1	12.6	6.8	1.7	3.8	8.8	8.8	7.7	14.1	23.5	18.3
<b>Total</b>	<b>131.5</b>	<b>77.1</b>	<b>47.0</b>	<b>141.0</b>	<b>114.7</b>	<b>116.2</b>	<b>32.8</b>	<b>78.9</b>	<b>86.0</b>	<b>68.9</b>	<b>73.0</b>	<b>134.7</b>	<b>100.5</b>	<b>116.5</b>

### Deliveries

mdwt	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bulk	81.1	99.9	99.9	62.8	48.0	48.9	47.4	38.9	28.4	41.7	49.7	38.0	30.8	32.2
Tanker	43.8	42.4	33.5	22.7	17.0	19.5	33.3	38.6	29.3	38.4	24.4	26.2	29.2	15.1
Container	16.9	14.6	15.2	16.5	17.1	19.2	10.3	12.6	14.2	11.4	9.4	11.7	12.5	25.0
Other	8.9	7.0	5.0	5.7	5.9	7.5	8.1	6.5	7.5	6.7	6.0	9.0	7.2	8.7
<b>Total</b>	<b>150.8</b>	<b>163.9</b>	<b>153.6</b>	<b>107.7</b>	<b>88.0</b>	<b>95.1</b>	<b>99.0</b>	<b>96.7</b>	<b>79.4</b>	<b>98.2</b>	<b>89.6</b>	<b>84.9</b>	<b>79.7</b>	<b>81.1</b>



### Fleet and Orderbook Evolution



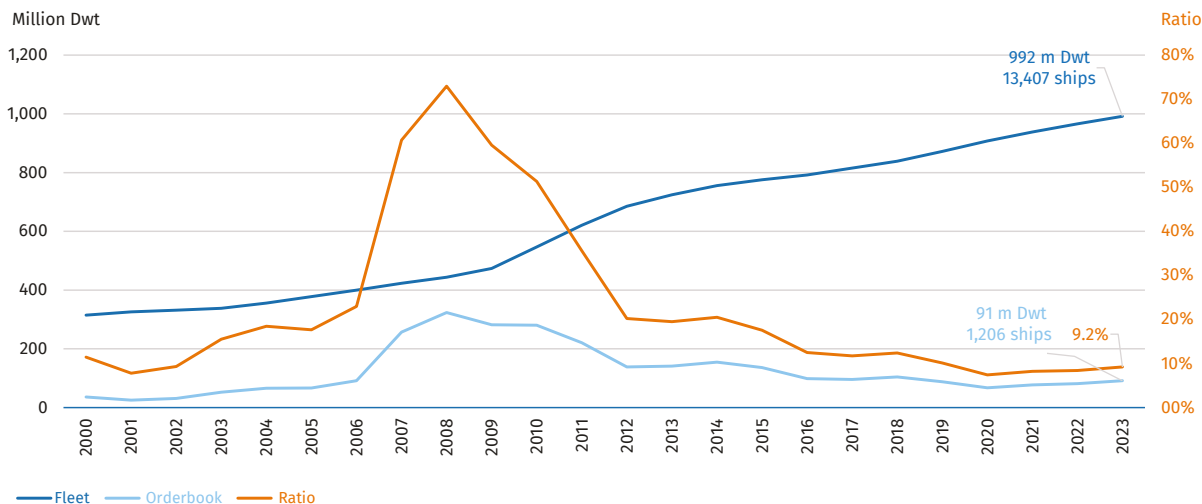
**Bulker** orders increased from 35.6 million Dwt in 2022 to 43 million Dwt in 2023. At the close of 2023, the bulker orderbook, totaling 91.3 million Dwt, accounted for 9.2% of the active bulker fleet, which amounted to 991.7 million Dwt. This distribution remained fairly even across the main segments of the dry bulk fleet, ranging from Handysize to Newcastlemax. Notably, the VLCC class made a return to the shipyards in 2023 through various orders with VALE as head charterer. In 2023, deliveries amounted to 32.2 million Dwt, marking the third-lowest figure in the past decade and significantly below the 10-year average.

Bulk Summary		2022	2023
Orders	m Dwt	35.6	43.0
Deliveries	m Dwt	30.8	32.2
Orderbook	m Dwt	81.3	91.3
Active Fleet	m Dwt	966.1	991.7
<b>Orderbook/Active Fleet</b>		<b>8.4%</b>	<b>9.2%</b>
China	m Dwt	48.7	63.2
	Market Share	59.9%	69.2%
Korea	m Dwt	0.4	0.0
	Market Share	0.5%	0.0%
Japan	m Dwt	27.5	23.2
	Market Share	33.9%	25.4%

The dominance in the bulker orderbook is continuously split between two countries: China commands a substantial market share of 69.2%, while Japan follows with a share of 25.4%. Despite being the second-largest shipbuilding nation globally, South Korea maintains a minimal presence in bulker construction. Worth noting this year is that China is continuing to win market share from Japan. The bulker fleet, comprising 991.7 million Dwt, continues to be the largest fleet on the seas.

	Orderbook	Fleet	Ratio
Handysize/Handymax	11.6	120.1	9.7%
Supramax/Ultramax	23.2	205.4	11.3%
Panamax/Kamsarmax	25.0	206.6	12.1%
Post-Panamax/Babycapex	5.6	66.1	8.5%
Capesize/Newcastlemax	22.6	293.5	7.7%
Vlcc	2.6	81.7	3.2%

### Bulk Fleet and Orderbook Evolution



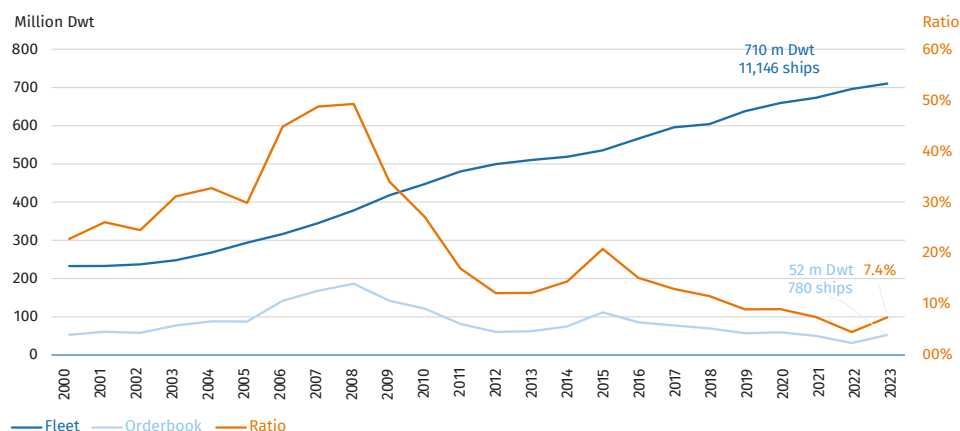
**Tanker** ordering went up from 10.7 million Dwt in 2022 to 36.4 million Dwt in 2023. At end-2023, the tanker orderbook, totaling 52.3 million Dwt, accounted for 7.4% of the active tanker fleet, which amounted to 710.1 million Dwt.

The ratio of the tanker orderbook to the active fleet has experienced a notable uptick, rising from last year's all-time low (unseen since 1990) of 4.5% to the current figure of 7.4%. Unlike the relatively concentrated dry bulk orderbook, the tanker orderbook exhibits a higher level of diversification. Among the various segments, the Aframax/LR2

category stands out as the most favored in terms of new orders and construction activity. Deliveries in 2023 were halved compared to 2022 with 15.1 million Dwt only, a remarkably low figure.

The tanker market continues to be controlled by China and South Korea. However, China's dominance accelerated in 2023, as it increased its market share to 62.6% compared to 32% in 2022. Meanwhile, Korea's market share of 44.1% in 2022 more than halved to only 19.5% in 2023. However, Japan managed to contain its tanker market share at 9.4% (9.7% in 2022).

## Tanker Fleet and Orderbook Evolution



**Container carrier** orders decreased by 38.6% going from 30.8 million Dwt in 2022 to 18.9 million Dwt in 2023.

The container carrier orderbook slipped from a peak of 87 million Dwt in 2022 to 80.6 million Dwt in 2023, representing a lower but still impressive 24.5% of the total fleet. In 2023, most orders were for container carriers in the 7,500 to 18,000 teu range. Deliveries doubled in 2023 to 25.3 million Dwt from 12.5 million Dwt in 2022.

The container carrier orderbook is mainly controlled by China (56.9%) and Korea (33.7%).

Size range teu	Existing		Orderbook		O/E
	Ships	teu	Ships	teu	%
18,000-24,232	184	3,951,959	49	1,168,856	29.6%
13,300-17,999	117	1,868,843	151	2,400,320	128.4%
12,500-13,299	291	4,007,452	87	1,194,620	29.8%
10,000-12,499	207	2,273,791	32	355,228	15.6%
7,500-9,999	481	4,274,052	95	781,884	18.3%
5,100-7,499	464	2,908,611	84	527,312	18.1%
4,000-5,099	640	2,901,620	8	35,744	1.2%
3,000-3,999	292	1,004,109	53	174,265	17.4%
2,000-2,999	836	2,131,002	70	177,259	8.3%
1,500-1,999	751	1,311,533	85	152,617	11.6%
1,000-1,499	761	876,547	94	111,822	12.8%
500-999	771	571,556	23	16,702	2.9%
100-499	182	59,771	13	2,554	4.3%
<b>Total</b>	<b>5,977</b>	<b>28,140,846</b>	<b>844</b>	<b>7,099,183</b>	<b>25.2%</b>

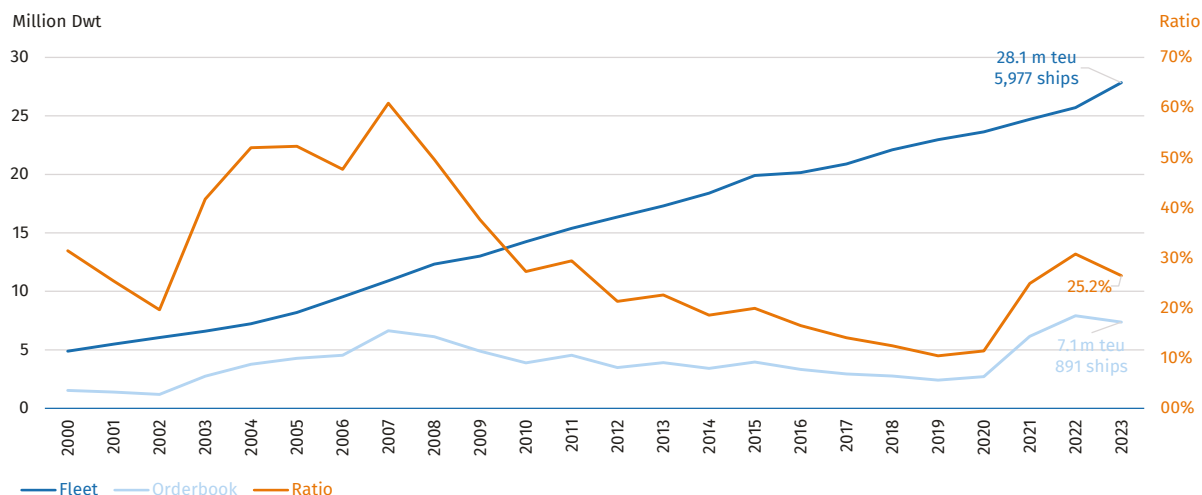
Tanker Summary		2022	2023
Orders	m Dwt	10.7	36.4
Deliveries	m Dwt	29.2	15.1
Orderbook	m Dwt	31.3	52.3
Active Fleet	m Dwt	695.9	710.1
<b>Orderbook/Active Fleet</b>		<b>4.5%</b>	<b>7.4%</b>
China	m Dwt	10.0	32.7
	market share	32.0%	62.6%
Korea	m Dwt	13.8	10.2
	market share	44.1%	19.5%
Japan	m Dwt	3.0	4.9
	market share	9.7%	9.4%

	Orderbook	Fleet	Ratio
MR1	0.3	19.1	1.7%
MR2	9.4	87.9	10.7%
Panamax/LR1	2.5	33.1	7.7%
Aframax/LR2	17.5	123.9	14.1%
Suezmax/LR3	11.0	105.5	10.5%
VLCC	7.1	279.3	2.5%

Container Summary		2022	2023
Orders	m Dwt	30.8	18.9
Deliveries	m Dwt	12.5	25.3
Orderbook	m Dwt	87.0	80.6
Active Fleet	m Dwt	305.4	328.7
<b>Orderbook/Active Fleet</b>		<b>28.5%</b>	<b>24.5%</b>
China	m Dwt	51.1	45.9
	market share	58.7%	56.9%
Korea	m Dwt	28.8	27.2
	market share	33.1%	33.7%
Japan	m Dwt	6.6	7.2
	market share	7.6%	8.9%



## Container Fleet and Orderbook Evolution



## Orders and Orderbooks for Specialised Vessels

2023 was characterized by a firm demand for the ‘other types of ships’ which reached their second high of the decade with 17.7 million Dwt. This was driven by an unabated demand for LNG carriers (7.4 million Dwt) and LPG carriers (5.4 million Dwt). Even if an important decrease in the LNG segment took place in 2023 with 87 ships ordered versus 196 in 2022, this was still the second-best year ever. But the most brilliant and promising segment was taken by the LPG and other gas carriers such as NH<sub>3</sub> and CO<sub>2</sub> orders that went from 50 in 2022 to 116 in 2023. LPG has really been the top pick in 2023, this largely reflects the belief that a lot of LPG/Ammonia carriers will be needed in order to cater for the logistics of using ammonia as a fuel in the future or as way to carry H<sub>2</sub>.

The exceptional demand for car carriers that took place in 2022 dropped slightly but remained high, far above the 10-year average. Chinese car

manufacturers are driving this demand as they take increase their share of the Western market.

The Cruise ship sector saw a rebound while doubling newbuilding orders from about 508,000 in 2022 to about 1,040,000 Gt in 2023. This is still far from the pre-Covid levels. And instead of the giant cruise vessels that used to dominate the market, the tendency is now going more towards mid-size, where the exclusive, more personalized cruises are going stronger.

New Orders (n° of ships)	2021	2022	2023
LNG	79	196	87
LPG	109	50	116
Ferries & Ro-pax	20	22	10
Cruise	2	22	18
SST Chemical carriers	53	63	57
Car carriers	38	91	86
Ro-Ro	14	10	5

New Orders	2015	2016	2017	2018	2019	2020	2021	2022	2023
LNG (cbm)	3,289,294	896,766	3,145,678	10,814,293	8,869,523	7,260,607	12,228,828	32,181,815	14,425,582
LPG (cbm)	3,790,371	26,768	1,252,298	1,935,041	2,531,197	2,513,693	5,968,054	2,715,882	8,020,022
Ferries & Ro-pax (Gt)	320,374	632,618	504,373	926,099	977,665	138,150	606,128	344,140	249,292
Cruise (Gt)	2,497,405	2,426,894	3,112,253	2,325,644	1,651,427	81,040	57,498	508,080	1,039,528
SST Chemical Carriers (Dwt)	2,232,324	931,557	477,744	389,535	429,749	626,410	896,570	983,021	990,617
Car carriers (cars)	203,192	19,248	38,310	20,830	34,715	21,150	265,611	685,850	726,980
Ro-Ro (lm)	47,001	55,142	46,138	124,727	30,426	8,263	41,060	37,744	6,800

New Orders (Dwt)	2015	2016	2017	2018	2019	2020	2021	2022	2023
LNG	1,779,817	487,215	1,673,133	5,850,083	4,750,166	4,054,680	6,767,913	16,762,481	7,385,678
LPG	2,617,327	22,424	839,449	1,292,920	1,707,106	1,687,631	4,033,523	1,791,518	5,362,331
Ferries & Ro-Pax	72,004	150,953	119,354	232,815	210,678	49,316	199,433	75,917	37,587
Cruise	211,193	199,065	265,861	214,076	146,685	9,766	5,235	59,560	85,812
SST Chemical Carriers	2,232,324	931,557	477,744	389,535	429,749	626,410	896,570	983,021	990,617
Car carriers	560,122	43,337	106,428	51,171	102,447	55,791	696,169	1,788,126	1,665,092
Ro-Ro	153,076	167,217	154,144	333,412	139,185	31,301	331,559	139,282	56,500

# Order Cancellations in 2023

Order cancellations in 2023 remained at a subdued level of 1.3 million Dwt. The cancellations, that some people predicted would come from a weaker container market, did not materialise.

m Dwt	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Orders	131.5	77.1	47.0	141.0	114.7	116.2	32.8	78.9	86.0	68.9	73.0	134.7	100.5	116.5
Cancellations	38.4	23.3	16.5	30.9	14.7	11.3	12.0	4.5	7.8	2.0	0.9	4.8	2.2	1.1

# Recycling in 2023

The passing years resemble one another, and 2023 was no different. The amount of tonnage sent for demolition remained low at 10.3 million Dwt. This figure is, along with 2022, the lowest in over a decade, and significantly below the 10-year average of 25.6 million Dwt. Moreover, it constitutes less than 0.5% of the total merchant fleet currently in service. Each year, the shipping community anticipates a surge in demolition volumes, hoping for some market relief or for the opportunity to phase out outdated tonnage. Despite the introduction of stricter environmental regulations last year, there was no evident impact. It seems that market considerations outweigh other factors, with shipowners opting to capitalize on high freight rates.

The tanker segment saw a big drop in demolition, to only around 13% of that demolished in 2022. The very strong charter market incentivised owners to keep their vessels and many tankers were sold to third parties and became part of the 'grey' fleet. It seems also that certain charterers have become more flexible on their age restrictions. Meanwhile, bulk demolitions doubled compared to 2022. Container scrapping also started after an almost full stop during the immensely strong charter markets of previous years. The average age of vessels scrapped in 2023 was around 29 years.

m Dwt	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Demolitions	29.1	41.8	59.4	45.1	34.6	36.4	44.5	32.4	28.7	17.1	20.6	21.9	10.2	10.3
Deliveries	150.8	163.9	153.6	107.7	88.0	95.1	99.0	96.7	79.4	98.2	89.6	84.9	79.7	81.1

Year	Bulk			Tanker			Container		
	Dwt Scrapped	Ave Age of scrap	Scrappricerange (\$)	Dwt Scrapped	Ave Age of scrap	Scrappricerange (\$)	Dwt Scrapped	Ave Age of scrap	Scrappricerange (\$)
2010	7,229,167	33	390.4	14,302,370	28	436.7	2,176,608	27	399.2
2011	25,192,503	31	484.6	9,394,869	28	510.8	1,229,889	29	491.7
2012	35,344,914	28	426.3	13,997,465	26	450.0	4,860,127	24	446.7
2013	22,821,672	29	398.8	11,850,696	25	421.3	6,249,742	23	424.2
2014	16,853,691	28	431.3	8,360,280	27	470.4	5,691,866	23	476.3
2015	29,058,185	26	335.6	2,689,617	30	361.5	2,780,581	23	371.3
2016	30,736,822	24	254.2	2,547,473	30	283.3	8,835,562	19	289.6
2017	14,622,531	25	354.0	9,331,977	26	375.4	5,751,190	21	375.0
2018	4,773,842	33	423.3	20,455,088	25	432.9	1,359,675	24	445.8
2019	8,166,609	30	384.4	4,488,585	29	394.6	2,728,658	24	398.4
2020	13,619,417	28	328.9	2,870,975	30	340.4	2,595,720	24	348.7
2021	7,410,160	30	520.1	12,582,026	27	530.9	246,109	30	540.3
2022	3,176,022	29	582.7	6,384,548	26	612.7	15,301	29	622.7
2023	6,633,439	29	527.2	822,184	29	545.4	1,851,377	28	563.5

Demolition prices slipped slightly to \$527.2/ldt for bulkers, \$545.4/ldt for tankers and \$563.5/ldt for containers. Prices still remain relatively high, but strong charter markets have refrained owners from turning to demolition.

## Demolitions in 2023 (N° of Ships)



- Others – 29%  
82 ships
- Bulk – 35%  
99 ships
- Tanker\* – 10%  
29 ships
- Container – 25%  
71 ships

\*Incl. Chemical and Small Tankers



# Deliveries and Worldwide Shipbuilding Capacity in 2023

Total deliveries remained stable at 81.1 million Dwt (79.7 million Dwt in 2022) in 2023. On a segment-by-segment basis, deliveries were 32.2 million Dwt of bulk carriers (30.8 million Dwt in 2022), 15.1 million Dwt of tankers (29.2 million Dwt in 2022), and 25.3 million Dwt of containerships (12.5 million Dwt in 2022).

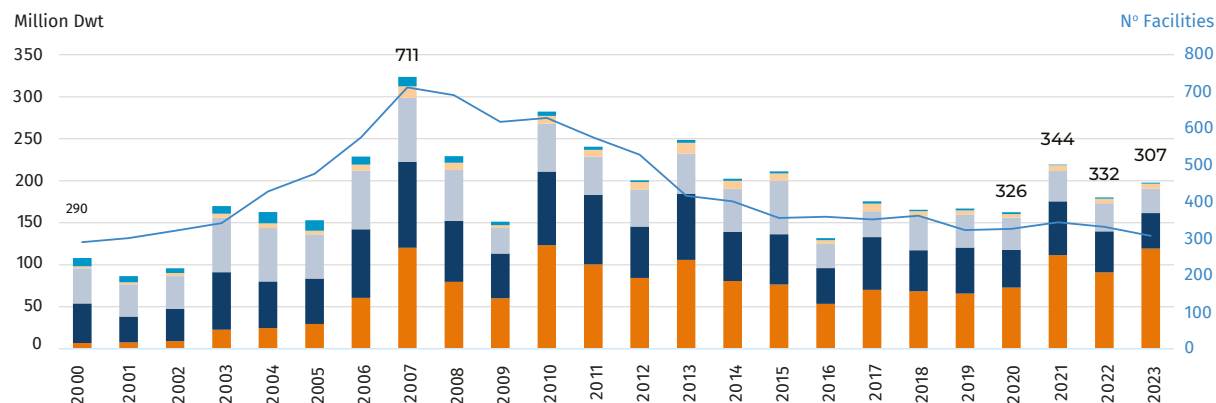
In China, deliveries increased from 37.9 million Dwt to 40.4 million Dwt but slipped slightly in number from 717 to 689. In South Korea deliveries slipped in deadweight terms from 23.7 million Dwt to 22.3 million Dwt

but increased slightly in number from 197 to 211. In Japan, the number of vessels coming out (15.6 million Dwt or 252 ships) was almost on par with 2022 (15.4 million Dwt or 263 ships).

Presently, there are approximately 300 operational shipbuilding facilities globally. These yards have either secured new contracts or successfully delivered tonnage within the year. This current count represents about 40% of the peak number observed in 2007 when there were about 700 active facilities.

Deliveries (million Dwt)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
China	37.2	63.5	70.6	66.3	43.4	36.0	38.8	36.1	38.9	35.0	36.7	38.6	40.9	37.9	40.4
South Korea	43.0	46.5	53.3	49.1	33.4	24.1	29.2	35.9	30.8	19.0	32.3	25.0	24.1	23.7	22.3
Japan	29.2	32.8	31.9	29.1	25.0	22.4	21.1	21.6	20.2	20.1	24.6	22.6	17.0	15.6	15.4

## Active Building Facilities per Year and Region (Excluding Offshore)



# Newbuilding Prices in 2023

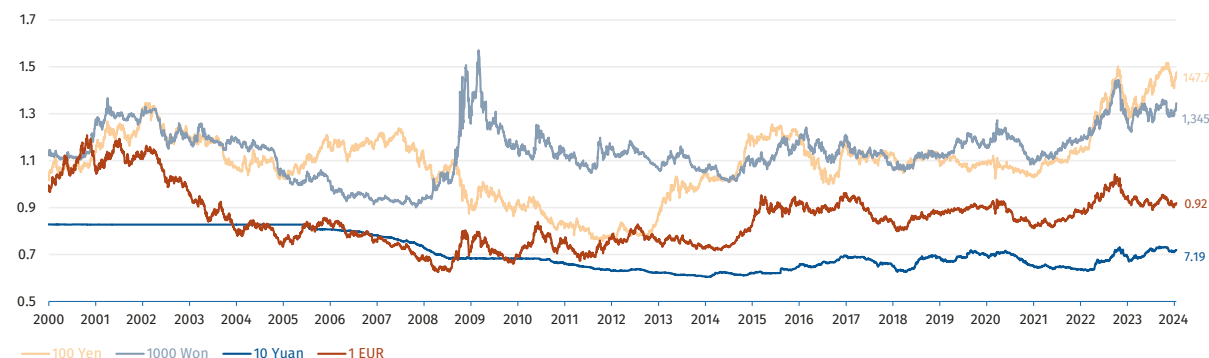
Newbuilding prices for container carriers remained broadly stable while those for bulkers rose by around 5% and those for tankers increased by close to 10%. Prices followed a logical path of growth reflecting demand pressures and the rise of building costs now observed since 2021. Price rises were more acute for in-demand tonnage such as LNG and LPG carriers. For instance, prices for VLGCs, VLECs and VLACs soared from \$90 m to \$114 m (+26.5%). Prices for 7000 PCTC dual fuel (LNG) firmed from \$91 m to \$97 m (+7%)

	Age	End 2021	End 2022	%variation	Dec 23	%variation
Kamsarmax Bulker	15 years	18	16	-11%	16	0%
	5 years	33.5	28.5	-15%	32,5	+14%
	Newbuilding (China)	35	33	-6%	35	+6%
VLCC Tanker	15 years	32	56	+75%	56,5	+1%
	5 years	71	93	+31%	101	+9%
	Newbuilding (Korea)	106	123	+16%	127	+3%
1,700 teu Containership	15 years	27	11	-59%	7,5	-32%
	5 years	43	22	-49%	18	-18%
	Newbuilding (China)	27	29.5	+9%	29,5	0%

When looking at the financials of stock-listed shipbuilders, it appears that yards that such as Hanwha (ex DSME) and SHI that posted significant losses in the previous years managed to balance their accounts and make profits.

Prices in the second hand market followed a similar pattern to the charter markets but not totally. If second hand prices for container carriers dropped significantly and second hand tanker prices rose substantially during the whole year, we saw reasonably large increases for bulkers.

### Daily Exchange Rates with US\$



	End2020	End2020	End2021	End2021	End2022	End2022	End2023	End2023
	China 1 <sup>st</sup> tier*	SK/Japan	China 1 <sup>st</sup> tier*	SK/Japan	China 1 <sup>st</sup> tier*	SK/Japan	China 1 <sup>st</sup> tier*	SK/Japan
<b>Tankers</b>								
VLCC	81	86	95	106	115	123	118	127
Suezmax	52	57	66	74	71	83	79	87
Dual-fuel LNG					84	96	94	102
Aframax/LR2	43	45 (A)	55 (A)	59 (A)	56 (A)	67 (A)	63 (A)	74 (A)
Dual-fuel LNG	47	49 (LR2)	57 (LR2)	61.5 (LR2)	59 (LR2)	70 (LR2)	65 (LR2)	76 (LR2)
					68	79	76	87
					71	82	78	89
LR1					49	58	53	58
Dual-fuel LNG					60	70	65.5	70.5
Dual-fuel Methanol					59	68	63	68
MR2 IMO 3 (12+2)	33.5	33.5	39	39.5	39	45	43	48
Dual-fuel Methanol					48	54	53	58
<b>Bulkers</b>								
Newcastle (205k Dwt)	51/23	63/65	65/67	71/73	63	73	66	76
Capesize (180k Dwt)	48/49	60/61	60/61	66/68	60	69	63	73
Kamsarmax	26/27	33/35	35/36	38/40	33	38	35	40
Ultramax (U)	21/22 (U)	24/25 (U)	32/32.5 (U)	35/36 (U)	32	37	33	38
Handymax (H)	24/25 (H)	27/28 (H)	28.5 (H)	30/31 (H)	-	-	-	-
<b>Containerships</b>								
Post-Panamax (7k teu)	54/55 (6k)	57/58 (6k)	74/75 (6k)	77/78 (6k)	82	90	84.5	100
Post-Panamax (5.5k teu)	48/49	49/50	68/69	70/71	70	77	67.5	85
Feedermax (2.7k teu)	30	32	38	40	40	45	39	49
Feeder (1.9k teu)	22.5	24	28	29.5	30	34	30	37
Feeder (1.1k teu)	17.5	18.5	23	24	23.5	27	23.5	30

\*China 2nd tier yards are expected to offer lower prices around 5% less

### Second Hand Price Evolution During 2023 for 5 Year Old Vessels (m \$)

	Jan 23	High	Low	Dec 23	Variation Jan-Dec		
VLCC	93.38	93.29	13 Jan	100.83	22 Dec	100.83	+ 8.0%
Aframax	59.24	59.24	06 Jan	67.95	22 Dec	67.95	+ 14.7%
MR Tanker	41.61	41.58	13 Jan	43.51	22 Dec	43.51	+ 4.5%
Capesize	41.98	41.29	03 Feb	48.45	22 Dec	48.45	+ 15.4%
Panamax	29.01	28.52	03 Feb	32.22	22 Dec	32.22	+ 11.1%
Supramax	23.81	23.53	03 Feb	26.54	02 Jun	25.48	+ 7.0%

Source: Baltic Exchange



# Shipbuilding in the World

## Shipbuilding in China

China cemented its position as the top shipbuilding nation thanks to a formidable leap forward in newbuilding orders from 52.9 million Dwt to 78.8 million Dwt (+50% y-o-y) bringing its orderbook from about 123 million Dwt to about 161 million Dwt and its market share from 50.6% to 58.1%.

In 2023, China made a new strike on the 3 main segments of the shipbuilding market being first in the dry bulk segment with 63.2 million Dwt (69.2%) orderbook, being first in the tanker segment with 32.7 million Dwt (52.3%) orderbook, and first in containerships with 45.9 million Dwt (56.9%) orderbook. China is also first in the 'other ships segment' with a 19.3 million Dwt (36.4%) orderbook. If we try to find an area where China is not the first, we may quote the LNG carrier segment where the orderbook of Korean shipbuilders stands at about 23 million Dwt (or about 71%). But for how long?

Last year, total Chinese shipbuilding output increased from 37.9 million Dwt to 40.4 million Dwt. The orderbook/yearly output ratio reached a record of 4 against 3.2 in 2022, confirming that most Chinese yards are full for the next 3 to 4 years and therefore hardly able to offer delivery slots earlier than 2027.

### Top 4 Chinese Shipyard Groups

The top four Chinese shipbuilding groups consolidated their respective positions in 2023 as CSSC, CHI, YZJ and NTS together accounted for 68% of the Chinese orderbook.

China State Shipbuilding Corporation (CSSC) remains the number one shipbuilding group worldwide holding 36% (about 58 million Dwt) of the Chinese orderbook and 21% of the global orderbook. CSSC secured new orders amounting to 24.6 million Dwt in 2023, about 88% more than the largest Korean group HHI which secured 13.1 million Dwt.

Cosco Shipping Heavy Industry (CHI) is the second largest shipbuilding group in China, holding 13% (about 21 million Dwt) of the Chinese orderbook and the third largest global shipbuilding group accounting for 8% of the world orderbook. In 2023, CHI secured new orders totalling 8 million Dwt, slightly below the 8.2 million Dwt secured in 2022.

In third and fourth place are Yangzijiang (YZJ) and New Time Shipyard (NTS), the two largest private shipbuilders in China with orderbooks of about 17.4 million Dwt (about 11%) and 13.4 million Dwt (about 8%),

Shipbuilding in China		2022		2023	
		m Dwt	N°	m Dwt	N°
Orderbook	Market share	50.6%	50.7%	58.1%	55.2%
	Bulk	48.7	625	63.2	775
	Tanker	10.0	242	32.7	471
	Container	51.1	633	45.9	545
	All ships	123.2	1972	161.1	2413
Orders	Bulk	20.9	294	33.9	397
	Tanker	4.9	102	26.3	335
	Container	18.0	228	9.8	124
	All ships	52.9	883	78.8	1142
Delivery	Bulk	19.6	270	19.1	237
	Tanker	8.3	162	3.6	106
	Container	7.0	117	15.0	212
	All ships	37.9	717	40.4	689

respectively. This ranks them in fourth (previously 6th) and sixth (previously 8th) position globally. Respectively, they secured about 7.9 million Dwt and 6.3 million Dwt of orders last year, accounting for around 6.8% and 5.4% of global ordering.

### Newbuilding Capacity

After several years of capacity reduction, last year we saw several attempts to reopen some facilities:

#### Some attempts were successful:

Hengli Heavy Industries Group, a subsidiary of the Hengli Group, is running the assets of STX Dalian. The yard restarted in January 2023. The shipbuilding facility consists of one large graving dock and 4 large slipways, with its output estimated at 1 million Dwt/year.

In August 2023, Wuhu Shipyard took over the land and facilities of the former Samjin Shipbuilding Industry part of the automobile group Chery. They can now build car carriers, Kamsarmaxes and other ship types.

Kouan Shipyard has been going through a reorganization process since 2019 and is currently building blocks and ships for the account of third-party shipbuilders including Dajin, Taizhou Changqin and Taizhou Changyue.

Jiangxi New Jiangzhou Shipbuilding Industry was established on 31 March 2023. The main investors are Qinshi (Xiamen) Trading and Jiangsu Yangchuan investment Development. Qinshi (Xiamen) is the parent

company of a listed company, Bestway Marine & Energy Technology, whereas Jiangsu Yangchuan is a subsidiary of Yangzijiang Shipbuilding Group. The yard has signed contracts for stainless steel tankers with Chinese buyers.

Private company, Fujian Guanhai Shipbuilding that stopped production in 2013 and went bankrupt in 2019 has now been taken over by Fujian's private steel giant Jinshenglan Group and renamed the Fujian Songmin Group.

Quanzhou Shipyard that was established in 2004 and entered bankruptcy in 2019 reached agreement with a local government owned company to invest and reorganize the yard. In September 2023, a ceremony was held for the resumption of work and production.

### Some attempts failed... so far...

The former CEO of Jiangsu Rongsheng Heavy Industries tried to reopen the giant facility under the name of 'SPS Shipyard'. Unfortunately, the attempt did not succeed. The yard is located in the Yangtze River Delta, and was founded in 2006, after which it became the largest private shipbuilder in China before collapsing in 2014.

Dalian Shipbuilding Industry Company (DSIC) located in Dalian launched a project to relocate, build and upgrade their facilities in Taiping Bay, 100km north of Dalian City. The aim was to have a modern high-end ship assembly and construction base with an expected annual shipbuilding capacity of 2.6 million Dwt. However, it seems that this plan is now on hold.

In order to increase their capacity, CSSC SWS, located on Changxing Island, plan to restart the facilities which previously belonged to Shanghai Shipyard on Chongming Island if they can obtain the agreement from local government.

## Overview per Segment

### BULK CARRIERS

Qingdao Beihai, part of CSSC group, has retained its position as the shipyard with the largest dry bulk order backlog by deadweight in 2023. The state-owned shipyard had a total of 10.35 million Dwt of bulk tonnage on order consisting of 40 Newcastlemaxes and 6 VLOCs. In second place is CHI Yangzhou with a total of 4.2 million Dwt (2 VLOCs, 10 Newcastlemaxes and 17 Kamsarmaxes) and in third is Nantong Xiangyu with a total of 3.55 million Dwt (6 Kamsarmaxes, 47 Ultramaxs and 2 Handymaxes).

### CONTAINERSHIPS

Yangzijiang, the largest private shipyard in China, confirmed their

leadership in the containership segment with a combined orderbook of 670,700 teu (48 ships ranging from 1,000 to 24,000 teu).

### OIL AND PETROLEUM TANKERS

The tanker segment is largely dominated by three shipyards: New Times for the larger sizes with an orderbook of 7.6 million Dwt (67 ships including 8 VLCCs, 34 Suezmaxes, 2 Aframaxs, 10 LR2s and 13 MRs), Yangzijiang and CSSC GSI for the medium and smaller sizes with a respective orderbook of 2.7 million Dwt (57 ships including 5 LR2s, 12 LR1s and 40 MRs) and 1.4 million Dwt (26 ships including 4 LR1s and 22 MRs).

### LNG TANKERS

The construction of large LNG carriers has been, for years, limited to CSSC Hudong-Zhonghua which has an orderbook of 53 units for delivery until 2028. However, since 2022, 4 shipyards joined the club of LNG builders: CSSC Dalian with an orderbook of 13 units (8 for China Merchant, 3 for COSCO Shipping and 2 for ChinaGas) CSSC Jiangnan with 8 units for ADNOC and domestic owners, CMHI Jiangsu with 6 units for Denmark's Celsius, and Yangzijiang with 2 units for their own account (ex-buyer is Germany's Hammonia Reederei). Overall, China holds 25% of the global LNG orderbook against 71% held by Korea.

### LPG TANKERS

The LPG tanker segment is largely dominated by three shipyards: CSSC Jiangnan (about 82%) mostly for the larger sizes including VLGCs with an orderbook of 4.0 million cbm (42 ships including 34 VLEC (ethane), 4 VLGCs and 4 of the world's largest Very Large Ammonia Carriers (or VLCAC) each of 93,000 cbm for EPS. After which there are Yangzijiang (about 10%) and CIMC Nantong SOE (about 5%) for the medium and small sizes with respective orderbooks of 0.5 m cbm (13 MGCs including 10 ammonia carriers, 2 ethylene carriers and 1 ethane carrier) and 0.23 m cbm (9 ships — 4 MGC ammonia, 2 x 24,000 cbm ethane carriers and 3 small ethylene carriers). With 34 VLECs on order, Jiangnan accounts for about 83% of the VLEC Market, well in front of Hyundai HI who hold the remaining 17%. Ammonia carriers are also becoming more popular with the promising development of ammonia propulsion.

### PCTC

In 2022, 72 PCTCs out of 90 were ordered at Chinese yards. 2023 was almost on par as Chinese yards secured 70 PCTC newbuilding orders out of a total 84 orders placed globally. Chinese yards now control 81% of the world PCTC orderbook, followed by Japan with about 15% and Korea with about 4%. The PCTC orderbook of 161 units is distributed amongst ten Chinese yards: CMHI Jiangsu (36 units), GSI (29), CMHI Jinling (20),



## Shipbuilding

Image:  
Artists impression of the worlds first Ammonia DF Container vessel with 1400 teu capacity, being built in Qingdao Yangfan Shipyard by CMB.TECH for end users YARA/NCL.



Xiamen (17), CIMC Raffles (17), CSSC SWS (16), CMHI Weihai (9), CSSC Jiangnan (7), Mawei (7) and Wuhu (3).

- CMB Group signed another 6 ammonia DF Newcastlemaxes in CSSC Qingdao Beihai Shipyard in 2023 which brings their total order of Newcastlemaxes in the same shipyard to 26 units.

## ROPAX AND FERRIES

The construction of Ropax and Ferries in China is in the hands of two shipyards: CSSC GSI on one side with 7 units including 4 for GNV, and CMHI Weihai on the other with 6 units (3 for Stena, 2 for France's La Meridionale and 1 for a domestic company).

## CRUISESHIPS

China clearly confirmed its position in the construction of cruise ships. The first of the two famous 135,500 Gt Vista-class cruise ships (323.6 m loa, 37.2 m beam, able to accommodate 5,246 passengers) was successfully delivered by CSSC Shanghai Waigaoqiao Shipbuilding (SWS) to the owner Adora Cruises (a J/V between Carnival and CSSC). The ship was built in cooperation with Italy's Fincantieri. The second unit should be delivered in 2024. CMHI Jiangsu is the second Chinese shipyard building cruise ships with 4 units on order (one 4,500 Gt expedition cruise ship for the Sunstone, 2 x 37,000 Gt cruise ships for the domestic owner Shanghai Style Cruise and 1 x 8,000 Gt unit).

## Some Significant Orders of the Year

- In 2023, Chinese shipyards secured orders for 270 dual-fuel propulsion ships (excluding LNG carriers) against respectively 189 in 2022, 137 in 2021, 60 on 2020 and 46 in 2019. This represented 64% of total dual-fuel ships ordered globally in 2023 and 24% of the total newbuilding orders placed in China. Meanwhile in 2023, Korea and Japan secured 24% and 7%, respectively, of dual-fuel orders. These orders included 51 dual-fuel (LNG) Ro-Ros, 27 dual-fuel (LNG) tankers, 12 dual-fuel (LNG) bulkers, 45 dual-fuel (LNG) containerships and 76 dual-fuel (methanol) containerships.
- Dynacom ordered 30 tankers in China in 2023: 6 VLCCs, 14 LR2s, 2 Aframaxes and 8 LR1s in 4 different shipyards.

## Shipbuilding in South Korea

In 2023, Korea ranked second globally with its 65.2 million Dwt orderbook (23.5% of global market share), its 20.0 million Dwt of newbuilding orders (17.2% of global market share) and its tonnage output of 22.3 million Dwt (27.5% of global market share).

Korea lost considerable market share as its orderbook shrunk from 27.9% to 23.5% and its securing of newbuilding orders went from 25% to 20%. The sole segment where Korea gained newbuilding orders was in the tankers, where it went from 2.5 million Dwt in 2022 to 6.1 million Dwt in 2023. However, this represents a fraction of what China succeeded in gaining (4.9 million Dwt in 2022 and 26.3 million Dwt in 2023). Containership newbuilding orders shrunk from 10.2 million Dwt in 2022 to 6.2 million Dwt in 2023, all in accordance with a similar trend

Shipbuilding in South Korea	2022		2023		
	m Dwt	N°	m Dwt	N°	
Orderbook	Market share	27.9%	18.1%	23.5%	16.7%
	Bulk	0.4	3	0.0	1
	Tanker	13.8	104	10.2	124
	Container	28.8	278	27.2	246
	Gas	24.3	304	27.4	342
	<b>All ships</b>	<b>67.8</b>	<b>705</b>	<b>65.2</b>	<b>731</b>
Orders	Bulk	0.0	1	0.0	0
	Tanker	2.5	28	6.1	79
	Container	10.2	120	6.2	47
	Gas	12.4	144	7.7	111
	<b>All ships</b>	<b>25.3</b>	<b>300</b>	<b>20.0</b>	<b>243</b>
Delivery	Bulk	0.8	3	0.4	2
	Tanker	16.1	113	9.4	55
	Container	3.6	33	7.8	77
	Gas	3.2	47	4.6	73
	<b>All ships</b>	<b>23.7</b>	<b>197</b>	<b>22.3</b>	<b>211</b>

to China (9.8 million Dwt in 2023 vs 18 million Dwt in 2022). As for the bulker segment, it completely disappeared in 2023.

Korean yards still dominate the construction of LNG carriers and accounted for about 64% of newbuilding orders in 2023 with 56 new units against 131 in 2022. However, Chinese yards are now geared up to increase their capacity and secured 34.5% (30 new units compared with 70 in 2022)

Illustrating the consolidation of the Korean shipbuilding industry, about 84% of newbuilding orders in 2023 were secured by the 'Big Three', with Hyundai HI holding about 62%, Samsung about 17%, and Hanwha (formerly known as Daewoo) about 5%. Only 9 Korean shipyards received new orders in 2023 compared with 23 in 2008.

Korean shipbuilding output decreased from 23.7 million Dwt in 2022 to 22.3 million Dwt. Meanwhile, the orderbook to yearly output ratio was about 3 at end-2023, thereby making it in principle easier to find an earlier delivery position in Korea than in China.

## Some Newsworthy Events of the Year

- If the 'Big Three' (HHI, Samsung and Hanwha) managed to be back in the black in 2023 after years of deficit, South Korean shipyards are being hit hard by a labour crisis now they have to face the new demand. Korean authorities have decided to ease its immigration laws and open the country's doors in an effort to resolve labour shortages. Accordingly, about 10,000 foreign workers from across Asia were estimated to have joined South Korean shipyards in the first half 2023.
- Hyundai Heavy Industries (HHI/HMD) secured some 63% of all the new orders placed in Korea in 2023 and made a profit of about \$100 million. For 2024, the group has set a \$13.5 billion sales target for its three shipyards and already by the end of January 2024, the group managed to secure 25% of this target. An important note is that out of the 169 newbuilding orders fixed in 2023, 62% were equipped with dual-fuel propulsion.
- Samsung HI (SHI) secured 28 newbuilding contracts in 2023 (including 8 LNG Carriers) representing some 18% of all the new orders placed in Korea in 2023.
- Daewoo Shipbuilding & Marine Engineering (DSME), South Korea's third-largest shipyard, was acquired by the Hanwha Group, South Korea's seventh-largest business conglomerate, and officially rebranded as Hanwha Ocean in 2023. The Korea Development Bank (KDB) who managed the shipyard for over two decades, reduced their stake to about 28% from about 55%. In 2023, Hanwha Ocean secured 5% of all the newbuilding orders placed in Korea in 2023. Like Samsung, Hanwha is now concentrating on LNG carriers and large containerships.
- It is noteworthy that Samsung and Hanwha have entered into a partnership whereby Hanwha will supply hull blocs to Samsung for the construction of large containerships. This outcome is driven by difficulties due to the shortage of workers and block makers. On their side Samsung have engaged Zhoushan CIMC Chang Hong Shipbuilding and Hengli Heavy Industries in China to build large hull blocks for containerships.
- Hyundai Mipo Dockyard (HMD) continued to dominate the medium sized shipyard segment (below LR2 size) and collected most of the small and medium sized new orders placed at Korean yards in 2023. It won 66 orders in 2023 against 62 in 2022, 83 in 2021 and 52 in 2020. Its main product remains the MR tanker and together with its Vietnamese affiliate (HVS), it succeeded in winning 34% of MR orders placed worldwide.
- DH Shipbuilding, previously known as Daehan, continued to focus on the construction of large tankers. In 2023, they secured 13 ships (10 Suezmaxes and 3 Aframax) compared with 9 ships in 2022 and 17 ships in 2021.
- K Shipbuilding (ex-STX and sister company of DH Shipbuilding) continued to focus on tankers. In 2023, they secured 18 orders (2 LR2s, 6 LR2s, 8 MRs and 2 small tankers for a Japanese owner) compared with 16 ships in 2022 and 25 ships in 2021.
- HJ Shipbuilding (ex-Hanjin shipyard) decided to focus only on containerships. In 2023, they secured 2 additional containerships of 9,000 teu. Their orderbook consists of 8 container carriers (2 X 9,000 teu, 4 x 7,700 teu and 2 x 5,500 teu) by end-2023.
- Dae Sun Shipbuilding and Engineering, one of the few small to medium-sized shipyards left in South Korea, saw some turbulence and did not secure any orders in 2023. Its orderbook consists solely of 3 ships (2 x 1,000 teu and 1 small ferry). The yard has applied for a corporate workout programme to restructure its debts with its main creditor bank, KEXIM. Domestic steel manufacturer Dongil Steel became the main shareholder in early 2021 after purchasing 83% of the yard's shares from KEXIM.

## Some Significant Orders of the Year

- In 2023, Korean shipyards secured orders for 103 dual-fuel propulsion ships (excluding LNG carriers) — representing about 54% of the total orders placed in Korea — against 72 orders in 2022, 119 orders in 2021, 43 orders in 2020 and 34 orders in 2019. This was about 24% of total dual-fuel ships ordered globally last year. In comparison, Chinese and Japanese yards won 64% and 7%, respectively, of dual-fuel orders placed last year. These orders included 33 dual-fuel (LPG) LPG tankers (28 VLGCs, 3 MGCs), 5 dual-fuel (LNG) containerships and 42 dual-fuel (methanol) containerships.
- Samsung secured 16 x 16,000 teu dual fuel methanol containerships from Taiwan's Evergreen. The liner company also signed for 8 additional units with Japan's Nihon Shipyard.

- Hyundai secured 25 VLGCs from 10 different shipowners which represented 78% of VLGCs ordered in 2023 in Korea and 60% globally.

## Shipbuilding in Japan

Japan maintained its position as the third largest shipbuilder in 2023 with its 37.4 million Dwt orderbook (13.5% market share), its 13.6 million Dwt of newbuilding orders (11.7%) and its tonnage output of 15.4 million Dwt (19.1%).

If Japan managed to gain some newbuilding orders in the tanker and container carriers segments, it lost considerable ground on bulkers, a traditional backbone, and contrary to the global trend going from 13 million Dwt to 6.9 million Dwt. Japan's five largest shipyards Nihon (Imabari + JMU), Oshima, Shin Kurushima and Namura secured a combined 82% of the total new orders placed at Japanese yards in 2023, with shares of 62%, 9%, 4% and 7%, respectively.

Japan's total shipbuilding output of 15.4 million Dwt is on par with that of 2022. However, the orderbook / yearly output ratio of about 2.5 is not a true reflection of the commitments made by Japanese yards.

### Some Newsworthy Events of the Year

- Imabari Shipbuilding and Japan Marine United (JMU), are Japan's two largest shipbuilders with an orderbook of 13.4 million Dwt (35.7% of Japan's orderbook) and 8.8 million Dwt (23.4 % of Japan's orderbook), respectively. In January 2021, they launched a new joint venture company, Nihon Shipyard Co, with Imabari holding a 51% stake and JMU 49%. This new company is handling all commercial ships excluding LNG carriers. In 2023, Nihon won orders for 82 ships (against 70 in 2022 and 89 in 2021) for a total of 8.4 million Dwt. At the end of 2023, the orderbook of Nihon totalled 248 ships for a total of 22.1 million Dwt. This makes it the world's third largest after CSSC and HHI.
- Nihon shipyard secured the world's first medium-size ammonia-fuelled ammonia carrier (40,000 cbm). The ship will be equipped with Japanese-built engines (Japan Engines Corp for the main engine and IHI Power Systems for the auxiliaries). The order is the result of a national project.
- Oshima Shipbuilding, Shin Kurushima and Namura, who are the third (4.7 million Dwt), fourth (1.7 million Dwt) and fifth (2.8 million Dwt) largest Japanese shipbuilders, secured a combined 61 ships for a total 2.7 million Dwt. In Japan, 27 shipyards secured new orders including the largest five Japanese shipyards which took 80.5% of the total new orders placed in 2023.

Shipbuilding in Japan		2022		2023	
		m Dwt	N°	m Dwt	N°
Orderbook	Market share	16.1%	17.3%	13.5%	14.8%
	Bulk	27.5	381	23.2	340
	Tanker	3.0	71	4.9	88
	Container	6.6	94	7.2	88
	<b>All ships</b>	<b>39.2</b>	<b>674</b>	<b>37.4</b>	<b>645</b>
Orders	Bulk	13.0	176	6.9	114
	Tanker	1.4	42	2.8	43
	Container	2.2	43	3.0	29
	<b>All ships</b>	<b>17.8</b>	<b>340</b>	<b>13.6</b>	<b>234</b>
Delivery	Bulk	9.5	125	11.3	155
	Tanker	3.8	48	1.0	26
	Container	1.8	31	2.3	35
	<b>All ships</b>	<b>15.6</b>	<b>252</b>	<b>15.4</b>	<b>263</b>

- Following several years of strategic development and cooperation between Japanese companies such as Imabari taking 35% of Hitachi Zosen Marine Engine in 2022, Namura and Imabari working with Mitsubishi HI for the development of advanced ship designs, or Tsuneishi collaborating with Mitsui E&S Shipbuilding on low-emission designs, Japanese shipyards have now started to cooperate with Chinese groups. Indeed, WinGD, a CSSC subsidiary, signed a partnership on ammonia-fuelled vessels with Mitsubishi. WinGD will apply its X-DF-A ammonia-fuelled engines to a range of vessel designs. Mitsubishi will design the vessels and complete the fuel chain with its ammonia fuel supply system (AFSS).
- Tsuneishi Shipbuilding undertook a feasibility study concerning constructing a new shipyard in East Timor with the capacity to build up to 12 ships annually. The Kambara family group have successfully developed several shipbuilding facilities abroad (Cebu in The Philippines and Zhoushan in China) from greenfield sites into major shipyards. They also run a small shipyard in Paraguay. To develop its domestic capabilities for constructing gas carriers, containerships and passenger ships, they also acquired a majority stake in compatriot company Mitsui E&S Shipbuilding.
- Naikai Zosen is back in the dry bulk segment after focusing on Ro-Ro/Ropax and feeder containerships since 2015. They took advantage of the good market offering earlier deliveries. Naikai is a diversified shipbuilding, ship-repair and general engineering company, and is listed on the Tokyo Stock Exchange.
- Sumitomo Heavy Industries Marine & Engineering, with a shipbuilding legacy dating back to 1897, has decided to quit commercial shipbuilding. Sumitomo said it is faced with rising material costs, volatile newbuilding prices and continued intense competition from abroad and has found it challenging to sustain the shipbuilding business.



## Shipbuilding in Europe

European shipyards maintained their level of orderbook with 10 m Gt and 333 ships. New orders increased slightly due to the cruise segment (11 units) and dry cargo (71 units), a ship type for which Europe is becoming more attractive due to short delivery times. In 2023, China, Korea, Japan and Europe accounted for 126.1 m Gt, 66.0 m Gt, 26.4 m Gt and 9.9 m Gt of the global orderbook, respectively. In million Dwt terms, the equivalent figures were 161.1, 65.2, 37.4 and 4.7 million Dwt.

The region's total shipbuilding output is back to the level last seen in 2021 with 1,8 m Gt. The orderbook to yearly output ratio of 5 is not so representative in Europe due to the typology of the region's shipyards as there are few large premises building very large units and a multitude of small yards building small units.

### Some Newsworthy Events of the Year

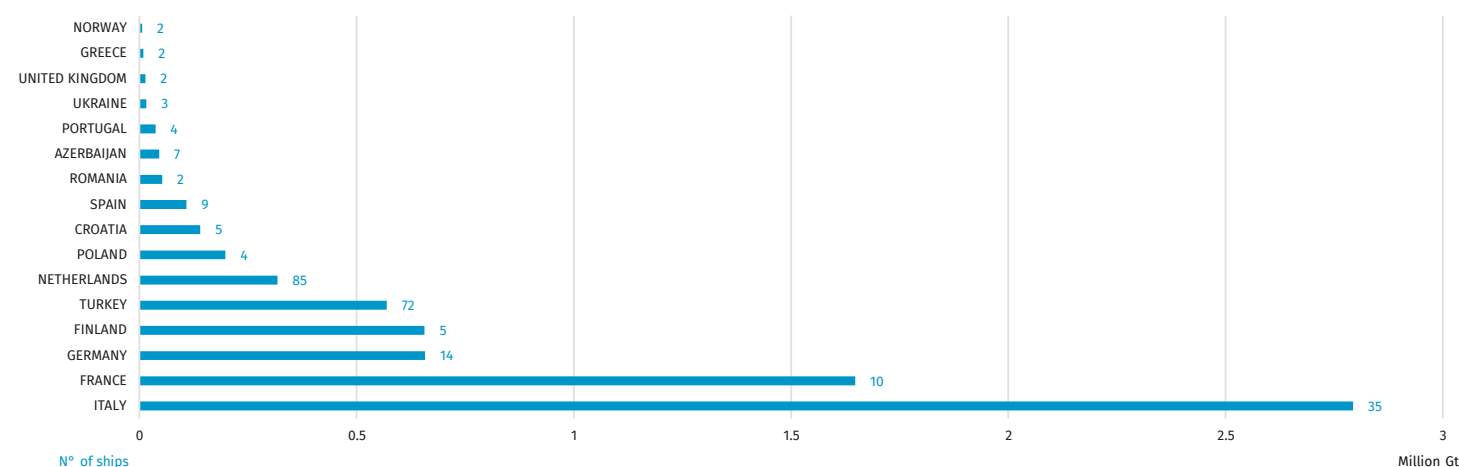
- In 2023, Italy had the strongest orderbook with 2.7 m Gt due to Fincantieri's position as the largest cruise ship builder in the world. By end-2023, Fincantieri had 30 large cruise ships on order, representing 45.2% of the global cruise ship orderbook and which will be delivered up until 2031. Italy can also count on Visentini which is constructing one large LNG-ready Ropax for Pol Ferries and one Ro-Ro, on Mariotti which is building one 23,000 Gt cruise ship which will be delivered in 2027 and on San Giorgio del Porto which is back in shipbuilding after 10 years with a 7,500 cbm bunkering LNG vessel for renewable energy producer Axpo.
- Based on current figures, Russia should be in second place among the European countries with 2.6 m Gt. However, in view of the ongoing war in Ukraine and sanctions, it is uncertain if these orders will be fulfilled. The orderbook of Russia's Zvezda shipyard consists mainly of LNG carriers for which the hull blocks and other components were in principle to be procured from Korean

Shipbuilding in Europe		2022		2023	
		m Gt	N°	m Gt	N°
Orderbook	Market share	4.9%	8.0%	4.2%	7.6%
	Bulk	0.0	5	0.0	6
	Tanker	0.8	44	0.7	43
	Container	0.2	4	0.2	6
	LNG	1.9	16	1.9	17
	Dry Cargo	0.7	149	0.9	173
	Cruise	6.0	62	5.6	57
	<b>All ships</b>	<b>10.3</b>	<b>310</b>	<b>9.9</b>	<b>333</b>
Orders	Bulk	0.0	2	0.0	3
	Tanker	0.1	11	0.0	7
	Container	0.2	4	0.0	2
	LNG	0.0	1	0.0	1
	Dry Cargo	0.2	54	0.4	71
	Cruise	0.5	10	1.0	11
		<b>All ships</b>	<b>1.0</b>	<b>93</b>	<b>1.5</b>
Delivery	Bulk	0.0	4	0.0	2
	Tanker	0.2	14	0.2	7
	Container	0.0	0	0.0	0
	LNG	0.0	0	0.0	0
	Dry Cargo	0.1	19	0.2	42
	Cruise	1.9	18	1.4	16
		<b>All ships</b>	<b>2.5</b>	<b>65</b>	<b>1.8</b>

shipyards including HHI and Samsung. Therefore, when ranking European countries together, we believe it is better to exclude Russia until we have a better understanding of its shipbuilding industry.

- France is in second place due to its leading shipyard — Chantiers de l'Atlantique — which has a total orderbook of 10 cruise units for a total of 1.6 m Gt after having contracted 2 new cruise ships with LNG propulsion for MSC. In terms of tonnage, this represents 27.8% of the global cruise ship orderbook. All units will be delivered up until 2027. The French state remains the main shareholder in Chantiers, holding an 84% stake after European competition regulators rejected a proposed merger with Fincantieri.

### Orderbook of European Shipyards at end-2023 (million Gt)



- Germany is in third position having one of the world's best cruiseship builders — Meyer Werft — who enjoys an orderbook of 0,9 m Gt (7 units) representing 15.6% of the global cruise ship orderbook in tonnage terms. These units will be delivered up until 2025 and end 2023 no new orders had been signed since 2021. The country can also count on Flensburger Schiffbau-Gesellschaft (FSG) shipyard with 1 Ro-Ro on order and with Ferus Smit Leer with its orderbook of 6 small ships (3 tankers, 3 general cargo vessels).

Werften Wismar, purchased by Thyssenkrupp Marine Systems (TKMS) in 2022, was sublet by Meyer Werft to complete the 208,000 Gt state-of-the-art cruise ship purchased by Disney from the bankrupt Genting group. The ship is planned to be delivered in 2025.

- In Finland, the fourth European country in terms of gross tonnage, Meyer Turku Oy holds an orderbook of 0.56 m Gt consisting of 3 cruise ships to be delivered up to 2025 for Royal Caribbean and TUI. End 2023, Finnish yards did not receive any new orders since 2021. Rauma Marine are still constructing two 48,000 Gt, 1,800-passenger, dual-fuel (LNG) ferries for Australian ferry operator TT-Line. An interesting and surprising development is that Helsinki Shipyard was acquired by Canadian's Davie Shipbuilding from Russian's Algador Holdings. They will join their expertise for developing ice-class vessels and ice breakers.
- Turkey's shipbuilding industry has continued to expand as it won 17 orders in 2023 on top of the 44 won in 2022. Its yards now have an orderbook of 0.57 m Gt, spread across 21 shipyards. The country is in fifth position in Europe. For example: Atlas secured 4 x 8,600 Dwt diesel electric General Cargo from Longship, SEDEF secured 2 x 650 teu containerships with dual fuel methanol propulsion, RMK secured 1 x wind-powered Ro-Ro from Neoline in France and Tersan secured for the first time in more than 10 years 2 x 16,500 Dwt tankers equipped with dual fuel methanol propulsion from Netherland's Tune Chemical Tankers (TCT). Tersan shipyard made an interesting move and purchased the bankrupt Havyard Leirvik in Norway in order to increase its production capacity and to combine expertise from both yards, as well as customer portfolios.

With Chinese shipyards being full and not so interested in small units, Turkey is becoming a strong alternative.

- Dutch shipbuilders won the highest number of new orders across the region in 2023 as 7 shipyards secured orders for 30 ships. Of these, 27 orders were general cargo ships. In terms of the orderbook, the main shipyards are Damen Gorinchem (15 ships), Royal Bodewes (13 ships), Ferus Smit Westerbroek (13 ships), Thecla Bodewes (12 ships) and GS yard (11 ships). Good to note that Dutch shipyards secured 2 diesel-electric projects with wind propulsion: 5 x 3,600 Dwt MPPs for De Bock Maritiem and 3 x 3,800 Dwt MPPs for compatriot Hartel Shipping.
- End 2023, Polish shipyards have not secured any new orders since 2021. However, due to the 3 x 4,100 Dwt dual-fuel ferries ordered at the Remontowa yard by the Polish Government, they stand in seventh position in Europe. Poland can also count on Gryfia Shipyard and its partner Stocznia. Poland also remains active as a block and hull manufacturer for other European builders.
- Croatian shipyards are falling in the ranking. Their orderbook shrunk to only 5 ships as no orders were signed in 2023. Brodosplit, one of the largest of the country's shipyards, filed for bankruptcy in the wake of the sanctions placed on Russia. The new yard — Uljanik 'Uljanik Brodogradnja 1856' — is building a drydock for an Israeli shipyard. 3 Maj, fighting for getting new orders, is completing an MR tanker which was already under construction at Brodotrogir and originally ordered at Russia's Sevmash in 2004. All the yards are also building blocks for the cruise ship builder, and neighbour, Fincantieri.
- Spain is struggling to take new orders despite having several excellent shipyards. Only four commercial ships were ordered in 2023. Of these, there was an additional LNG-fuelled fast ferry for Balearia at Armon. Meanwhile, orders for two general cargo ships were received by Balenciaga and one for Murueta.



Image:  
MV CMB FLORIS (hull n° F056) (IMO n° 9908499), 63,628 Dwt ultramax bulkcarrier, by Tadotsu Shipyard Co., Ltd. to BOCIMAR (CMB Group), delivered in July 2021.

## Shipbuilding in the Rest of the World

The orderbook at shipyards in the Rest of the World (RoW) has slightly increased in 2023 with 8.8 million Dwt versus 8.5 million Dwt in 2022. Meanwhile, the region's global market share slipped down from 3.5 % to 3.2%.

Deliveries increased significantly from 1.7 million Dwt in 2022 to 2.6 million Dwt in 2023 (the same level last seen in 2020).

In 2023, 18 RoW shipyards secured new orders (compared with 8 in 2021, 7 in 2020, 13 in 2019 and 14 in 2022). The first two yards Tsuneishi Cebu (Philippines) and HVS (Vietnam) remain the most prolific and account for 48.7% and 32.6%, respectively, of the RoW orderbook, and together secured 82.7% of the region's new orders in 2023 compared with 81.4% in 2022.

### Some Newsworthy Events of the Year

- The Philippines, led by the Tsuneishi Cebu, maintained its leadership of the Rest of the World shipbuilding countries, and held 50% of the total RoW orderbook at end-2023. This compares with shares of 49% in 2022, 53.8% in 2021 and 52% in 2020. Last year, Tsuneishi secured orders totalling 1.5 million Dwt (25 ships). These were all bulk carriers (10 Capesizes, 8 Kamsarmaxes and 7 Ultramaxs) for Japanese owners. Austal Philippines delivered a dual-fuel LNG, 115-metre, high speed vehicle-passenger ferry, named Express 5, for Denmark's Molspinjen. The two large drydocks of Agila Subic shipyard (ex- Hanjin Subic) are still out of work since 2019 despite attempts from Tsuneishi and HD Hyundai to reactivate them.
- Last year, Vietnam retained its second position in the RoW thanks to Hyundai Vietnamese affiliate HVS which accounted for 87.3%

Shipbuilding in ROW		2022		2023	
		m Dwt	N°	m Dwt	N°
Orderbook	Market share	3.5%	5.9%	3.2%	5.6%
	Bulk	4.6	79	4.9	84
	Tanker	3.1	52	3.3	54
	Container	0.3	9	0.2	6
	<b>All ships</b>	<b>8.5</b>	<b>230</b>	<b>8.8</b>	<b>245</b>
Orders	Bulk	1.6	24	2.1	33
	Tanker	1.9	29	1.0	19
	Container	0.2	3	0.0	2
	<b>All ships</b>	<b>3.9</b>	<b>99</b>	<b>3.3</b>	<b>87</b>
Delivery	Bulk	0.8	19	1.5	24
	Tanker	0.7	24	0.8	17
	Container	0.1	6	0.2	5
	<b>All ships</b>	<b>1.7</b>	<b>63</b>	<b>2.6</b>	<b>67</b>

of the country's orderbook. By end-2023 its orderbook totalled 40 ships (13 LR2s, 23 MR tankers and 4 Ultramaxs) for 2.9 million Dwt. The country can also count on Damen Ba Son with 6 x 3,500 Dwt general cargo new orders, Piriou the French shipyard building wind-powered cargo ships for TOWT and Grain de Sail, Pacific Shipbuilding which is constructing 2 bulk carriers, and Dung Quat which is building 4 x 5,000 Dwt general cargo hydrogen powered ships for CMB-Boeckmans. Local shipyard group SBIC (ex-Vinashin) which is owned by Vietnamese state along with Pha Rung, Ha Long and Bach Dang, is under bankruptcy process.

- Iran surprisingly arrived in third position with 4 Aframaxs under construction for PDVSA — Venezuela's national oil company. In 2023, two of these Aframaxs were ordered at Iran Marine Industrial Co (SADRA) which were added to the previous 2 orders signed in 2007 which are still not delivered. Both countries are under US sanctions.
- India strengthened their return into the international shipbuilding market which was initiated in 2022, and moved from the sixth position to fourth with 48 ships in its orderbook against 30 in 2022.

### Orderbook Rest of the World 2023 (million Dwt)

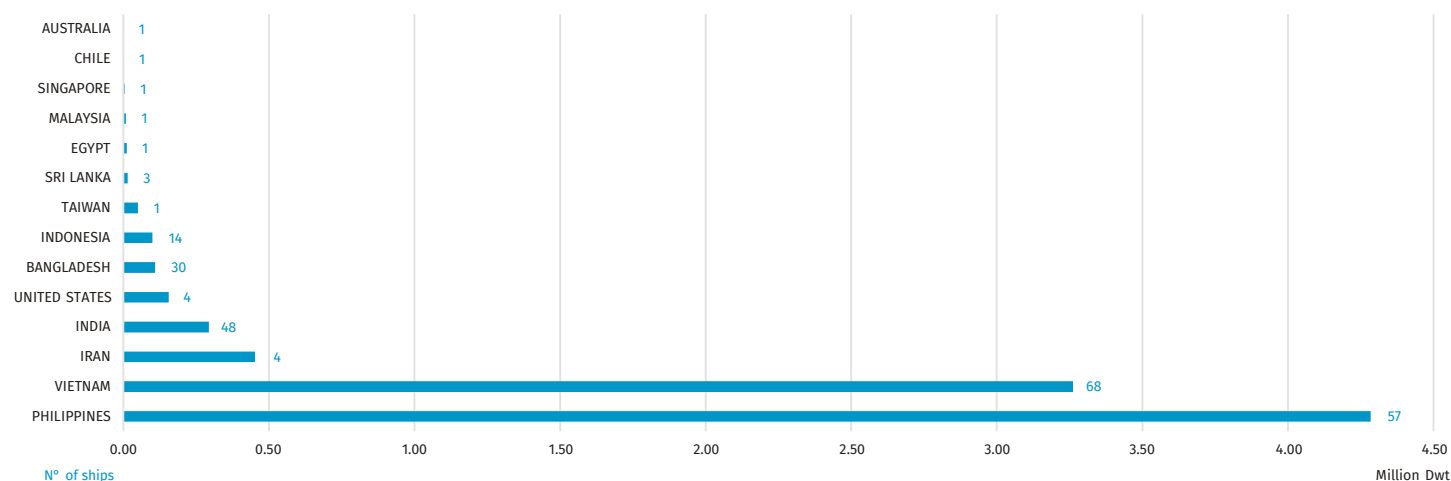






Image:  
Rendering of a 38,000 Dwt stainless steel chemical tanker, part of a large series, to be built for Stolt Tankers at Wuhu shipyard (China).

Chowgule Shipyard secured 10 new contracts. Of these, 8 were for 8,500 Dwt general cargo ships for the Netherland's Boomsma Shipping and 2 were for additional 5,600 Dwt general cargo ships for the Netherland's Vertom. Meanwhile, state-owned Cochin Shipyards secured 6 x 3,800 Dwt general cargo ships for Norway's Wilson and 2 x 365 teu containerships for Iceland's Samskip. India can also count on Atreya shipyards which is building general cargo ships for domestic owners.

- US shipyards are in fifth position although no new orders were registered in 2023. They had an excellent year in 2022 when fourteen ships were ordered: 10 x small coastal catamaran cruise ships ordered at Chesapeake Shipyard by domestic owner American Cruise Line, 3 x dual fuel LNG 3,600 teu containerships ordered by Hawaiian liner operator, Matson at Philly Shipyard, and one double-ended hybrid ferry for the US state of Washington secured by Vigor shipyards.
- With 4 orders signed since 2021 (although none were placed in 2023), Bangladesh has a relatively active orderbook of 30 units spread across 7 different shipyards. The largest yard is

Bashundara Group with 11 ships on its orderbook. Bangladesh is mainly a domestic market. The size of ships built in Bangladesh are below 5,000 Dwt.

- Indonesia moved from ninth to seventh position thanks to 4 domestic new orders placed in 2023. Indonesia's orderbook holds 14 ships spread across 7 shipyards, the largest one being KTU shipyard with 5 ships on order.
- CSBC, the largest yard in Taiwan, is left with only one MR tanker in its orderbook for domestic oil refiner CPC Corp (CPC). The last time that CSBC bagged a tanker order was in 2015.
- Despite difficulties in the country, Sri Lanka's Colombo Dockyard continues to build and deliver ships. They still have 3 x 5,000 Dwt eco bulk carriers fitted with diesel electric hybrid power systems to be completed for Norway's Misje Rederi. The yard also delivered the "Sophie Germain", a cable layer ordered by Orange Marine. Japan's Onomichi Dockyard owns 51% of Colombo Shipyard.

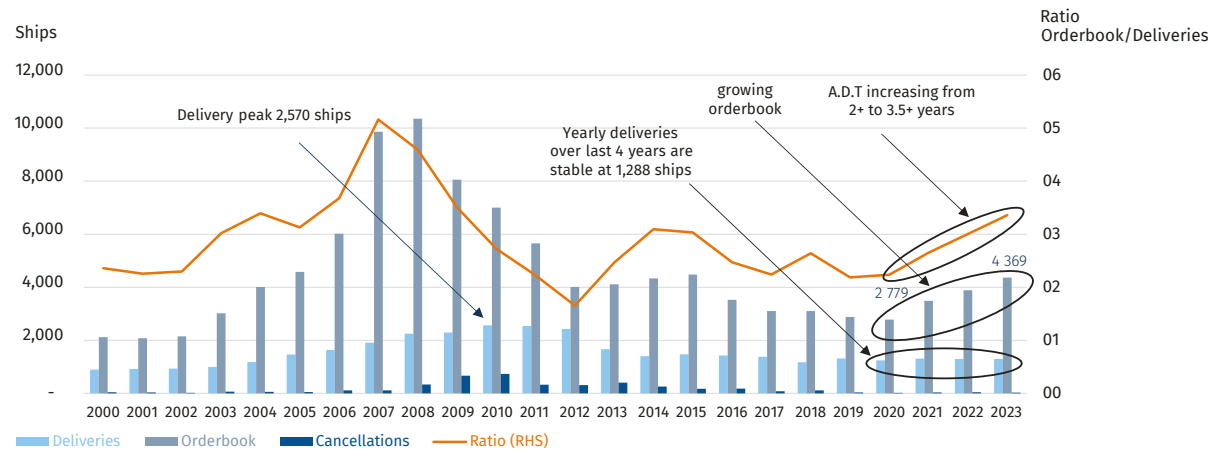
# Some Aspects of the Shipbuilding Market

## Shipbuilders Orderbooks and Average Delivery Times

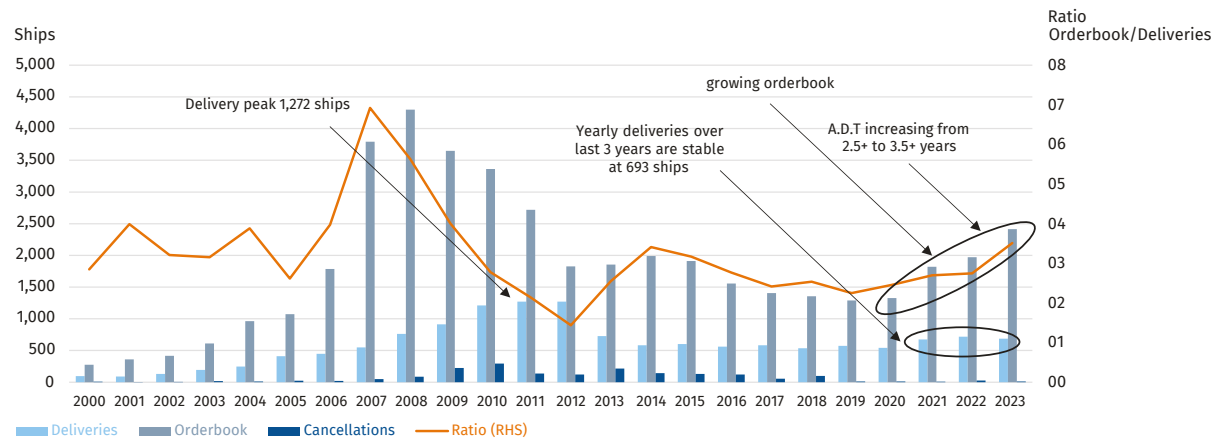
The below graphs are a tentative study to explain simply that current lead times have increased steadily from over two years in 2020 to over three years by the end of 2023.

Japan remains as usual a mystery, as unlike South Korea and China, orders are not routinely reported, and therefore an in depth discussion of the Japanese orderbook makes it difficult to draw conclusions. One reason for this is that Japanese yards make commitments and accept to book slots for their clients without systematically entering into shipbuilding contracts.

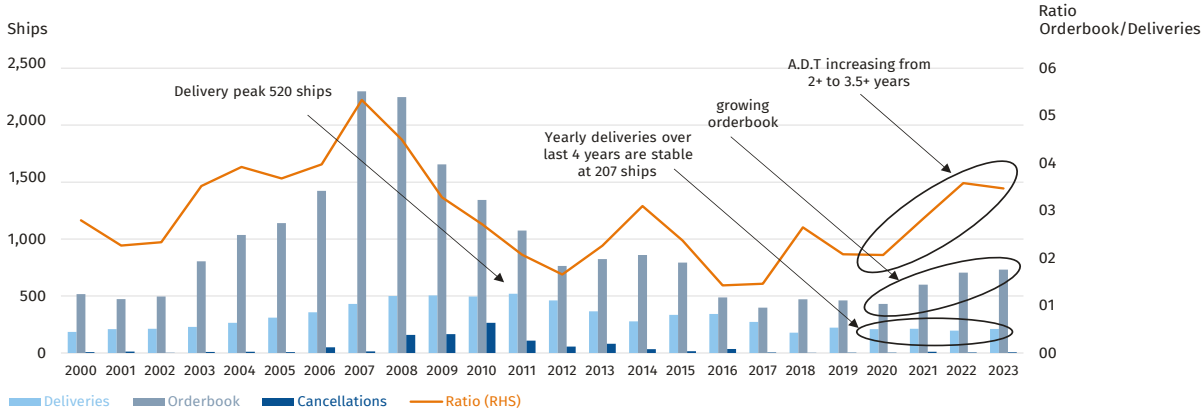
**World Orderbook (w.o) versus World Deliveries (w.d) in Number of ships**  
Ratio w.o/w.d = Average Delivery Time (ADT)



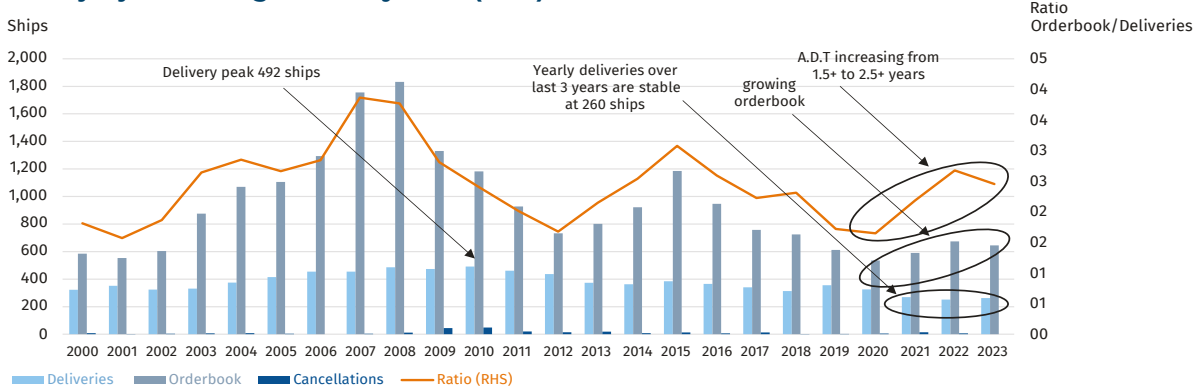
**China Orderbook (c.o) versus China Deliveries (c.d) in Number of ships**  
Ratio c.o/c.d = Average Delivery Time (ADT)



**S.Korea Orderbook (sk.o) versus S.Korea Deliveries (sk.d) in Number of ships**  
**Ratio sk.o/sk.d = Average Delivery Time (ADT)**



**Japan Orderbook (j.o) versus S.Korea Deliveries (j.d) in Number of ships**  
**Ratio j.o/j.d = Average Delivery Time (ADT)**



## Dual Fuel Propulsion

Undoubtedly, 2023 saw an acceleration in the ordering of newbuildings equipped with dual-fuel propulsion. Statistics speak for themselves and show that about 36.2% of the ships on order will be equipped with a form of dual fuel propulsion, bringing the portion of such vessels to 6.4% of the active fleet when they are all delivered and assuming no significant demolition in the period.

### Dual-Fuel and Dual-Fuel Ready Excluding LNG

Dual-Fuel With	Existing Ships	Ships on Order	Total
LNG	590	601	1,191
LPG	107	110	217
Methanol	34	360	394
Ethane	23	17	40
Batteries	60	121	181
Wind assisted	29	11	40
Hydrogen	1	10	11
Ammonia	33	162	195
<b>All Dual Fuel</b>	<b>812</b>	<b>1,216</b>	<b>2,028</b>
<b>All Ships</b>	<b>42,077</b>	<b>3,986</b>	<b>46,063</b>
<b>Ratio</b>	<b>1.9%</b>	<b>30.5%</b>	<b>4.4%</b>

### Dual-Fuel & Dual-Fuel Ready

Dual-Fuel With	Existing Ships	Ships on Order	Total
LNG	1,222	967	2,189
LPG	107	110	217
Methanol	34	360	394
Ethane	23	17	40
Batteries	60	122	182
Wind assisted	29	11	40
Hydrogen	1	10	11
Ammonia	33	162	195
<b>All Dual Fuel</b>	<b>1,444</b>	<b>1,583</b>	<b>3,027</b>
<b>All Ships</b>	<b>42,788</b>	<b>4,369</b>	<b>47,150</b>
<b>Ratio</b>	<b>3.4%</b>	<b>36.2%</b>	<b>6.4%</b>

### Including LNG Carriers

Dual-Fuel With	Existing Ships	Ships on Order	Total
LNG	1,024	904	1,928
LPG	107	110	217
Methanol	27	211	238
Ethane	23	17	40
Batteries	55	98	153
Windassisted	29	11	40
Hydrogen	1	10	11
Ammonia	0	12	12
<b>All Dual Fuel</b>	<b>1,228</b>	<b>1,347</b>	<b>2,575</b>
<b>All Ships</b>	<b>42,795</b>	<b>4,369</b>	<b>47,150</b>
<b>Ratio</b>	<b>2.9%</b>	<b>30.8%</b>	<b>5.5%</b>



## Excluding LNG Carriers

Dual-Fuel With	Existing Ships	Ships on Order	Total
LNG	392	538	930
LPG	107	110	217
Methanol	27	211	238
Ethane	23	17	40
Batteries	55	97	152
Windassisted	29	11	40
Hydrogen	1	10	11
Ammonia	0	12	12
<b>All Dual Fuel</b>	<b>596</b>	<b>980</b>	<b>1,576</b>
<b>All Ships</b>	<b>42,077</b>	<b>3,986</b>	<b>46,063</b>
<b>Ratio</b>	<b>1.4%</b>	<b>24.6%</b>	<b>3.4%</b>

But let's not fool ourselves either.

If we wish to assess the progress made by the industry, we need first to exclude the LNG carriers that have always been specified — by design — with an LNG propulsion, all the more considering the recent surge in LNG newbuilding orders in 2021, 2022 and 2023 that hit a record high. When these are excluded, the percentage of dual fuel propulsion in the orderbook drops from 36.2% to 30.5%.

Furthermore, when excluding the ships that are only dual fuel ready, the percentage slips further to 24.6%.

The above unfortunately confirms that at the end of 2023, 30.5% of the worldwide shipbuilding orderbook of 4,369 newbuilding and 24.6% of the worldwide shipbuilding orderbook excluding LNG carriers was to be equipped with a dual fuel propulsion. This translates in an annual output of 444 dual fuel ships or about 358 dual fuel ships (excluding LNG carriers). At this pace and considering the global active fleet of approximately 42,000 ships, it will take more than 100 years to have a full dual fuel fleet in place. This is in sharp contrast to last year's decision by the IMO which is pushing to fully decarbonise shipping by 2050, even if we assume that these dual fuel ships would fully meet this target.

In 2023, we noted a greater interest for newbuildings being equipped with dual fuel methanol especially on tonnage below Kamsarmax size (82,000 Dwt) versus dual fuel LNG. This likely reflects the lower capex of dual fuel methanol compared with dual fuel LNG as methanol is liquid at ambient temperature and can be stored easily. However, progress is not linear. For example, French liner giant CMA CGM decided to reconsider its choice of fuelling as it switched eight methanol dual-fuelled 9,200-teu box ships to dual fuel LNG, adding probably another \$10 million per ship, and further fuelling the debate in the maritime industry about the merits of LNG and methanol as fuels. LNG offers CO<sub>2</sub> reductions and removes almost all NO<sub>x</sub> and SO<sub>x</sub> while further emissions reductions can be made by using bio-LNG, with a pathway to low or carbon-free synthetic LNG for the future. Methanol is seen as an easier-to-handle, non-cryogenic alternative to LNG. However, when

## Dual-Fuel Ready Only

Dual-Fuel Ready With	Existing Ships	Ships on Order	Total
LNG	198	63	261
Methanol	7	149	156
Batteries	5	24	29
Ammonia	33	150	183
<b>All Dual Fuel</b>	<b>226</b>	<b>337</b>	<b>549</b>
<b>All Ships</b>	<b>42,795</b>	<b>4,369</b>	<b>47,150</b>
<b>Ratio</b>	<b>0.5%</b>	<b>7.7%</b>	<b>1.2%</b>

derived from fossil fuels it does not offer the same CO<sub>2</sub> reductions as LNG. Nonetheless, maritime users want to buy carbon-neutral green methanol that is currently only available in very small quantities and at high prices.

We noted a greater interest as well to adopt wind assisted power propulsion (WASP) that had received very limited success so far in spite of a number of technical developments. A modern, industrial and globalized world seems hardly able to do without the predictability and reliability that shipping has simultaneously enabled and prospered from. But the sail as a wind assisted form of propulsion is slowly emerging. Some projects show that round trips across the Atlantic between North Europe and the US on bulkers or tankers could reduce fuel consumption by around 20% and this could rise to 30% and even more when the service speed is lower. That is more efficient on slower vessels, another reason to call for an immediate reduction in service speeds. Even if the capex of (WASP) remains lower than for dual fuel (LNG or methanol) and wind is free, (WASP) has not yet been able to make a breakthrough since efficiency gains remain difficult to assess, while there remain maintenance and potential operational complications. Notwithstanding the above, we anticipate that many industrial companies and important wholesalers need improve their ESG, their Scope 3 CO<sub>2</sub> emissions, and their image in the eyes of customers, bankers and shareholders, and could therefore opt for innovative energy saving solutions such as (WASP). This is illustrated by the aforementioned important newbuilding order by LDA (France) of 3 wind-propelled Ro-Ros to transport Airbus plane sections between Europe and USA.

# The Maritime Industry Facing an Avalanche of New Environmental Regulations

## IMO Revised GHG Strategy July 2023

In 2018, the International Maritime Organisation (IMO) adopted its initial strategy concerning the reduction of greenhouse gases (GHG) emitted from international shipping, setting technical and operational targets which require ships to improve their energy efficiency. From 1 January 2023 it became mandatory for all ships to calculate their attained Energy Efficiency Existing Ship Index (EEXI) and to initiate the collection of data for the reporting of their annual operational carbon intensity indicator (CII).

- **EEXI:** The EEXI is a technical measure addressing the technical design of an existing vessel by retroactively imposing energy efficiency requirements equivalent to the Energy Efficiency Design Index (EEDI) of new buildings. The EEXI is a one-off certification at a ship's first annual, intermediate or renewal survey of its IAPP Certificate on or after 1 January 2023.
- **CII:** The CII is an operational efficiency measure calculated as grams of CO<sub>2</sub> emitted per Dwt nautical mile on an annual basis. The CII calls for a 2% annual CO<sub>2</sub> carbon intensity reduction between 2023 and 2026 or an 11% cumulative improvement by 2026 vs a 2019 reference level. Future reduction rates for 2027-30 are yet to be determined and will be decided as part of a review to be concluded by January 2026. Vessels will be given an annual rating ranging from A to E. Ships rated D for three consecutive years, or E for one year, have to submit a corrective action plan to show how the required index of C or above will be achieved.

In July 2023 the IMO made a step further on this matter during MEPC-80, adopting a revised strategy on reduction of greenhouse gas emissions from ships, with enhanced targets to tackle emissions. The revised IMO strategy states that GHG emissions from international shipping should reach net-zero by or around 2050.

The following check points have been set:

### 2030

- Reduce CO<sub>2</sub> emissions per transport work, by at least 40% by 2030, compared to 2008.

- Increase uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources to at least 5%, striving for 10% of the shipping energy by 2030.
- Reduce GHG emissions from shipping by at least 20%, striving for 30% in 2030, compared to 2008.

### 2040

- Reduce GHG emissions from shipping by at least 70%, striving for 80% in 2040, compared to 2008.

### 2050

- Reach net-zero GHG emissions by or around 2050.

## The Inclusion of Shipping in Europe's Emission Trading Scheme (EU ETS)

As part of the European Commission's legislative proposals to deliver the European Green Deal – the 'Fit for 55' package – amendments to both the EU ETS Directive (2003/87/EC) and the Monitoring, Reporting and Verification Regulation (2015/757) were formally adopted as EU law in May 2023

From 1 January 2024, cargo and passenger ships larger than 5,000 Gt calling ports of the European Economic Area (EU + Iceland, Liechtenstein, Norway) will have to acquire and surrender enough "European allowances" (EUA), which represent the right to emit one tonne of CO<sub>2</sub>, to cover their emissions on an annual basis. EUAs can be freely traded between companies, in OTC transactions or on the emissions marketplace (ICE Endex and EEX mainly). Shipping is joining the EU ETS at a time where EUAs are trading at record highs: the benchmark carbon contract reached its highest value ever of €101,25/mt in February 2023 and the 2023 price average was also the highest since the launch of the EU ETS in 2005.

## Scope of the EU ETS

Cargo/passenger ships larger than **5,000 Gt** calling ports in the European Economic Area (EEA).

Threshold lowered to **400 Gt** if approved from 2026 onwards.

**Offshore ships** larger than 5,000 Gt from 2027.

**40%** of the verified emissions fall under the ETS obligation in 2024, **70%** in 2025 and **100%** from 2026 onwards.

First compliance deadline in **September 2025**.

**CO<sub>2</sub>** from 2024.

**CH<sub>4</sub>** and **N<sub>2</sub>O** from 2026 after a two-year monitoring period.

## The FuelEU Maritime Regulation

The FuelEU Maritime regulation is part of the Fit for 55 climate package which aims to reduce the block's GHG emissions by at least 55% by 2030 compared with 1990 levels. Despite progress in recent years, the maritime sector still relies almost entirely on fossil fuels and therefore is a significant source of greenhouse gases and other harmful pollutants. The goal of this regulation is to promote the use of renewable and low-carbon fuels in maritime transport to reduce the greenhouse gas intensity of the energy used by ships by up to 80% by 2050.

From 1 January 2024, the FuelEU maritime regulation requires ships to measure the yearly average greenhouse gas intensity of the energy used on board, measured as GHG emissions per energy unit (g CO<sub>2</sub>e/MJ). The regulation then sets well-to-wake greenhouse gas emission intensity requirements on energy used on board ships calling ports in the EEA from 2025 and mandates the use of on-shore power supply or zero-emission technology for container ships and passenger ships in ports from 2030. Using the well-to-wake approach means that the measurements must include emissions from extraction, cultivation, production and transportation of the fuel, in addition to the emissions generated during the combustion. The directive also encourages the uptake of renewable fuels of non-biological origin (RFNBO) by rewarding ships that use it and if needed, it will set a sub-target of 2% share of RFNBO in the total yearly energy used on board by January 2034. By 31 August 2024, companies must submit to the verifiers a monitoring plan for each of their ships indicating the method chosen for monitoring and reporting the amount, type and emission factor of energy used on

board. The first monitoring and recording period starts on 1 January 2025. By the end of January of the next year, the company must submit the relevant data to the verifier, including the use of pooling, banking, borrowing mechanism and by the end of April, the verifier will record the data in the compliance database. Penalties have to be paid by May. The FuelEU certificate of compliance is issued in June.

## Main rules applicable to shipping under the FuelEU Maritime

Ships larger than 5,000 Gt

Measure GHG intensity from 2024, reduction targets applicable from 2025. GHG intensity requirements applies at 100% to voyages between two EEA ports or at berth, and at 50% for voyages which departed/arrived in an EEA port.

Annual average carbon intensity has to decrease by:

- 2% in 2025–2029
- 6% in 2030–2034
- 14.5% in 2035–2039
- 31% in 2040–2044
- 62% in 2045–2049
- 80% in 2050

CH<sub>4</sub> and N<sub>2</sub>O are covered and converted in CO<sub>2</sub> equivalent.

Evasive port calls: EU list that includes (so far) Tanger Med and East Port Said.

Exceptions for certain categories of vessels such as warships, fishing-related vessels, and government ships used for non-commercial purposes.

Exemptions and discounts for outermost regions, small islands and public service until 31 December 2029.

From 2030, container ships and passenger ships are required to connect to on-shore power supply when at berth for more than two hours in a Trans-European Transport Network (TEN-T) port. From 2035, the requirement applies to all ports where shore power is available (with some specific exceptions).

Banking and borrowing of compliance surplus allowed and pooling vessels possible.



## CBAM, the World's First Carbon Tax, Starts its Monitoring Phase

Europe's carbon border adjustment mechanism (CBAM) regulation entered into force on 16 May 2023, paving the way for legislators to draft the rules of the world's first carbon border tax. CBAM is designed to achieve two objectives, with a third one being more of a consequence:

1. Protect against carbon leakage: the risk that EU companies could move carbon-intensive production abroad to countries where less stringent climate policies are in place, or when EU products are replaced by more carbon-intensive imports.
2. Encourage cleaner industrial production in non-EU countries and make sure EU climate objectives are not undermined by countries with less stringent policies.
3. Enhance the competitiveness of EU products against foreign goods as it will make imports more expensive to EU customers. This last objective is not mentioned in the EU Directive.

The CBAM will initially apply to imports of certain goods and selected precursors whose production is carbon intensive and at most significant risk of carbon leakage. In its first phase, the following 6 sectors will be covered: cement, iron and steel, aluminium, fertilisers, hydrogen, electricity.

The regulation's official entry into force provides the legal authority to begin drafting implementing policy, such as the methods for calculating imbedded carbon in imports, the accreditation process for CBAM verifiers, and details on how to factor in trading partner's carbon prices. CBAM will enter into force in its transitional phase as of 1 October 2023 and have a two year of gradual phasing in (2024-2025) to allow for a predictable and proportionate transition for EU and non-EU businesses.

Companies importing any product from these 6 covered sectors into the EU will have to buy CBAM certificates to cover the carbon emissions embedded in them unless they can prove they have already been accounted for by climate legislation in the producer country. With this scope, CBAM will, when fully phased in, capture more than 50% of the emissions in ETS covered sectors. The proceeds will largely go into the EU's budget. The European Commission predicts that CBAM could produce 500-800 million euros of tax revenues for the EU from 2023-30.

Image:  
HAFNIA LOIRE, LR2 Tanker, 109,999 Dwt, delivered in May 2023 from Guangzhou Shipyard International Co. Ltd (GSI).

## Dark Fleet

More than ever, the world is now characterized by growing tensions and an accumulation of sanctions that have gradually morphed into geo-political considerations and pushed for new sovereignty decisions.

One spectacular development has been the rise of a 'dark' or shadow fleet especially in the tanker segment.

	Delivered	Fleet%	Avg age
<b>Tanker</b>	1,044	9.4	21.0
<b>Bulk</b>	91	0.7	22.7
<b>Dry Cargo</b>	253	3.6	26.8
<b>Container</b>	57	1.0	19.0
<b>Other</b>	40	0.7	37.9
<b>Total</b>	1,485	3.5	22.3

According to BRS estimates, the tanker dark fleet represents about 675 tankers or 7.4 % of the global tanker fleet with an average age of 21.0 years against the 14.7 year average age of the wider tanker fleet. This constitutes an enormous opportunity as old ships find an outlet better remunerated than being demolished. But in addition to the economic risks that sellers and buyers are taking, we have to forcefully state that much of this shadow fleet constitute time bombs as they are largely not subject anymore to port state controls (neither at load nor at discharge), nor vetting, and there is certainly no inspection from certain flag states of the respective ships that do not have any experience and track record in shipping. The risk of accidents, oil spills is greater than ever.



# Perspectives for 2024: Newbuilding Orders, Deliveries, Demolitions and Newbuilding Prices

## Newbuilding Orders

In early 2023, we estimated that around 85 million Dwt of new tonnage could be ordered during the year split roughly as follows: 40 million Dwt Bulkers, 20 million Dwt Tankers, 10 million Dwt Container Carriers and 15 million Dwt for the others. Reality decided otherwise with a global figure of 116 million Dwt distributed as follows: 43 million Dwt Bulkers, 36 million Dwt Tankers, 19 million Dwt Container Carriers and 18 million Dwt for the others.

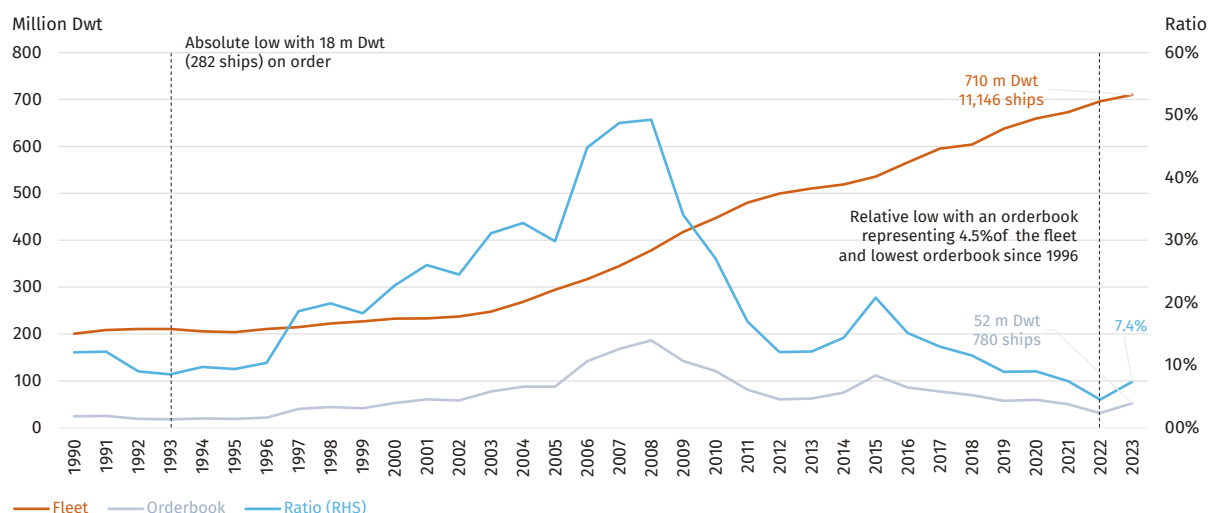
In short, there was much more activity on tanker and container carriers than expected.

### What Went Wrong?

- First of all, it demonstrates that the best educated guess can be upended by reality and the many black swans that the shipping industry are subjected to.

- Secondly, it was hard indeed to believe that more Container Carriers could be ordered in 2023 considering that prices had reached record in a spiralling downward freight environment which developed in 2H22 and that as this was likely to cool down investment appetite. Furthermore, by end-2022, the Container Carrier orderbook stood at a mammoth teu, a record level in absolute terms, well above the previous peak of about 6 m teu posted in 2007. Even if in relative terms, the 7.5 m teu represented only 28.8% of the existing fleet compared with 60% in 2007, and the ships ordered in 2007 were faster well above 21 knots against the current 16 knots, at the time, this orderbook appeared oversized.
- As to oil and petroleum product tankers, the level of contracting in 2022 had been extremely disappointing with only 8.7 million Dwt ordered hence our more upbeat forecasts of 20 million Dwt for 2023. However, the market was even more bullish: a certain recognition that in spite of being a vilified fossil fuel, oil will remain an integral part of the energy mix for many years to come.

## Tanker Fleet and Orderbook Evolution

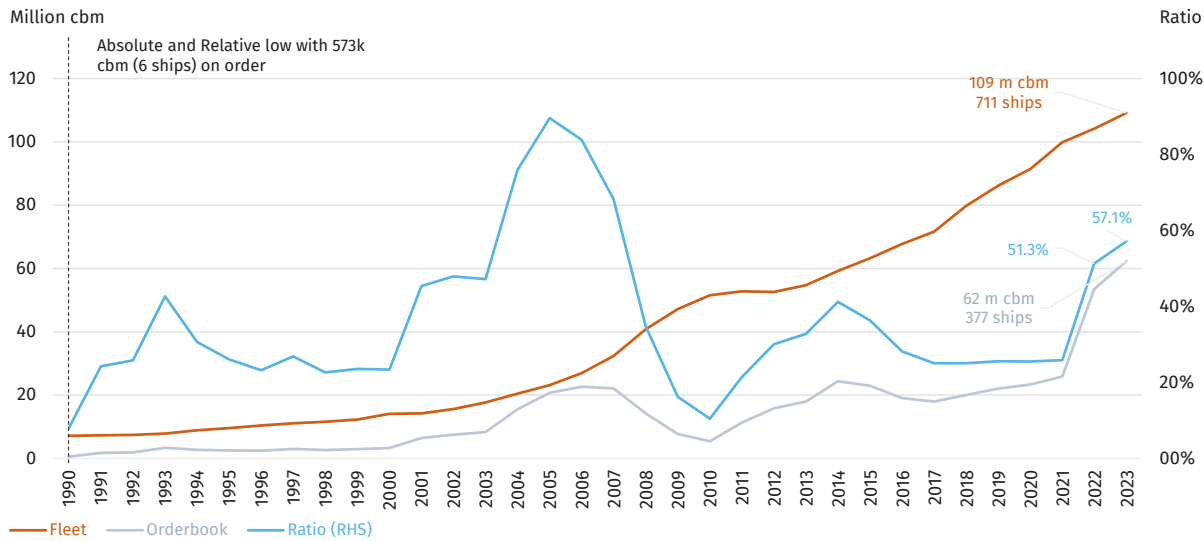


- Likewise, it was hard to believe that more LNG carriers could be ordered in 2023 compared to 2022 considering that prices had already reached record highs, that newbuilding orders had also hit records in both absolute and relative terms, well above any previous peaks, and that the time of delivery was beyond a 4-year horizon.

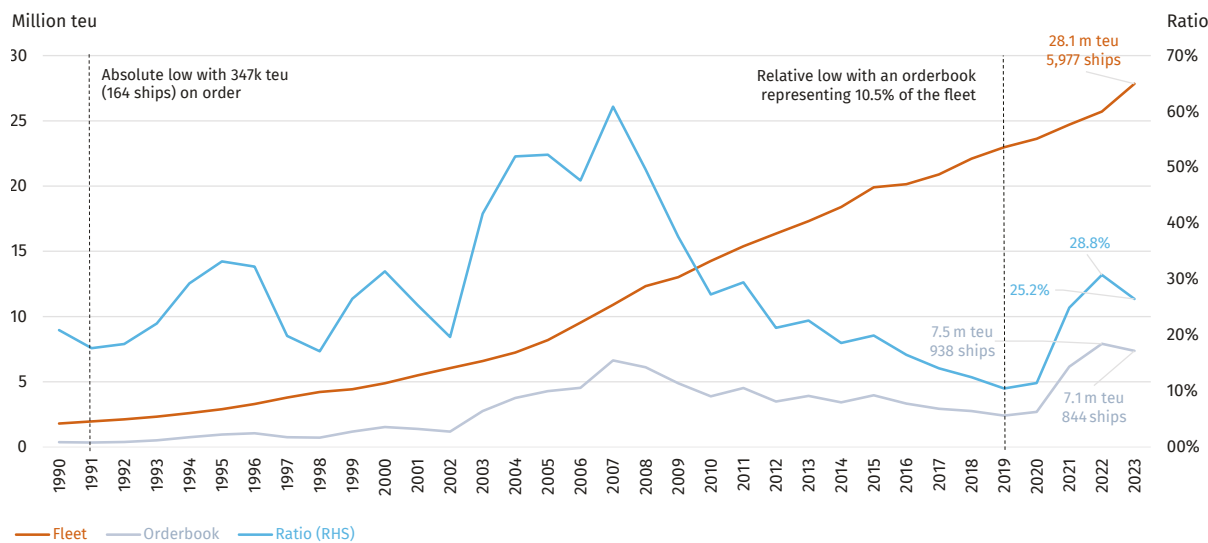
### So What About our Forecasts for 2024?

The need for new tonnage meeting new rules and regulations, the need to replace an ageing fleet (above 14 years), the need to cope with additional ton miles that exploded in 2023, the need to reduce speed to comply with intermediate requirements (CII for instance) and the potential for a new super cycle in the shipbuilding industry to replace all the ships that were delivered in large numbers between 2005 and 2010, suggest a very similar global figure to last year.

### LNG Carriers Fleet and Orderbook Evolution



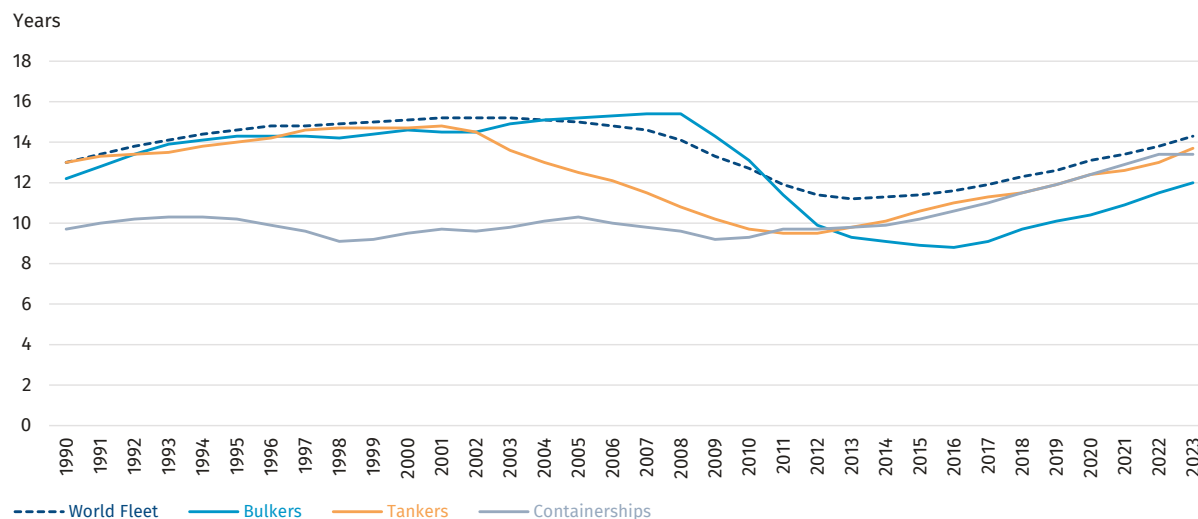
### Container Fleet and Orderbook Evolution



Fleet renewal is also a necessity as the worldwide fleet has been aging.



## Average Age by Ship-type



Under these conditions, we would then anticipate the following individual ordering levels in 2023:

- 15 million Dwt for Container Carriers
- 40 million Dwt for Tankers
- 45 million Dwt for Bulkers
- 15 million Dwt for the others including LNG and other Gas Carriers
- i.e a combined total approximately 115 million Dwt for 2024

## Newbuilding prices

As for newbuilding prices, we expect them to increase during 2024 across the board simply in view of the considerable orderbooks at shipbuilders.

## Deliveries

Deliveries in 2024 could reach a range around 90 to 95 million Dwt.

## Demolitions

In principle, vessel scrapping should rise in the near future, especially in the container sector. Nonetheless, we remain quite cautious on this issue and argue that not more than 15 million Dwt of tonnage will be demolished in 2024, especially since the situation at recycling yards in Pakistan and Bangladesh has become more difficult recently.

# Ship Finance



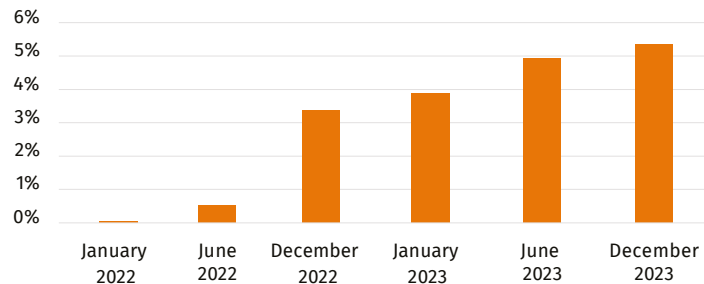


## Financing Costs Remain High

Monetary policy continued to focus on keeping inflation under control by raising interest rates. As a result, interest rates continued to climb in 2023, although at a slower pace than in 2022.

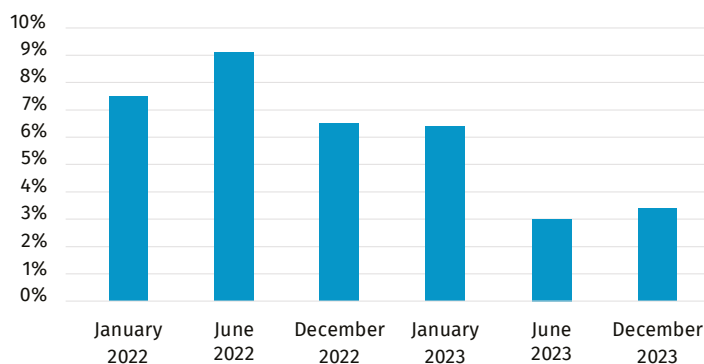
Accordingly, the 90-Day average SOFR (US Base Rate) climbed from 3.9% in January 2023 to 5.4% in December 2023. Assuming a loan of \$10 million per ship, compared to January 2022, this represents an additional cost of around \$1,400 per day as of end-2023.

### 90-Day Average SOFR



Meanwhile, inflation rates appear to have peaked in mid-2022, with rates remaining in the 3–4% range during the second part of 2023. This bodes well for the monetary policy to adjust accordingly. According to the forward curves, interest rate increases are behind us and therefore the market expects the SOFR to start decreasing in 2024.

### US Inflation Rate



That being said, we should not expect the low rates witnessed before Covid to return. The market consensus is pointing towards relatively high rates to remain, with long-term rates in the 3.5–4% range, far above the below 1% levels which were prevailing before Covid.



With this reverse in the forward curve trend, lessors have started to quote on fixed bareboat terms again, feeling more comfortable with the interest rate risk.

## Shipping Finance Activity in 2023

Shipping Finance activity in 2023 was pretty close to 2022. Shipowners enjoyed performing shipping markets and finance cost was high, leading to continuous deleveraging.

In this context of high base rates, and in an effort to attract business, European commercial banks have been pushing their margins downwards to levels not seen since 2008.

A notable share of the shipping finance activity consisted of repaying sale and leasebacks which were concluded a few years back by traditional bank debt with a lower leverage. Scorpio is the best illustration of this trend, where, in order to reduce financing costs, the company exercised purchase options for 22 vessels to take them out of leasing structures from various parties. Teekay Tankers also exited 9 sale and leasebacks which were refinanced together with other vessels by a senior loan.

Consequently, the usual providers of sale and leaseback solutions, such as Chinese Leasing houses, Japanese lessors and alternative lenders, saw a notable decrease in their portfolios. Japanese owners were eagerly looking for depreciable assets to replace the ones which had been prepaid, offering an interesting source of financing especially for European mid-size owners.

## The Return of Offshore Finance

The offshore sector is progressively coming out of restructurings, with some landmark transactions taking place. Solstad Offshore came under the control of Aker as it completed a \$1.3 billion refinancing with new equity from Aker-backed AMSC and debt from DNB and Eksfin. Vroon

completed a similarly sizeable refinancing of its offshore activities by selling 40 vessels to various parties, most of the fleet landing in the hands of Britoil Offshore Services.

Last year, offshore was one of the only sectors with both a strong recovery story and asset values still on the rise. This triggered the interest of numerous alternative lenders, who were suffering from competition from traditional banks in the shipping space. The offshore sector proved to be a suitable alternative from a point-in-cycle perspective, as well as from the lack of interest of banks to finance this sector. Several banks have been struggling to exit their financing in this sector for several years, making the case for new financing in the sector more difficult. Another aspect is also growing ESG concerns, with some banks excluding offshore assets involved in the oil and gas sector from their mandate.

## Everything Green

Sustainable finance continued to grow, with the most successful product remaining sustainability-linked loans. The share of sustainability-linked loans in bank portfolios continue to grow as more and more owners opt for them.

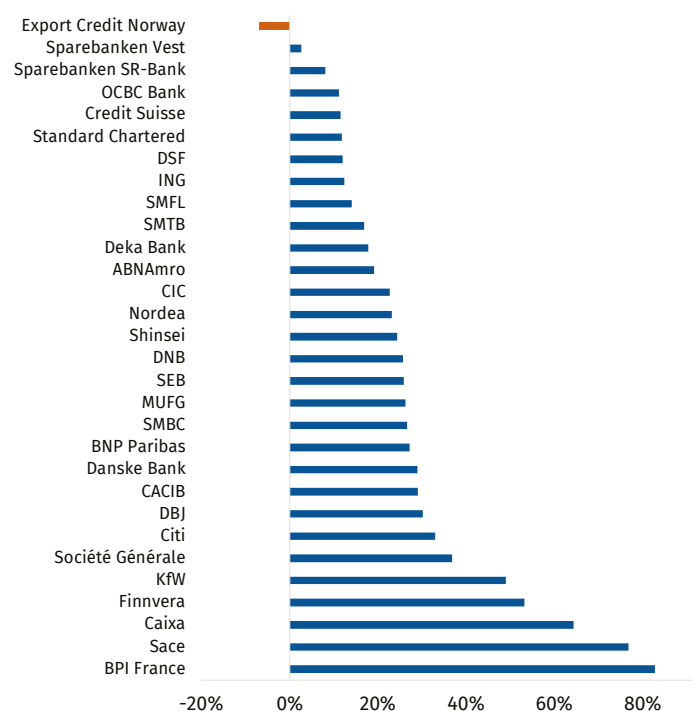
Notable transactions include a \$2.8 billion sustainability-linked loan for Gaslog, which includes decarbonization as well as social performance indicators, related to gender diversity in their cadet program. While decarbonization targets are now the market standard for shipping, social performance indicators are less common. Other sizeable sustainability-linked loans include a \$527 million loan for MISC to finance Very Large Ethane Carriers.

The number of Poseidon Principles signatory banks increased from 30 to 34 in 2023, representing around 80% of shipping bank portfolios. There have so far been four reporting years, and the last one saw a change in the reporting benchmark.

Since its inception, banks taking part in this initiative had been reporting the alignment of their portfolio to the IMO's initial 2018 GHG strategy, which targeted a 50% reduction in GHG emissions by 2050. This was not aligned with the Paris Agreement. In 2022, the Poseidon Principles Initiative announced their ambition to align their framework with the temperature goal of the Paris Agreement. In the meantime, the IMO revised their GHG emission reduction ambitions. The IMO's revise strategy takes into account well-to-wake emissions as well as other GHG gases on top of CO<sub>2</sub> and targets zero emissions by or around 2050. The Poseidon Principles have elected to report accordingly. The IMO has proposed two pathways, a "minimum" one, and a "striving" one. The average score against the minimum trajectory was +27.2%, and +32.1% against the striving curve, meaning that bank portfolios were on average not aligned with the IMO pathways. Only one signatory had scores showing an alignment under both trajectories.



Alignment of the Poseidon Principles signatories to 2023 IMO GHG study (2023 reporting)



## Where Should My Money Go?

Shipowners again found themselves in an interesting situation last year. Several shipping markets were strong allowing cash to accumulate in the bank. Strong markets translated into high asset values, which did not make a good investment case. Newbuilding prices remained high while ahead of new environmental regulations there continued to be some uncertainty around the desirability of an asset.

With cash at hand and limited investment opportunities, some shipowners traditionally focusing on shipping ventured into the offshore space, where market fundamentals were more promising from an asset play perspective. For example, the Greek owner Evangelos Marinakis set up a new venture, Capital Offshore, to acquire several Platform Supply Vessels.



## Mergers and Acquisitions

Initially envisaged as a merger, the Frontline and Euronav story unfolded in 2023, with Frontline acquiring 24 VLCCs from Euronav for a total amount of \$2.35 billion.

In the dry bulk segment, the highlight for 2023 was the merger of Star Bulk and Eagle Bulk, creating a fleet of over 150 vessels. The resulting entity will operate under the Star Bulk name.

The container shipping segment witnessed the massive take-private acquisition of Atlas, the Seaspan mother company, for close to \$11 billion. The acquirer is the consortium Poseidon Acquisition Corp, a vehicle backed amongst others by the shipowner ONE, asset manager Fairfax and the Washington family.

## Debt and Equity Capital Markets

There was more activity in the debt and equity capital markets in 2023 compared to the very slow 2022, especially in Norway. Bond markets proved an interesting source of capital for the offshore sector, with pricing only at a small premium to traditional bank loans. Borr Drilling raised over \$1.5 billion in total to refinance its existing borrowing.





Image:  
MV NORVIC HOUSTON, 39,755 mt Dwt Bulk Carrier, built in 2023  
at Onomichi Yard, Operated by Norvic Shipping Ventures.



# Dry Bulk



Image:  
MV LOWLANDS HOPE, Bulk carrier, 60,063 Dwt, built by OSHIMA, operated by Cobelfret, delivered in 2016.





LANDS HOPE

LANDS HOPE  
LDM



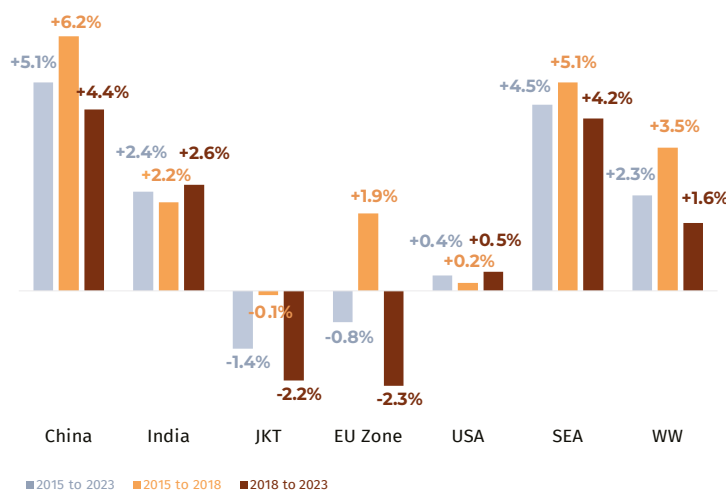
The first half of 2023 did not go as the bulls expected as the highly touted Chinese “Re-opening Effect” narrative did not quite pan out.

With the impact of past grey swan events including unprecedented Chinese port congestion, the overspill of booming container demand to geared bulkers and the disruption to coal flows in the wake of the Ukrainian conflict receding swiftly, global dry bulk demand growth will need to step up spectacularly to fill in the void.

While import volumes of the world's largest dry bulk importer, China managed to rebound by a spectacular 12.7%, its actual import trajectory is still playing catch-up to its pre-2018 (when the US-China trade war began) trend. In addition, India and Southeast Asia mustered impressive gains of 8.6% and 13.2% y-o-y. However, these shining lights were soured by negative growth in developed trading blocs including Japan, Korea and Tawiwan (JKT) and Europe which contracted by 5.8% and 9.9%, respectively. This provided a stark reminder of how macroeconomic headwinds exert a drag on international trade.

Overall, global dry bulk volumes rose by around 4% in 2023. Nonetheless, it is evident that dry bulk prospects have not fully recovered from the cumulative ravages of the 2018 USA-China trade war, Covid and the ongoing Chinese real estate slowdown. For example, from 2015 to 2018, the compound annual growth rate (CAGR) of global dry bulk volumes was +3.5%. In contrast, from 2018 to 2023, it shrunk to 1.6%.

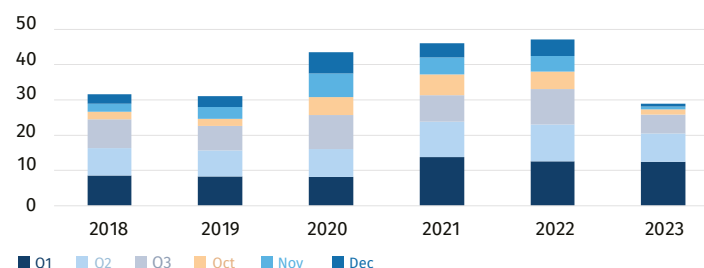
### Seaborne Dry Imports CAGR %, by major regions



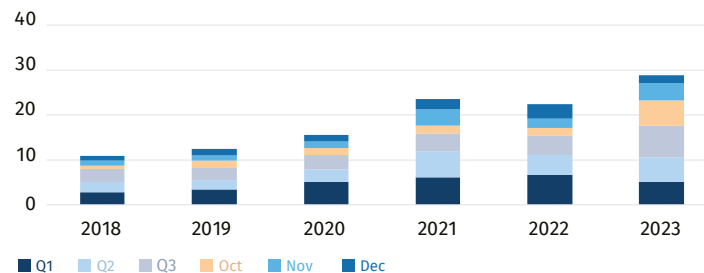
Entering the second half of 2023, most of the initial bulls had seemingly lost hope for the year after the Baltic Dry Index (BDI) averaged 1,157 points over 1H23, almost half of the level recorded in 2022. However, it is worth mentioning that, at this stage, freight had merely returned to its pre-pandemic trend. The third quarter, usually the strongest period per year, saw little uptick. Nevertheless, bulkers ended the year on a positive note.

The Capesize market caught a much-needed tailwind as its bauxite shipments to Asia improved by 27% quarter-on-quarter (q-o-q) in 4Q23. Meanwhile, as El Nino arrived, water levels in the Panama Canal reached record lows for the time of year, prompting drastic transit reductions, thereby forcing USG grain shipments on sub-Cape units to reroute via the Suez Canal instead. Record loading congestion in Brazilian ports (due to low river levels) also heightened positional tonnage tightness in the Atlantic basin. This resulted in the BDI average breaking the 2,000 marks in 4Q23, while posting a q-o-q increase of 70%. This was the first Q4 V Q3 increase since 2017.

### USG Dry Shipments via Panama Canal (mln mt)



### USG Dry Shipments via Suez Canal (mln mt)



Meanwhile, The Black Sea Agreement ended abruptly in July, after Russia refused its extension. This highlighted the evolving geopolitical uncertainty that both shipowners and charterers have to navigate. Nevertheless, shipping has proven to be an adaptive and resilient animal. As the Russia-Ukraine conflict is now a constant, markets seem to have found a new normal. Ukraine has made the most of its river and land connections which has permitted grains to be diverted towards the Romanian port of Constanta.



Image: MV LOS ANGELES, Newcastlemax Bulk Carrier, 206,104 Dwt, SHANGHAI JIANGNAN-CHANGXING SHIPBUILDING CO., LTD., Diana Shipping Services S.A., 2012.

# An Unexpected Fourth Quarter

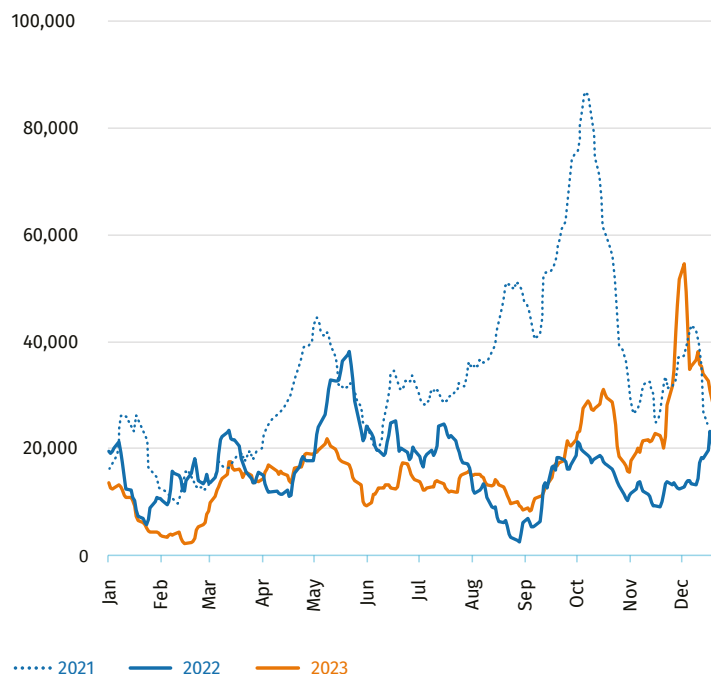
## Capesize (>120,000 Dwt)

The Capesize market had a subdued first 9 months of 2023, before somewhat springing to life in the final quarter. This reflected the segment’s dynamic response to global economic shifts, geopolitical events, and intricate supply-demand interplays. Indeed, although the segment faced challenges, it also demonstrated its resilience, thereby revealing the sector’s adaptability to a changing landscape.

In the first couple months, several challenges emerged, especially the subdued coal trading and uncertainties around Australian coal flows after Beijing lifted its ban on Australian coal imports. However, February brought a notable surge in Capesize demand, particularly in the C3 segment which peaked at \$28.5/mt for prompt dates. Rates improved, with the C5 reaching close to \$9.00/mt by the end of the first quarter compared with its 1Q nadir of just \$2,246/day at end-February.

Buoyed by a rebound in C5TC rates from the end of February to mid-March, cautious optimism prevailed across April and May. However, Cyclone Fabien’s impact in the Indian Ocean and an abundance of tonnage saw any bullish sentiment dissipate. Consequently, C5TC struggled, falling to \$10,099/day, while C3 maintained stability in the low \$19,000s.

C5TC (\$/day)





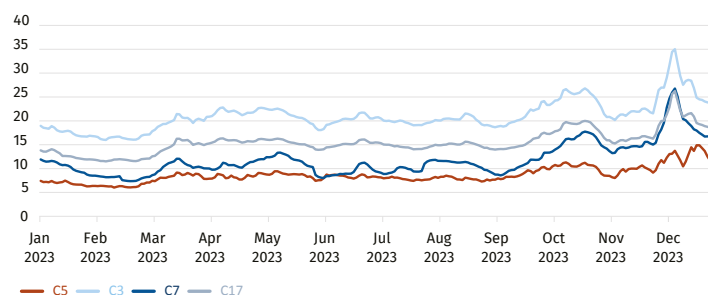
Back in 2022, due to a need to secure supplies following the onset of the Ukraine conflict, Indonesian Capesize coal shipments to India rose. However, amid increased local production, Indian cut its imports in 2023. Less volumes partially explained why backhaul rates lacked vigour across the second and third quarters. Additionally, since 2Q23, the appeal of Russian coal has faded as numerous buyers explore alternative sources and some revert to their pre-Ukraine-conflict sellers for seaborne coal.

September marked the beginning of a material shift, with increased activity boosting C5 rates from \$7.60/mt to \$7.90/mt. Accordingly, C3 rates improved to the mid-high \$18,000s. Fronthaul routes saw increases, but oversupply concerns in the Atlantic lingered, shaping the bearish market sentiment.

In an unexpected turn of events, November brought positive momentum, witnessing heightened fixing activity. C5 rates improved slightly, with fixtures reported at \$10.30–10.35/mt. C3 rates experienced a boost, reaching \$22.00/mt. Fronthaul rates ranged between \$35,000/day to \$36,000/day, reflecting the evolving market dynamics.

December saw a remarkable spot rally, especially in C3 front-haul voyages, as they hit 2023-highs of \$35/mt, in December. The transatlantic voyage C7 rallied to \$26.80/mt, driven by positional tightness in the Atlantic market. Meanwhile, C5TC peaked at \$49,310/day.

### Capesize Vogage Rates (\$/mt)



### Iron Ore and Steel

Iron ore shipments are expected to grow modestly by 1–2% in both 2024 and 2025. This aligns with a 1.9% increase in global steel demand projected by the World Steel Association. In China, steel demand could stagnate in 2024, with a potential recovery in 2025 dependent on improvements in the property sector.

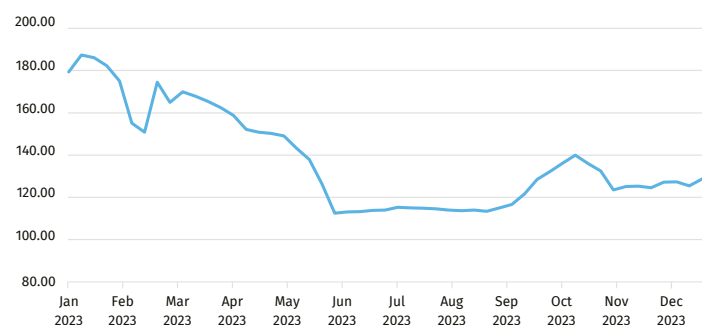
### China Iron Ore CFR 62% (\$/mt)



### Coal

A notable revision is witnessed in the outlook for coal shipments, anticipating a substantial 3–5% decline in 2024 and 2–4% in 2025. This aligns with the International Energy Agency's view that coal demand may have peaked in 2023. Importantly, the forecast accounts for the potential resilience in coal trade during the first half of 2024 in the wake of lower hydropower prospects. Thereafter coal trade could decline as hydropower generation rebounds.

### Australian Coal Price (\$/mt)



### Capesize Fleet Development

Over the past few years, the number of active Capesize vessels has been gradually and consistently rising, reaching 1,560 (292.39mln Dwt) in 2023. It is noteworthy that the deadweight has increased at a much higher rate than the ship count during this period. This trend suggests that the average size of Capesize vessels is rising, reflecting the industry's pursuit of economies of scale and advances in port infrastructure.

An insightful indicator of owners' market sentiment is the orderbook. Notably, in 2007, owners exhibited optimism in the market before a significant downturn. Subsequently, owners have maintained a cautious approach to ordering, aiming to prevent a crisis akin to that seen in 2008. For example, in 2023, a relatively low 40 Capesizes were ordered, reflecting that owners continue to remain cautious.

### Cape Contracting Activity (N° of Ships)

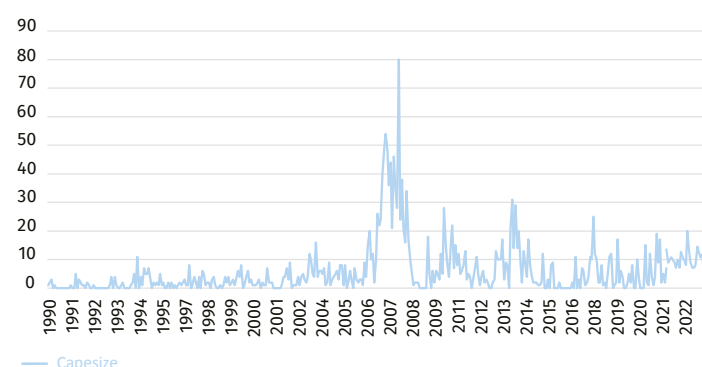




Image:  
MV MOUNT TROODOS, built by Namura Shipping Group, delivered in 2009, Charterers Mercuria, owned by Safe Bulkers.

## Babycape and Post Panamax (85,000–125,000 Dwt)

Babycapes and Post-Panamaxes experienced a year of two halves. The first half of the year was spent trying to upsize Panamax stems during a low market, and then offering cheap freight on downsized Capesize stems during the strong market seen in the second half of the year. Markets which saw notable growth were East Coast South American grains and West Africa. We noted Takoradi in Ghana loading bauxite on Babycapes and San Pedro in Ivory Coast recently loading its first nickel ore shipment on a Post-Panamax.

## Over Panamax (85,000–99,999 Dwt)

There is growing split between the popular 85,000 Dwt design and the integration of Japanese 99,000 Dwt designs, that are bridging the gap between Post-Panamaxes and Babycapes. The biggest trade for Post-Panamaxes remains coal from East Coast Australia shipped into Japan and China, representing 40% of their utilisation in 2023. For the first-generation 93,000 Dwt units, the future looks unclear as they grow older and their valuations are put to test when compared to new-eco designs. A large majority of the 93,000 deadweight units were delivered between 2010 and 2012. As they enter their 15th year of service, some charterers will turn their backs on them. Put into numbers, a little over 30 of the 230 units in the 90–94,000 deadweight segment are built post-2013.

We therefore are left with an Overpanamax sector split between (1) predominantly Chinese built 85,000 Dwt units closely resembling Kamsarmaxes, but without the liquidity of grains cargoes for the US and East Coast South America (2) large Japanese designs resembling more Babycapes than the 85,000 Dwt design (3) first generation tonnage, predominantly 93,000 Dwt, with a few larger Japanese designs.

## Babycapes (100,000–125,000 Dwt)

Last year's predictions for grain demand on Babycapes came to fruition, with a 25% growth y-o-y for SBM shipments out of East Coast South America. This also ties into a notable increase in Babycape activity in the Indian Ocean where Persian Gulf aggregates and chrome ore out of South Africa and Mozambique offered some liquidity to operators west of Singapore.

In the Atlantic, coal flows shifted East with weak European demand that was largely offset by Indian and Chinese imports. For example, Baltimore US steam coal exports saw a 380% y-o-y increase on Babycapes, with charterers able to find Babycape freight below that of Capesizes during strong Capesize markets. Conversely during 1H23 Babycapes offered a notable discount to Panamax on the fronthaul grains route during low Capesize markets. The bulk of Babycape volumes nevertheless remain Australian iron ore, bauxite, and coal to the Far East, accounting for about 55% of all seaborne volumes hauled by Babycapes.

On the supply side, the fleet is relatively young, with about 67% of the existing Babycape (100–125k Dwt) fleet is between 11 to 15 years old and almost 24% of the existing fleet being 10 years old or young. This is considering an active fleet of 159 vessels, representing roughly 18 million Dwt. There are 2 units in the orderbook scheduled for 2026, while it is worth noting 4 deliveries were made to ArcelorMittal this past year. In this environment, Oldendorff, the largest owner and operator of Babycapes conducted a large drydock program that saw technical improvements made to their owned tonnage, in order to lower fuel consumption and emissions. It will be interesting to see how big of a difference these upgrades will make to CII ratings.

## Panamax (68,000–84,999 Dwt)

Last year saw the Panamax market reflect the latest trends and challenges seen across the maritime industry. The market has been on the downslope since the strong rally in 2021 which drove the P5TC to average around \$27,000/day that year. Indeed, while P5TC averaged around \$20,700/day in 2022, the average sank to only \$12,800/day in 2023. Nonetheless, last year's average still stood above 2019 and was similar to 2018. To provide some further context, in 2023 the lowest point of the P5TC was \$7,277/day in February and the highest was \$21,966/day in December.

After three consecutive years of La Nina (wet weather phenomenon), El Nino kicked in, bringing dryness to the US. This reduced US crop volumes but also led to supply chain disruptions; notably as low water levels hit transit along the Mississippi River and through the Panama Canal. Together, these cut the throat of the US grain market and disrupted shipping across all sectors. The low rainfall in Panama (October saw the lowest recorded monthly precipitation since 1950), led to unprecedented low levels in the Lake Gatun, which saw measures taken to preserve water. Less transits and lower drafts meant that this route became unfeasible for many Panamax trades. This was not just due to increased costs or delays, but that draft restrictions meant that a fully laden Kamsarmax vessel could not pass through the canal. This resulted in a 45% reduction y-o-y in total transits by 68,000–85,000 Dwt vessels. The Panama crisis also saw insufficient Far East ballasters transiting to the US Gulf, further tightening the ballaster profile in 2H23.

Not only did North American grains struggle, but Argentinian and Uruguayan exports dropped by 40% and 38%, respectively. However, Brazil saw total grain exports climb by 23% y-o-y, thereby offsetting the aforementioned losses so that total ECSA grain exports rose by 1.5% y-o-y. These exports were also driven by strong Chinese demand for soybeans (+11% y-o-y) and corn (+32% y-o-y). Brazil has delivered strong support to Panamax and Kamsarmax, which hauled about 70% of ECSA shipments last year. Furthermore, Brazil represented 82% of the total ton-mile generated out of ECSA which was 9% higher y-o-y in 2023. Despite higher volumes, rates were not as well supported. The Baltic Exchange P6 index representing this route averaged \$13,500/day, significantly lower than the \$21,264/day averaged in 2022. The lowest point was \$8,245/day in February whilst the highest point was in April at \$18,513/day (vs \$10,750/day and \$30,709/day in 2022 respectively).

Reflecting China's reopening, there was a notable increase in the country's seaborne coal imports which surged by 49.8% y-o-y. Coal shipments from Indonesia to China increased by 21.5% y-o-y, with Panamax and Kamsarmax experiencing a proportional uptick of 21% y-o-y for this trade. After a near two-year ban, China resumed its coal purchasing from Australia importing, 56.4 million metric tons. Notably, 17.5 million metric tons were transported on Panamax/Kamsarmax, slightly surpassing the pre-ban (2019) volume of 17.3

million metric tons.

### Top 10 Seaborne Coal Importers, All Vessel Sizes

Seaborne Coal	Volumes (mt)			
	Discharge Countries	12m–2022	12m–2023	y-o-y%
China		249.7	374.1	+49.8% ●
India		227.9	245.0	+7.5% ●
Japan		180.3	159.3	-11.7% ●
Korea South		125.5	116.9	-6.9% ●
Taiwan		62.0	58.1	-6.3% ●
Vietnam		29.9	48.9	+63.5% ●
Turkiye		37.9	38.6	+1.8% ●
Malaysia		35.0	37.0	+5.8% ●
Philippines		30.8	35.8	+16.3% ●
Netherlands		49.0	32.0	-34.8% ●
<b>Top 10</b>		1028.0	1145.7	+11.4% ●

In contrast to China, the rest of the world is starting to see a contraction in coal imports, so that seaborne coal shipments grew by a modest 6.4% in 2023. Despite an increase in coal transported on Panamax and Kamsarmax (+13.5% and +5.6%, respectively), this was insufficient to offset the unwinding of supply chain inefficiencies. Factors such as sharply less congestion at Chinese ports, the removal of quarantine measures, and the reversal of positive spillover effects from the container market were key contributors to a substantial 42% y-o-y decline in the average of the P3A (Baltic index route for a Pacific round voyage) last year.

### Seaborne Coal Volumes by Vessel Sizes

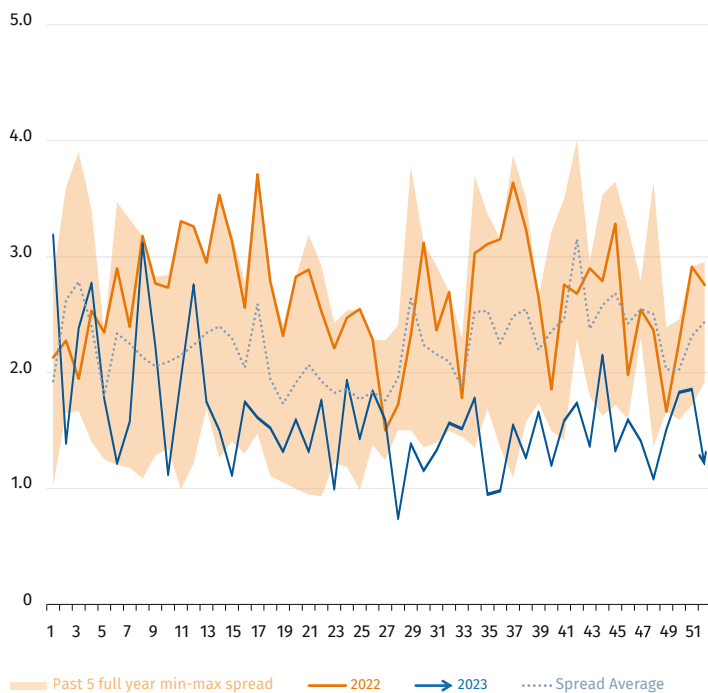
Seaborne Coal	Volumes (mln mt)			
	Vessel Segments	12m–2022	12m–2023	y-o-y%
Cape		298.3	295.9	-0.8% ●
Kamsarmax		233.4	246.6	+5.7% ●
Panamax		205.3	232.9	+13.4% ●
Over Panamax		179.7	181.9	+1.2% ●
Supramax		131.5	159.6	+21.3% ●
Ultramax		75.3	93.8	+24.6% ●
Babycapex		49.5	45.0	-9.1% ●
Handysize		31.0	31.6	+1.9% ●
Handymax		23.7	28.1	+18.6% ●
Minibulk		25.2	19.9	-21.0% ●
Small Cape		8.1	6.5	-19.8% ●
<b>All</b>		1261.1mln	1341.7mln	+6.4% ●



Furthermore, a warmer-than-usual winter and reduced economic prospects saw Europe’s seaborne coal imports plunge by a whopping 29% y-o-y.

Lower European coal imports were a double-edged sword. Initially, it explained why sub-Capesize vessel rates struggled for the first six to eight months of 2023. However, it eventually partially contributed to acute North Atlantic tonnage tightness at end-2023 as fewer vessels were naturally positioned in the region upon discharge.

**Europe (inc. Baltic Seaborne Coal Imports Volumes) — All Vessel Sizes by Load Year and Week (mln mt)**



So, despite seeing continued demand growth in some regions, coupled with supply-side issues such as the Panama restrictions and more recently issues concerning the Suez Canal, it was not enough to support hire rates at last year’s levels. A factor to play a role in 2024 includes the introduction of EU ETS — where vessels trading in Europe will need to purchase emissions allowances. This could lead to an increase in modern, less polluting tonnage trading in the North Atlantic. Also, we should start to see the impact of vessel CII (Carbon Intensity index) ratings. Indeed, we have already seen some vessels, in particular less energy efficient tonnage, slow down to reduce emissions or delete full speed and consumption figures from their descriptions. This could be a further supply side restriction if it persists.

**Supramax/Handysize**

In contrast to 2022, the geared bulkers market was sluggish, with Supramax S10TC averaging \$11,240/day (compared with \$22,152/day in 2022 and \$26,770/day in 2021). The first quarter set the tone with on-par levels between \$10,028/day and \$10,852/day, rising to \$14,853/day during the stronger fourth quarter. Handysizes (25,000–45,000 Dwt) told a similar tale. After averaging \$21,431/day in 2022 and \$21,337/day in 2021, last year they averaged \$10,431/day.

While containers can no longer function as the ‘X’-factor, the small-sized segment managed to best its larger counterparties in volumes gains in 1Q23. Firstly, there’s the absence of Indonesian export ban in January 23, with most shipments heading to China, Generally speaking, Indonesian coal shipments had been the key in igniting geared bulkers’ fiery performance in mid 1Q23. That provided the jolt of energy that woke S10TC from its slumber. Secondly, there was an increase in backhaul steel shipments from China as domestic demand wobbled. Thirdly, we welcomed the returned of Indian iron ore shipments after the export duty was scrapped in late 2022.

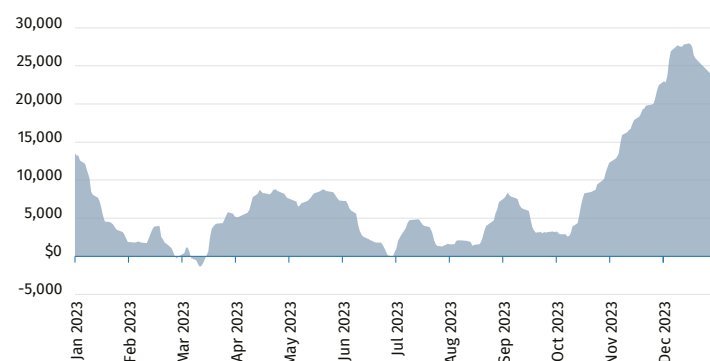
Q1 market movements seemed influenced by basic seasonality, speculation about China reopening and the Ukraine war. However, From Q2 onwards the market looked very different. The Chinese economy seemed unstable, akin to previously mentioned L-shaped recovery expectations. Although the decline in construction and infrastructure had only a limited effect on smaller sizes, it did nonetheless increase the availability of regional tonnage (so that both congestion and rates were kept down.)

**Geared Bulkers Exports Volumes FY2023, y-o-y Change (mln mt)**

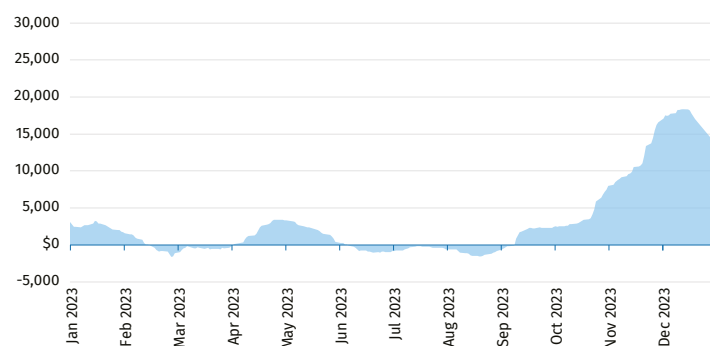
Top Loading Countries	Ultramax	Supramax	Handymax	Handysize
Indonesia	+19.17	+20.77	+5.10	+4.52
USA	+4.16	-1.02	+1.58	-3.20
Russia	+0.37	+19.78	+3.11	+6.50
Brazil	+5.67	+1.45	+0.21	+3.30
China	+6.34	+10.18	+0.59	+2.74
Australia	+4.52	+0.65	+0.79	+0.17
India	+6.15	+8.91	-1.30	-2.29
Vietnam	+1.75	+1.87	-2.67	+2.01
Canada	+4.52	+0.65	+0.79	+0.17
Philippines	+0.01	+5.70	+0.12	+0.07
South Africa	+1.73	-1.64	+0.10	+0.24
United Arab Emirates	-0.36	-0.47	+3.09	+0.87
Argentina	-2.92	-3.66	+0.31	-3.37
Japan	+0.65	-2.54	-0.08	+1.51
Chile	+1.39	-2.00	+0.50	-0.11
Saudi Arabia	+1.69	-0.27	-0.20	+0.68
Turkiye	-3.22	-7.36	-0.80	-2.22
Oman	-0.11	+4.47	+0.77	+1.18
Thailand	+1.03	-3.19	+0.29	-0.92
Romania	+2.12	+2.85	+0.14	+4.62
Ukraine	-1.87	-0.96	+0.36	-2.75
Worldwide	+60.43	+48.79	+10.01	+20.95
Worldwide (%)	+15.4%	+8.3%	+7.8%	+4.1%

Shaking off their Pacific counterparts, daily Handysize and Supramax Transatlantic vs Transpacific premiums rose above \$25,000/day and \$15,000/day, respectively. This illustrated a return to the pre-Covid trend that a stronger Atlantic market encouraged Atlantic repositioning against Pacific tonnage overexposure.

### Supramax 58K : T.Atlantic Premium over T.Pacific (S4A-S10) (\$/day)



### Handysize 38K : T.Atlantic Premium over T.Pacific (HS4\_38-HS5\_58) (\$/day)



The closing of the Black Sea grain corridor in July created further uncertainty. Fewer owners were willing to call at Black Sea ports and in turn this bolstered the number of Handy and Supra vessels available in the Mediterranean. This oversupply kept regional rates low for those conventional and non-premium routes.

With sentiment being pessimistic until the end of Q3, the relief brought by Supramax and Handysize routes from the US Gulf made the market soar, and in turn this trickled down to all other parts of the Atlantic during the comparatively strong Q4.

The sudden push on the USG was a consequence of the effects El Nino on the Panama Canal. Rates shot up to reflect decreasing transit numbers, and the number of ships available in the region fell, increasing the demand for ballast from elsewhere in the Atlantic. This inefficiency increased overall ton-miles (volume of shipped cargo times days at

sea) as ships had to use other routes, notably the Strait of Magellan, thus firming market levels up to December.

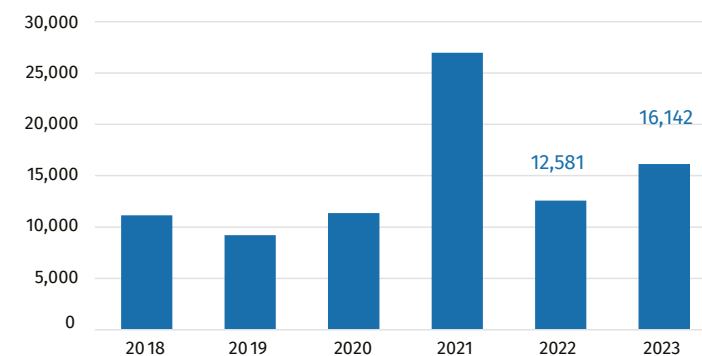
The substantial West African rainy season increased pressure on suppliers, and created additional supply side inefficiencies, decreasing cargo volume from the region by about 6% year on year. But, more positively, there was an annual increase of about 30% in intra-African geared bulk maritime trade last year.

The year ended with an unexpected conflict in the eastern Mediterranean. This brought further consequences on worldwide seaborne trade, particularly regarding Suez Canal transit, and security in the Gulf of Aden.

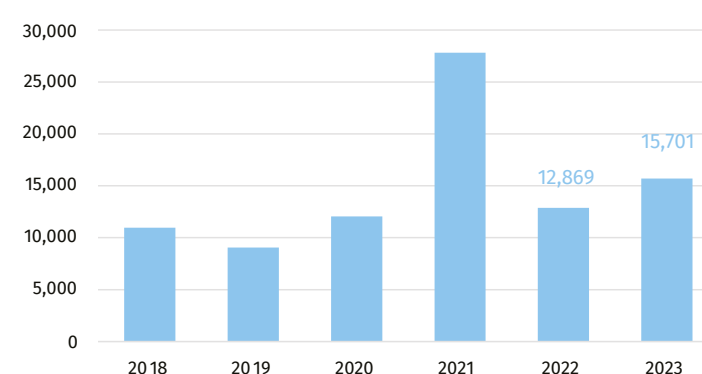
Consequently, the strength of the Atlantic Basin singlehandedly dragged up the average S10TC and HS7TC rates in December to above \$15,000/day apiece. The last time such figures were printed was back in 2021 when geared bulkers were enjoying an unexpected tailwind from then container bonanza.

As we enter 2024, we clearly observe a reshuffling of the main market physical influences mainly through two inefficient waterways, two major conflicts, and the pioneering implementation of the carbon ETS in European maritime trades.

### S10TC December Freight Rates (\$/day)



### HS7TC December Freight Rates (\$/day)



# Forward Freight Agreement (FFA)

A weak start of the year on FFA saw rates tumbling in the first 2 months in all sizes only for the market to rebound in March. The Capesize index plunged from \$13,561/day to \$2,630/day, the Panamax index from \$11,608/day to \$5,941/day and the Supramax index from \$10,646/day to \$6,874/day. This demonstrated how challenging the market was. The trend in the FFA market last year was similar to 2020 except that the market rebounded much sooner this time.

Capesize derivative levels were relatively rangebound in Q2 and Q3 but found significant support in Q4 to push above the \$20,000/day level, resulting in a much better yearly average for 2023 at \$16,389/day. Panamax and Supramax both had their fair share of challenging periods around Q3. However, they managed to finish the year stronger in Q4. Capesize annual averages rose by 3.24%, but Panamax and Supramax values almost halved from 2022, down by -41.61% and -50.55%, respectively.

One positive to add is that trading volumes for FFA increased in 2023 after dropping in 2022. A total of 1,143,651 lots were traded on Capesizes (+43.8%) compared with 794,939 lots in 2022. Panamax volumes rose from 900,685 to 1,246,599 lots (+38.4%) while Supramax volumes increased from 417,098 to 521,733 lots (+25.1%).

Looking forward to 2024, there are several factors that might encourage the market to move higher: notably the disruptions to the Panama and Suez Canals. Meanwhile, Chinese commodity demand remains resilient. Our forecast is for Capesizes C5TC to average around \$21,000/day, and for Panamax 4TC and Suramax 10TC to average around \$14,000/day to \$15,000/day, respectively.

Image:  
BOREAS VENTURE 43,500t Dwt Bulker (B.Delta design),  
built by Qingshan Shipyard, Sucden Armateurs,  
delivered in 2016 — Vessel sold to clients of Mssrs  
Suisse-Atlantique in 2023 and renamed Bariloche.





# Sale and Purchase (S&P)

Looking back on 2023, the dry bulk market – like every other shipping sector – had to overcome a myriad of challenges. On top of the new environmental regulations that came and are still coming into effect (EEXI, CII, EU ETS etc), shipowners had to navigate some extremely uncertain and volatile market conditions. Prominent events included rising global inflation, China’s economic woes, the war in Ukraine (and sanctions against Russia), high bank interest rates, disruptions to the Panama Canal and Red Sea and war in the Middle East. All played a major role in distorting market sentiment and investment decisions for many participants.

As a result, on the one hand it was not surprising to see that these unwanted adversities hit the number of second hand transactions that took place in the dry bulk market during 2023 which decreased by a relatively benign 10-11% y-o-y. This also reflects that a number of shipowners opted to reinvest their profits from the sale of older tonnage in newbuildings and deleverage their balance sheets.

On the other hand, and despite the poor drybulk freight market witnessed in Q1 and Q3, the sale and purchase market were remarkably resilient when it came to asset values. All dry-bulk asset classes ranging from Handysize to Capesize, from 10 years old to resale, appreciated in value compared to 2022. More specifically, the average indicative price of a 5-year-old Capesize bulker rose by 22%. Meanwhile, on the

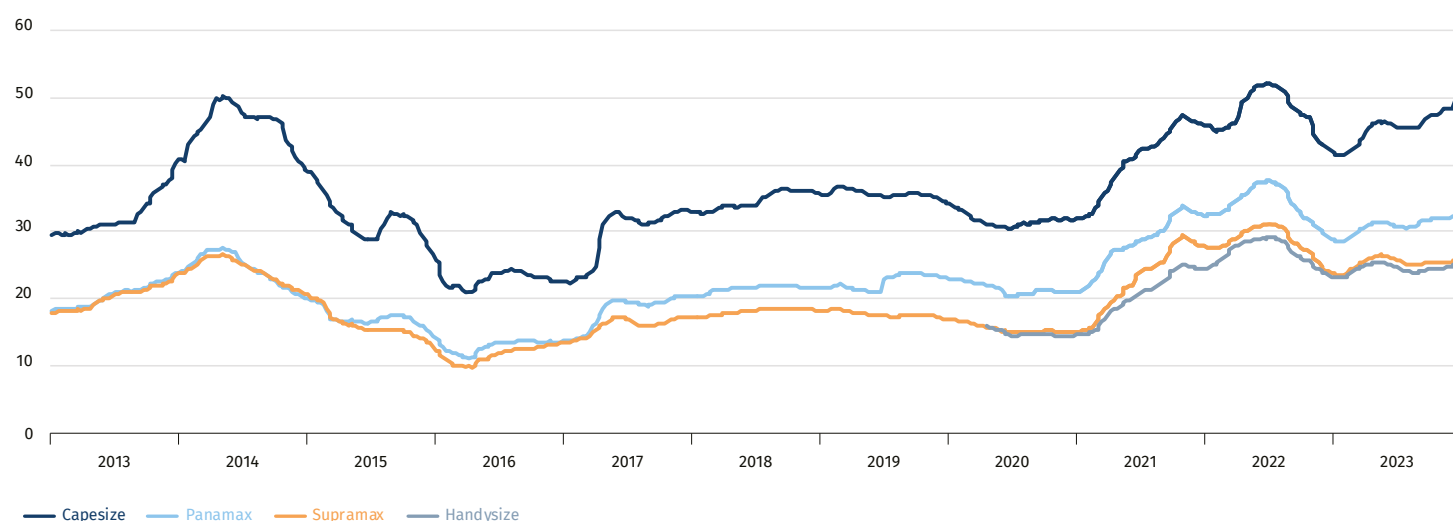
same basis a Kamsarmax/Panamax appreciated by 12%, a Ultramax/Supramax by 9% and a Handysize by 11%.

For the most part of 2023, Sellers of drybulk tonnage, having accumulated good earnings from the previous two years of trading, managed to hold out on their asking prices and were vindicated with the sudden upswing of the drybulk freight market in early Q4. This was especially evident with the increase in sales of vintage vessels (15-20 years old) that struggled to attract buying interest throughout the year.

The overall attention of buyers was mainly on renewing their fleets with more modern design and eco-friendly type of dry bulk carriers in the age group of 5-10 years old, with Handysize and Ultramax/Supramax winning the lion share of sales (in terms of number of units) for another year. It is also worth noting that the driving force of the dry bulk market, the Capesize sector, recorded significant second hand sales in 2023 of approximately 110 ships.

Moving into 2024, the low dry bulk orderbook (approximately 8% of the active fleet), long lead times for newbuilding deliveries and high newbuilding prices, should translate into another active year for the second hand dry bulk market. However, this could be equally unpredictable as the year just gone since geopolitical, financial, and environmental issues continue unabated.

## 5 Year Old Bulker Price (mln \$)



## Capesize values end 2023: (175,000–182,000 Dwt)

### 10 year old:

A special survey passed and BWTS retrofitted Capesize, built in Korea or Japan, was worth about \$31–32 million at end of the year, i.e. 14–15% more than end of 2022 where values ranged around \$27–28 million.

### 5 year old:

Eco-type (180,000 Dwt) Capesize values stood at \$50–51 million by end-2023, a rise of 21–22% from 2022 values of \$41–42 million.

### Newbuilding re-sale:

The value of a Capesize re-sale built in Japan posted an increase of 25–26%, ending 2023 around \$68–69 million.

## Panamax-Kamsarmax values end 2023: (76,000–82,000 Dwt)

### 10 year old:

At the end of 2023, Panamax (76,000 Dwt) values were at similar levels compared to end of 2022 at about \$19 million whereas Kamsarmax (82,000 Dwt) values gained some ground with prices finishing 2023 in the region of \$23–24 million (+9–10%).

### 5 year old:

Kamsarmax (eco-type) values closed out the year at about \$32.5 million which indicates an average increase of 14% versus end 2022 values of \$28.5 million.

### Newbuilding re-sale:

For prompt (3–6 month) delivery ex-Japanese yards, Kamsarmax re-sales based on NSF contracts and 20/80% payment terms were priced at around \$40 million as opposed to 12 months earlier at \$37–38 million (+6.5–7%). Similarly, Chinese-built Kamsarmax re-sale values appreciated from \$33–34 million in 2022 to \$37–38 million in 2023 (+12%).

## Supramax-Ultramax values end 2023: (56,000–58,000 and 60,000–64,000 Dwt)

### 10 year old:

The price for this type/age of asset (56,000–58,000 Dwt) experienced growth in 2023, rising by 11% over 12 months and ending the year in the region of \$19.5–20.5 million.

### 5 year old:

Japanese eco-type Ultramax (60,000–63,000 Dwt) values ended the year at levels of \$30 million recording an average increase of 9% from the previous year.

### Newbuilding re-sale:

By the end of 2023, China built Ultramax were priced at about \$34–35 million, whereas Ultramax built in Japan were priced at about \$37 million, a y-o-y appreciation of 9.5% and 5%, respectively.

## Handysize values end 2023: (32,000–42,000 Dwt)

### 10 year old:

A Japanese-built Handysize (32,000–33,000 Dwt) was worth about \$15.5–16 million at end 2023 which represents an average escalation of about 3% in the values of this asset class when compared with end-2022 values of \$15–15.5 million.

### 5 year old:

The larger eco-type units of 37,000 Dwt ended the year with values in the region of \$25.5–26 million, an improvement of 10.5–11% in 12-months.

### Newbuilding re-sale:

At the end of 2023 the values of 38,000–42,000 Dwt Japanese-built units were between \$32–33 million, about 10% higher than 2022.

(Estimated Values are for Japanese, Korean and top tier Chinese yards — for units built at lower quality Chinese yards a discount of at least 10–15% should be expected.)



Image:  
MV MYRTO, Kamsarmax  
Gearless Bulk Carrier,  
82,131 Dwt, built by  
Tsuneishi Shipbuilding Co.,  
Diana Shipping Services  
S.A., delivered in 2013.

Image:  
FOMENTO THREE,  
209,935 Dwt, Drybulk  
Carrier — CAPE, built  
by Tsu Shipyard, Mie  
prefecture Japan,  
Fomento, Oldendorff,  
delivered in 2018.





# Tanker

Image:  
MT MARIA A. ANGELICOUSSIS — LNG dual-fuel VLCC, 320,917 mt Dwt built by  
Samsung Heavy Industries and operated by Maran Tankers, delivered in 2023.







Last year came to prove our stipulation in early 2023 that a new upward cycle for the tanker market has begun.



# 2023: A Year of Consolidation

Indeed, the tanker freight market went from strength to strength in 2023 after it was marked by a variety of trade shifts which themselves were driven by geopolitical events, OPEC+ oil production cuts and disruptions on the back of El Nino.

As per AXSMarine data, combined crude and oil products ton-miles surged by approximately 7.0% y-o-y, while nominal tanker fleet supply is estimated to have grown by a mere 2.0%. Crude tanker spot earnings outperformed product tanker spot earnings on average across the major Baltic indices, as the ton-mile multiplier effect from the successful redirection of Russia crude oil exports to Asia was more pronounced in 2023 than the equivalent multiplier on oil products.

The market was dominated by tanker fleet supply inefficiencies caused by the redirection of the Russian oil exports away from Europe, primarily towards the East of Suez (ie. China and India). Simultaneously, the high non-OPEC oil supply response drove a surge in crude export barrels from West to East, thereby keeping crude tanker fleet utilisation high. This trade recalibration resulted in the outperformance of most of the Atlantic crude tanker indices. On the other hand, while product tanker ton miles also benefited from market dislocations, average spot earnings on major MR and LR2/LR1 indices were lower than in 2022, amid lower CPP imports in the West.

While quarterly earnings appeared volatile, the annual average Suezmax and Aframax Baltic indices were close to their 2022 averages, albeit with spot earnings in the Atlantic and Mediterranean averaging higher y-o-y. The highest percentage upside in crude freight, as this is assessed by the Baltic weighted average TCE was seen in VLCC spot earnings, which rose more than six-fold compared to 2022. Nonetheless, they still underperformed the absolute earnings of Suezmaxes and Aframax.

Freight strength was more pronounced in the Atlantic, as West to East crude oil trade rose, amid OPEC+ supply cuts. Crude oil export volumes out of the Atlantic accelerated with those out of the US and South

America hitting records. China was the main driver of oil demand as its refineries processed record volumes of imported crude during the year. Furthermore, India doubled their imports from Russia.

The sub-VLCC segments benefited from higher utilization, supported by the 'grey' fleet serving a large part of Russia's oil exports following the enforcement of the G7 crude and oil products price caps. The 'grey' tanker fleet (including that carrying Venezuelan and Iranian crude) is estimated at around 8% of the entire active tanker fleet. Accordingly, its absence from mainstream trades boosted utilization of mainstream tankers.

The earnings of LR2s were strong, as Middle East to West oil product flows accelerated amid refinery capacity expansions in the former. However, these were capped somewhat, given the increase in demand for short-haul trades which saw the MR2/MR1 share of CPP exports to West of Suez increasing. Furthermore, Panama Canal traffic disruptions, amid the worst drought in decades driven by a strong El Nino, increased MR supply inefficiencies in the second half of 2023. This drove a rally in MR freight rates in the Atlantic, which nevertheless was not enough to exceed the quarterly earnings seen in the second half of 2022.

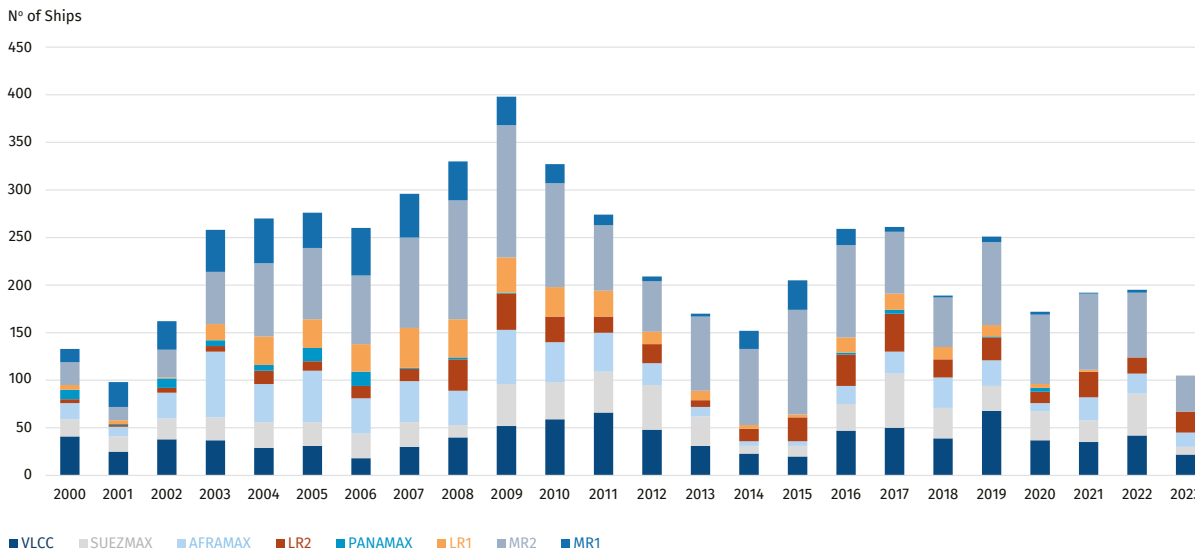
Looking forward, increased scrutiny on compliance with G7 price caps and the narrowing of the discount of Russia oil — as 2023 marked the peak of the maximum disruptions caused by the rebalancing of Russian trade flows — means that mainstream tankers may increasingly shun away from Russian trade, just as Red Sea trade disruptions take center stage. The onset of the Israel-Hamas conflict in the last quarter of 2023 led to a broader geopolitical escalation in the Middle East and to Suez Canal traffic disruptions with re-routings around the Cape of Good Hope providing a boost to tanker ton-miles, with the impact on product

tankers more pronounced. Meanwhile, China has raised its 2024 crude oil import quotas for private refiners and refining capacity additions are expected to further support its crude oil imports. In this context, and notwithstanding any negative exogenous shock, tanker demand fundamentals should continue to be constructive.

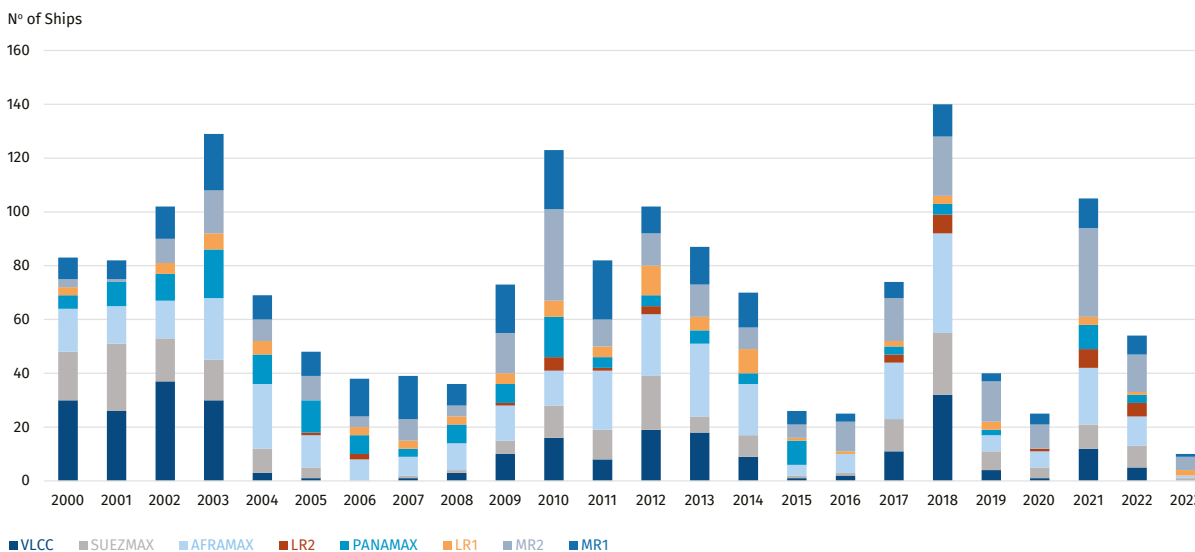
Last but not least, supply dynamics appear particularly favorable in 2024. Despite a rise in the orderbook as a share of the active fleet to 7.4% up from 4.5% during the same period last year, supply growth is projected to decline amid a drop in deliveries to their lowest

level since the mid-90s. Real fleet supply growth is expected to slip below nominal growth as declines in Suez Canal tanker transits and wide scale re-routings (assuming that they persist), are expected to drive fleet imbalances between the basins. These imbalances should arrive in volatile waves throughout the year. Against this simmering geopolitical backdrop, maritime's phased inclusion in the European Union's Emissions Trading Scheme (EU ETS) from 2024 onwards is expected to increase freight rates, with cost mitigation efforts on the fuel consumption and emissions front expected to favor eco units.

### Annual Tanker Deliveries



### Annual Tanker Demolition



# Time Charter

Following a highly volatile and exciting year in 2022, 2023 wasn't a 'boring' year at all. The unstable geopolitical environment, an uncertain global economic situation, new environmental regulations and declining tanker fleet supply growth were the main fundamental drivers of the tanker time charter (TC) market. These, sometimes, contradicting forces contributed to record high TC rates on long periods (3 years and longer), reflecting expectations for upside risks in spot freight, inflated asset values and the scarcity of eco tonnage available for TC.

The year started with a correction from the highs of December 2022. While 1 year clean tanker TC rates never managed to return to the highs of 2022 (except briefly on MR2s), 1 year crude tanker TC rates rose to elevated levels in March-April 2023. VLCC 1 year TC rates rose to their highest level since 2020 at \$57,000/day in March, while Suezmaxes rose to their highest level since 2008 and Aframax 1 year TC rates climbed to record highs of \$53,000/day and \$52,000/day, respectively, when factoring in an eco-premium.

In the first quarter, 1 year MR2 TC rates hit record high levels with some eco MR2s being fixed around \$35,000/day in March and April. On LR2s, 1 year TC rates gradually increased back to \$50,000/day in March. Meanwhile, 3 year TC rates rose to \$40,000/day on eco scrubber-fitted LR2s. However, the CPP spot market correction in May-June led to a

correction in TC rates. Since then, 1 year TC rates on CPP tankers have been stable and only started to rise again from November 2023. On longer period, owners kept rate ideas unchanged from the first half of the year despite the weaker spot market, making it more difficult to work on long TC deals. On the MR1s, 1 year TC rates got closer to MR2 TC rates, reflecting the growing scarcity of modern MR1s.

The crude tanker segment saw more volatility than clean tankers in the 2nd half of the year. Indeed, from October lows (especially on 1 year TC rates and shorter periods), crude tanker TC rates rose alongside increased spot earnings especially on Suezmaxes and Aframaxes. However, this led only to more activity on the short TC front, due to weak FFA values for 2024 among other reasons, and then on the 3 year or longer periods.

Furthermore, it was interesting to see an increasing number of market participants willing to discuss periods longer than 3 years, reflecting charterers' concerns to secure eco tonnage and owners' willingness to take advantage of these elevated TC rates. 2024 will most likely continue to see a two tier market with short TC activity remaining healthy while more long TCs will be discussed especially on the newbuildings for 2025 delivery.



Image:  
BANTRY BAY, MR2, 49,999  
Dwt, Hyundai Vinashin,  
built by Asiatic Lloyd,  
delivered in 2023.





Image:  
Mt MARIA A.  
ANGELICOUSSIS — LNG  
dual-fuel VLCC, 320,917  
mt Dwt built by Samsung  
Heavy Industries and  
operated by Maran  
Tankers, delivered in 2023.

## VLCC

2023 was a volatile year for the VLCC market with the continuation of sanctions meaning that global crude trade remained split between conventional market business and crude carried on shadow or 'grey' fleet ships. Meanwhile, the main market driver has been crude oil import demand from China. VLCC rates outperformed in the first half of the year, as OPEC+ oil production cuts took their toll on rates in the second half, with Q3 being the weakest quarter in the year, as Saudi Arabia crude exports dropped to their lowest level since 2Q21. Nevertheless, increased West to East crude oil exports came to the rescue to offset the loss, amid record high demand from China. This drove VLCC rates in the Atlantic (TD22) to outperform TD3C on average in the second half of the year by 17%.

While VLCC average spot rates (V2TCE) saw the highest upside percentage wise compared to 2022, they continued to underperform the baskets of Suezmax (S2TCE) and Aframax (A6TCE) earnings by more than 50% on average. Average quarterly spot earnings on a non-eco, non-scrubber fitted ship voyaging on TD3C (Ras Tanura to Ningbo) peaked in 1Q23. They then declined steadily to average \$20,440/day in Q3, before recovering to average \$37,962/day in Q4. Supply and demand fundamentals remained weaker compared to smaller sizes, yet the continued potential for trade disruptions due to geopolitical tensions and conflict, kept earnings sentiment upbeat and contributed to an overall healthy year for VLCCs.

Supply side fundamentals improved in 2023, but the VLCC fleet grew at a higher pace compared to other sizes, thereby stifling earnings. No ships were scrapped while 22 newbuilds were delivered. The VLCC fleet grew by 2.4% to 909 units, compared to +2.0% of nominal fleet growth of the crude tanker fleet, but real VLCC fleet growth was higher than nominal amid an increase in speeds. However, the truncation of the global fleet and slow yet continual growth of the dark fleet meant that this impact was perhaps not as felt in the open market as the overall fleet growth number may suggest. In 2024 supply side fundamentals

appear more constructive this year than last given that only two deliveries are expected (one of which has already been launched) and an overall order book of just 2.5% of the fleet.

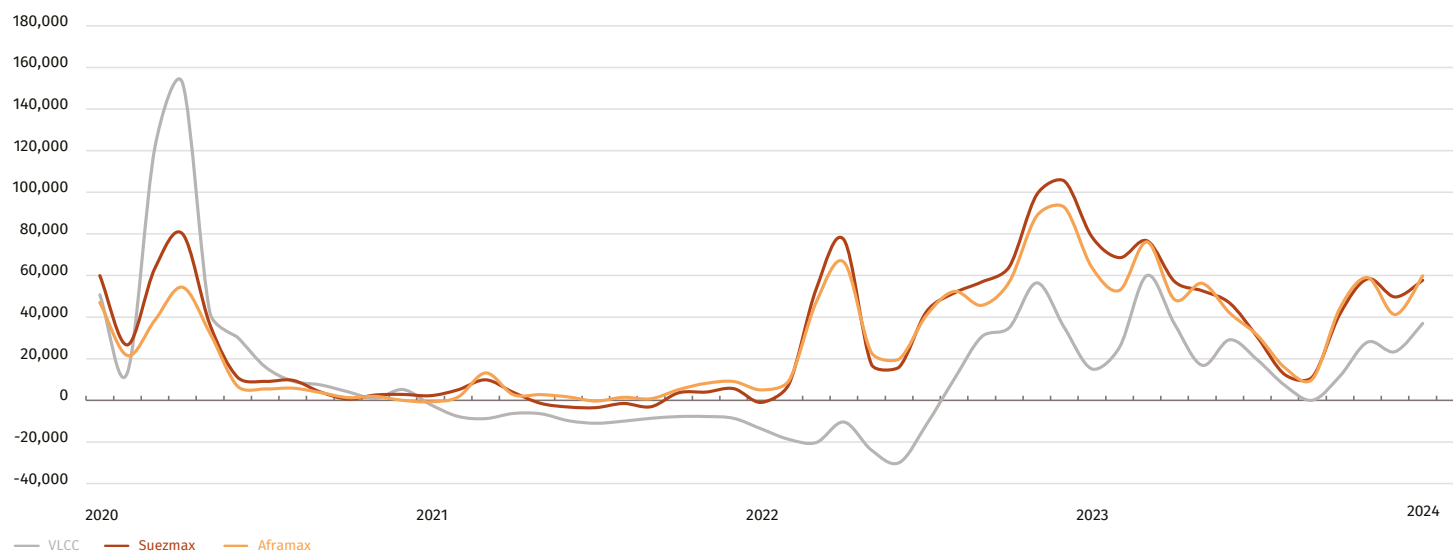
Global oil demand grew by 2.3 mb/d in 2023 yet the continuation and deepening of the OPEC+ output cuts was a bearish factor for VLCCs, as several major countries which partook in the cuts were in the Arabian Gulf, the main lifting area for VLCCs. This came despite an increase in Iranian crude oil exports to the highest level since 2018 to 1.5 mb/d, of which 67% was shipped on VLCCs (+7% y-o-y), as Iran ships all of its oil on its own NITC controlled fleet or on 'grey' fleet tankers. While the impact of more Iranian oil was muted mainstream VLCCs benefited from the rise in non-OPEC+ barrels, notably from the US. This meant the US Gulf VLCC market maintained its gains made in 2022 while the Brazilian VLCC market grew significantly. Brazilian exports on VLCCs grew from an average of 16 cargoes per month in 1H23 to an average of 23 cargoes per month in 2H23 with the majority of barrels heading to China. US Gulf export cargoes on VLCCs grew slightly, from an average of 40 cargoes per month in 1H23 to 41 cargoes per month in 2H23. These long voyages to the Far East were a major contributor to ton-mile demand.

VLCC cargoes from West Africa declined from an average of 26 cargoes per month in Q1 and Q2, to an average of 24 cargoes per month in Q4 because of declining production volumes in Nigeria and Angola. Nevertheless, on average throughout the year, VLCCs increased their share of combined crude liftings from Nigeria and the US for shipment into Europe. The temporary lifting of sanctions on Venezuelan crude meant conventional market vessels could partake in this premium business. However, due to poor local infrastructure, stems remained unreliable and led to vessels waiting for several weeks to load, further reducing available tonnage in the Atlantic.

Looking forward, global oil demand growth is projected to decelerate to 1.4 mb/d in 2024, yet the potential for supply side disruptions due to various regional conflicts in the world cannot be underestimated and, how long Red Sea traffic is disrupted for remains to be seen. This

gives rise for tanker fleet supply inefficiencies to intensify, with VLCCs benefitting from the positive spillover effect from smaller sizes. In addition, maritime's inclusion in the EU ETS from this year onwards is adding another layer of complexity for the segment at a time when VLCCs' share in crude shipments into Europe is rising due to cargoes being rerouted around the African Cape.

### Spot TCE Crude Tankers (\$/day)



## Suezmax

Early 2023 was characterized by robust market sentiment following the remarkable performance in the preceding year. The two-tier market continued to retain a significant portion of the fleet engaged in Russian trade, diverting tonnage away from mainstream routes and maintaining TD20 rates within the range of ws100 to ws150 throughout the first quarter. In June, OPEC+ extended crude output cuts by 3.7 mb/d until the end of 2024, along with an additional 1 mb/d reduction from Saudi Arabia until the end of 2023. This development significantly altered the Suezmax market dynamics: with substantial cuts from OPEC+, the prices of similar Russian grades exceeded the \$60 cap imposed by the G7 in December 2022. Consequently, European tanker owners were constrained from continuing to lift Russian oil. Around 55% of the tankers engaged in premium business were Greek-owned, and due to the breaching of the price cap, many ships reverted to conventional business. This sudden influx of tonnage led TD20 rates to drop below ws100 for the entirety of Q3.

In West Africa, another significant event reshaped the overall Suezmax tanker landscape in June: the Nigerian government issued tax bills to shipping companies dating back to 2010, causing owners to refrain from calling at the country. This resulted in a sharp increase in freight

for Nigerian exports, and oil fields nearly came to a halt due to a lack of available tonnage for loading. Presently, a portion of the fleet still declines to load in the country, and a premium is paid for ships calling in Nigeria. Market activities resumed in Q4, following a seasonal downturn, with increased volumes from the US Gulf and Guyana, which pulled European positions away from the West African market. The year concluded on a busy note, as Yemen's Houthi rebels attacked tankers amid the escalation of the Israel-Hamas conflict. This led many owners to suspend all transits via the Red Sea, altering the landscape for 2024.

On the fleet side, there were eight additions and one deletion during the year. Only 40% of the fleet is less than 10 years old, and not many deliveries are anticipated in 2024, maintaining the fleet's relatively advanced age. The average TD20 TCE in 2023 was \$40,350/day, an increase from \$29,000/day in 2022. The average TD6 TCE in 2023 was \$56,700/day, a decline from \$68,600/day in 2022.

## Aframax North Sea/Med

In what has been another year of significant challenges and global instability, 2023 was greatly rewarding for Aframax owners in the

Mediterranean and Northwest Europe. The figures don't lie; TCE earnings for TD7 and TD19 averaged \$45,470/day and \$49,377/day respectively, both surpassing the returns seen in 2022.

The most notable factors that drove the market higher in 2023 were the sanctions and price cap on Russian crude. According to AXSMarine data, ton-miles for Russian crude and DPP exports increased by roughly 38% relative to 2022 and 95% since 2021, with India and China combined accounting for approximately 57% of Aframax imports, up from 37% in 2022 and 18% in 2021.

Another significant development was the upset caused in the Red Sea due to Houthi attacks on merchant vessels. With most owners reluctant to transit via the Suez Canal and instead choosing to reroute via the African Cape; available tonnage was further tightened. This should provide support to rates for as long as it persists.

Looking forward, it will be interesting to see if the licenses issued by the Biden administration on Venezuelan oil until April 2024 are going to be extended and the impact that this fresh inflow of cargoes is going to have on the global shipping market.

Last but not least, the EU ETS has arrived, adding extra costs, introducing new clauses and further shaping the future of maritime transportation.

Overall, the outlook for 2024 is positive, with 2023 already setting the tone for what to expect. Global instability, EU and global maritime regulations, higher ton-miles and new routes are all adding to owners' confidence, in what could be another very profitable year for Aframax.

## Aframax USG

The USGC Aframax market outperformed in 2023 with rates reaching record levels, following up on a strong 2022 in the aftermath of the Russian invasion in Ukraine. The year was marked by the ban of imports of Russian oil by the EU and the emergence of the US as its top oil supplier. TD25 (USGC-ARA) and TD26 (EC Mexico to US Gulf) rose by 28% and 10%, averaging \$42,600/day and \$54,900/day respectively, marking record high annual levels since the Baltic assessments began. The primary market drivers were record US and South America crude oil exports, with Europe absorbing 30% of their combined exports compared to 27% in 2022, amid the need to substitute Russian barrels.

Oil pricing dynamics were favorable to increased USGC-Europe trade, amid a higher competitiveness of the WTI benchmark compared to Brent and Dubai. The decline in OPEC+ oil supplies and the supply response of the US, made light sweet WTI crude more competitive compared to Dubai, leading to a 14% decline in Middle Eastern crude supplies into Europe. Meanwhile, US crude exports into Europe surged by 26% y-o-y, while EC Mexico exports to the US Gulf increased by 12% y-o-y boosting Aframax utilisation in the area. In turn, US and South

American crude exports to Asia are estimated to have surged by more than 17% y-o-y, increasing the share of liftings on VLCCs in total US and South America crude exports to 38% from 33% in 2022. With South American exports primarily being shipped on Suezmaxes and VLCCs to East of Suez, thereby shifting larger vessels away from the region, Aframax in the USGC experienced less competition. This further contributed to structurally higher Aframax utilisation in the region. Moreover, earnings volatility was lower across the quarters, lifting the freight bottom higher during the 3Q23 earnings slump. Finally, upon the easing of US sanctions on PDVSA, the recovery of Venezuela's crude oil exports to the US benefitted Aframax. This saw the country's exports to the US rise to more than 200 kb/d, approximately 30% of its total exports.

## Aframax East

Whilst rates gradually weakened for much of the year, 2023 average earnings remained one of the highest on record for the Aframax market East of Suez. Whilst previous years might have seen one or two small periods of 'high' TCE's, 2023 was the first to see such a sustained level. The average TCE for TD8 (AG/East) in 2023 averaged an incredible \$44,500/day, compared to \$25,800/day in 2022 and \$1,400/day in 2021.

Nonetheless, the first half of the year was largely inactive, as many significant importing hubs in the East preferred to source oil from Russia, over 'normal' load-ports in the Arabian Gulf or Red Sea. India especially, which for years had amounted to a large proportion of the Aframax East market, shrunk to become a rarer route.

Tensions in the region dominated much of the discussions last year; the civil war in Sudan in April; the 7 October attack on Israel and the subsequent Israel-Hamas war, and finally the escalation of events in December with Yemen's Houthis attacking commercial vessels in the Gulf of Aden. Whilst no doubt of great concern, owners have continued to call and transit troubled areas, and have been able to command stronger premiums in the process. This has sustained earnings at high levels, even in times of a downturn in activity.

In the Far-East, the ongoing breakdown of the SPM & Thailand pipeline issues dominate regional trade for Aframax. In combination with regular runs from Singapore to both South Korea and Australia, tonnage levels have been held at relatively tight levels in the region. Always with the alternative of a ballast to the Arabian Gulf or Red Sea, and with earnings just as lucrative, Aframax owners have spent the year in good standing.





Image:  
HAFNIA LANGUEDOC,  
LR2 Tanker, 99,999 Dwt,  
delivered in March 2023  
from Guangzhou Shipyard  
International Co. Ltd (GSI).

## Fuel Oil

Late 2022 saw a surge in Russian oil product exports, including fuel oil exports, which led to a strengthening of utilisation in the Mediterranean region. This surge was driven by the anticipation of G7 price caps and an EU imports embargo, which faded during the course of the year, with 1Q23 seeing the peak of fuel oil volumes traded.

Throughout 2023, the fuel oil market exhibited its typical volatility as reflected by the moves of the Baltic Exchange's benchmark voyage for 30,000 mt of fuel oil from Tallinn to Amsterdam — TD18. The year began on a high note with the first quarter average (Q1) showing high numbers at ws300 (a TCE equivalent of \$41,600/day), indicating a strong start. However, as the year unfolded, market dynamics shifted. The second quarter average (Q2) witnessed a decline in Worldscale rates to ws245 (a TCE equivalent of \$31,000/day), coinciding with the traditional summer slowdown and an increase in available tonnage. This downward trend continued into the third quarter average (Q3), where Worldscale rates fell further to ws190 (a TCE equivalent of \$15,100/day), reflecting the annual low in demand. In contrast, the fourth quarter average (Q4) experienced a resurgence, with Worldscale rates rising to ws305 (a TCE equivalent of \$42,700/day) due to increased demand and heightened market activity during the winter season.

Another factor which raised the freight is understandable by looking at ship sales to the 'grey' fleet over the past year, our estimate falls within the range of 20 to 25 ships, lowering by much the tonnage in the Baltic, UK Continent and Black Sea.

Russian players in the CPP market faced substantial challenges after the imposition of the diesel export ban in late September, which indirectly hit fuel oil exports. This led to a considerable easing of the Mediterranean market while the UK Continent (UKC) market remained stable. Meanwhile, the dark fleet aggressively pursued any available cargoes in the Mediterranean, resulting in a 50-point difference between the Cross-UKC and Cross-Mediterranean levels by mid-December.

Furthermore, the share of Russian fuel oil exports into Asia jumped to 63% in the second half of the year compared to 54% in the first half. The redirection of Russia crude from the EU to Asia boosted ton miles and a share of Suezmax traditionally transporting fuel oil switched to Russian crude oil trade. This saw more Aframax fuel oil requirements emerging at the expense of MRs.

In 2024, market prospects appear favorable. The ongoing challenges in the Bab-el-Mandeb Strait may necessitate rerouting ships around the Cape of Good Hope, subsequently increasing voyage distances and escalating fuel requirements in West Africa.

During the period from 2024 to 2026, the MR1 fleet is expected to contract with the delivery of only 8 new vessels. Concurrently, the MR1 fleet is aging with more than 30% of the fleet now being above 20 years of age. This aging is expected to reduce the available tonnage for operations aligned with the standards of major Western companies.

## CPP East

### AG

The year started on a strong note for all the AG segments, as bullish sentiment from 2022 carried through into January. Healthy cargo volumes gave owners the opportunity to keep the pressure on, and tighter tonnage lists kept rates firm into April, despite a few hiccups early on. Additional refinery capacity in Kuwait and Oman continued to draw ballasters from other regions, as cargo supply in the West dwindled. Even with additional tonnage in the region, LR2 TCE's were in the high \$30,000's/day for Q1, with the LR1's not far behind in the mid-\$30,000's.

It was a different picture in Q2, however, as refinery turnarounds in Russia left ample disadvantaged tonnage in the region, which ended up competing on regular LR stems, not just the Westbound volumes that we had become accustomed to. Furthermore, charterers relaxed their outlook on tonnage with Russian history, leading to a decline in rates across the board. This really hit home in the second half of the year though, as rates plummeted to some of the lowest levels seen in recent years and drove TCE levels below \$20,000/day in Q3 as tonnage lists swelled with excess ships. The fourth quarter began ripe with promise. Paper led the expectation for the market, and the usual seasonal upturn – but it wasn't to be. Refinery outages in Saudi Arabia and Kuwait postponed cargo stems and vessels were left searching for employment. Later than usual, the market turned upwards, supported by declines in transits via the Suez Canal and owners enjoyed a couple of weeks of sky-high rates in December with TCE's pushing \$15-20,000/day above the average for the year.

2024 promises another shake-up for the industry as the Red Sea disruption has primarily benefited LR2s in the first months of the year, with spot earnings in the East reaching the highest level since 2Q20 at above \$100,000/day. In addition, market participants try to make sense of the EU ETS and how it will impact their bottom line. With clauses still under discussion, which will no doubt be rewritten several times over the coming year, it is still a work in progress. Overall, the lack of newbuilding deliveries and the aging fleet – combined with additional refinery capacity across the Middle East, paints a more optimistic picture of the year ahead. Gone are the days where VLCC newbuildings would cannibalise LR2 stems, and with vessels trying to cut their carbon emissions, perhaps a return to slower steaming for non-eco vessels. However, as is always the case – the market rests on politicians' shoulders. Whether OPEC+ will extend their output cuts, what the situation will look like in Ukraine and how heavily enforced are sanctions on shipping entities, as well as whether shipping disruptions in the Middle East will persist will determine the outlook for the market in 2024.

## Far East

The Far East market had a volatile 2023 – albeit within tighter boundaries than previously seen. For the MR's, peaks were extremely high while the troughs were low, although by no means as extreme as we have seen in the past. The supply of tonnage has remained relatively constant and so swings have been encouraged largely by demand-side factors. The MR's have been boosted at times by a large uptick in Mexico-bound cargoes, up over 100% y-o-y. LR2s have also benefited from changing landscapes as Australia continue to demand more product with the closure of refineries. Accordingly, Australia -bound cargoes were up 50% y-o-y and this whilst MR's have remained stable on this route. Of course, the headline factor in the Far East is China and its level of exports. This is undoubtedly the largest factor impacting all sizes in the Far East and there is a clear and direct correlation between average earnings and Chinese exports. Geo-political factors in the region are dormant in comparison to the Middle East and Mediterranean and so owners have, by and large, enjoyed a rather stable year where average earnings should make for comfortable reading.

## CPP West

After an extremely turbulent few years, 2023 continued to provide plenty of headaches as more geopolitical risks surfaced. The fall out from the Russian invasion of Ukraine and the EU embargo of Russian oil products caused the European market to turn further afield to replenish supplies from other sources. The sanctions have created a two-tiered market, with some owners gravitating towards the 'premium' business and obtaining much higher TCEs than in the standard market. Additionally, the enduring conflict between Israel and Hamas and the fallout in the Red Sea further highlights the fragility of supply lines. While weather events such as El Niño and the drought in the Panama Canal have also caused delays and tightened supply markets in the west.

### MR

The MRs in Europe have had a reasonably successful year. Initially, the markets were still recalibrating because of the Russian invasion in Ukraine. The start of the year was characterised by the highest rates of the year, peaking in February at just under ws230. As the year progressed and as the summer months arrived, tonnage lists grew increasingly saturated. The sanctions imposed on Russia resulted in irregularities in export streams which saturated the 'standard' market with ships that once favoured the 'premium business', creating a two-tiered market. When this was paired with a steady flow of stateside ballasters from an underperforming US Gulf, rates came under heavy pressure, and TCEs bottomed out in July. However, as Russia turned the taps back on, and as the US Gulf tightened, this ensured that markets

in Europe remained reasonably healthy for the remainder of the year. Looking to 2024, the biggest shake-up will likely be the phasing in of the EU ETS, which will impose significant extra costs on intra-EU voyages.

## Handy

The biggest adjustment in the Northwest European handy market was the demise of TC9 (Russian Baltic to UKC), which was a key route for handy owners. The Russia-Ukraine war has not shown much sign of letting up, leaving handy owners in a perilous position. We see more and more handy stems being taken out by MRs in Europe which could become a common theme in 2024, with MR's being more attractive on a dollar per ton basis.

The turbulence in the Mediterranean also continued throughout the year, with the Black Sea becoming increasingly unstable. This has not stopped owners from seeking premium business which has preserved the two-tiered market. In general, we are seeing 'premium' business paying at least 100 world scale points above the 'standard' market. More instability hit the region with the conflict between Israel and Hamas. While this has not had too much of an impact on the handy market in a broader sense, it has meant there is now about a 40ish-point premium for owners to call Lebanon. On the whole, the usual cross-Mediterranean voyages once again managed to achieve high and relatively stable levels throughout the year.

The introduction of the EU ETS will substantially impact both markets since many voyages occur intra-EU and are therefore liable for EU ETS

costs. While it is uncertain who these costs will sit with in practice, the prospect for the handy market isn't great. Not only will the EU ETS dramatically lower the TCEs of owners on already short voyages, but it will also decrease profit margins for charterers inspiring them to potentially source product from elsewhere.

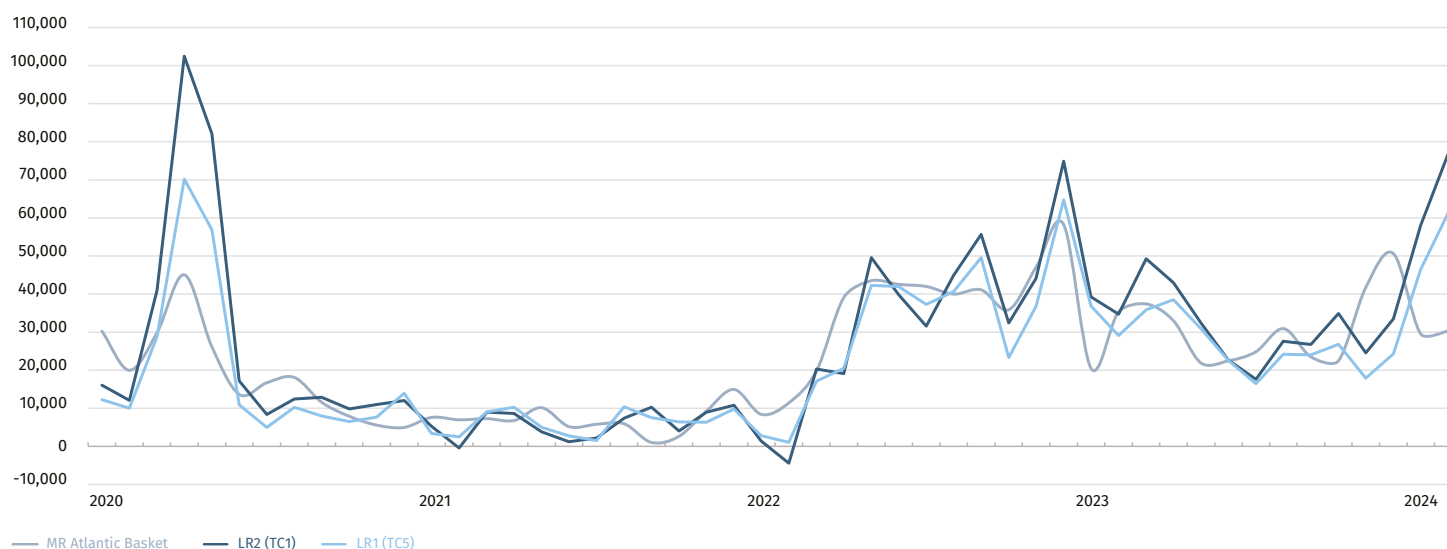
## LR

Last year we saw the western LRs increasingly becoming the secondary LR market as the rates in the west were mainly driven by the market in the east. As a result, for owners, it is now often more advantageous to ballast back east than take out stems at a lower price in the west.

## WAFR CPP Outlook

Dangote is coming! Dangote's 650 kb/d capacity refinery is poised to supply Nigeria and the entire region with transport fuels, propelling intra-Africa CPP trade. With potential exports to Latin America and Europe, it could bolster intra-Atlantic Basin CPP trade on MRs and LRs. Rising demand in Africa and Latin America is anticipated to outpace the Atlantic Basin's refined product supply, prompting increased imports from Asia and the Middle East. The US remains a significant product supplier to West Africa, primarily through MRs. South Africa's refining sector streamlining opens doors to external product imports. Despite the energy transition, African oil demand is set to grow, particularly in transportation fuels and LPG.

## Spot TCE Product Tankers (\$/day)





## FFAs

The ongoing Russia/Ukraine war contributed to the additional use of wet FFAs as a risk management tool, where cleared wet FFA volumes in 2023 were up 13% over ICE 2022 volumes. The Aframax trade appears to have benefited the most from the conflict and consequently the most liquid Aframax FFA route. Meanwhile USGC-UKC volumes, based on S&P Global, were up by 104% over 2022 ICE cleared volumes. New to the FFA market in 2023 was the TC20 FFA based on an LR2 carrying 90,000 mt, Middle East Gulf-UK Continent voyage, which launched in January as a new clean FFA and trades in lumpsum. Also, in 2023 the TD8 FFA,

Aframax Kuwait – Singapore route, resumed trading as an FFA, after years of being dormant.

As in 2022, in addition to hedging strategies with tanker FFAs, the added volatility increased the appetite for speculative trading. Speculative trading can be from the long or short side and with the healthy TCE rates across the wet freight market this enhanced liquidity in the overall wet FFA market. FFAs can also be used to create a synthetic time charter by replicating the vessel size in FFA paper across any of the benchmark routes for a specific period. Looking at a snapshot of the implied next year, calendar paper in TD3C and TC2 reflects the healthier expectations of the physical market over the past two years.

### Case in point for VLCCs

On 27/9/2023 The TD3 Cal24 TCE was \$34,379 \$/day

On 27/9/2022 The TD3 Cal23 TCE was \$31,470 \$/day

On 27/9/2021 The TD3 Cal22 TCE was \$14,400 \$/day

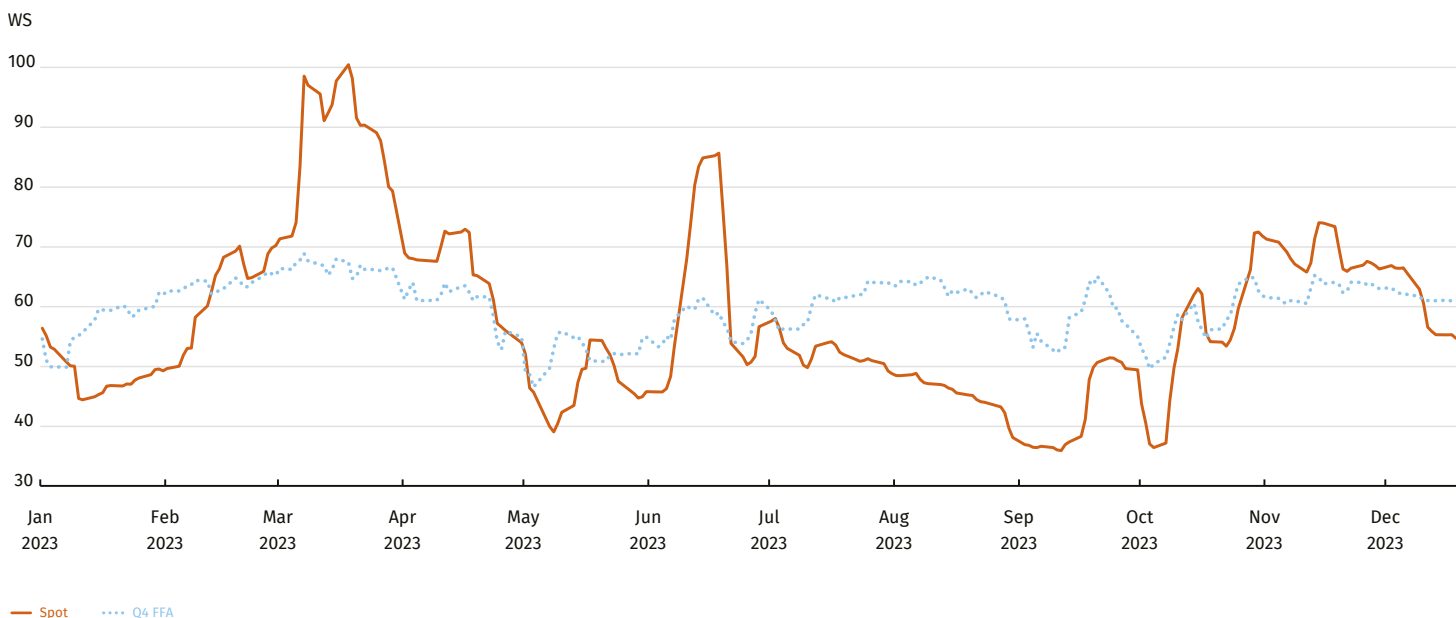
### And likewise for MRs

On 27/9/23 The TC2 Cal24 FFA settlement in TCE was \$16,753 \$/day

On 27/9/22 The TC2 Cal24 FFA settlement in TCE was \$25,230 \$/day

On 27/9/21 The TC2 Cal24 FFA settlement in TCE was \$5,100 \$/day

### 2023 TD3c Spot vs. 4Q23 FFA



# Sale and Purchase

## Units Sold For Scrap Per Year

N of Ships	2019	2020	2021	2022	2023
VLCC	11	2	20	5	0
Suezmax	8	5	10	11	1
Aframax & LR2	5	11	32	20	2
Panamax & LR1	6	3	12	10	2

## Vessel Value Changes from January 2023 to December 2023

	Resale	5 years	10 years	15 years
VLCC	3.23%	5.10%	-1.33%	-5.83%
Suezmax	10.18%	16.42%	26.32%	12.82%
Aframax & LR2	11.15%	15.57%	12.24%	3.90%
Panamax & LR1	5.17%	12.22%	17.65%	8.16%

For several decades, western democracies had hoped that enhancing trade with authoritarian regimes would have made the world a better and safer place, pushing the latter to embrace democratic values. Leaders of the authoritarian regimes did not like the idea that much. The willingness from Ukraine to get closer to the EU as well as the beginnings of commercial rapprochement between Israel and several Arab countries have been considered harmful by several authoritarian governments who decided wars were necessary to halt the trend. Shipping has always been, and will remain, the essential transmission belt for world trade. Crude oil is by far the most traded raw material. Consequently, tanker owners saw their businesses being turned upside down all year long. However, these upheavals were particularly beneficial.

Historically, tanker owners are used to be confronted with sanctions and embargoes. In modern history it started in the '50s with North Korea, in the '60s with Cuba, then in the '70s with Vietnam and South Africa. It continued in the '80s with Iran and in the '90s with Libya and Sudan. Over the last ten years, tanker owners' chartering teams have been, vigilant to cargoes from or to Venezuela and Iran. Since 2022 and particularly in 2023, Russia is now their major focus.

US, UK, and EU sanctions have made tanker owners' commercial affairs difficult. Those willing to comply with the rules must be extremely vigilant as the related obligations are complex, different from one body to the other, and frequently changing. These sanctions have created a two-tiered market with a group of owners not concerned by

## New Orders 2019 to 2023

N of Ships	2019	2020	2021	2022	2023
VLCC	39	44	31	2	18
Suezmax	38	39	13	9	57
Aframax & LR2	56	39	50	30	104
Panamax & LR1	1	0	0	0	36

## S&P Activity (Vessels for Further Trading)

N of Ships	2019	2020	2021	2022	2023
VLCC	59	105	101	81	89
Suezmax	41	44	38	59	42
Aframax & LR2	76	95	129	142	99
Panamax & LR1	33	24	41	61	72

the sanctions on one side, and another group unwilling to trade any Russian cargoes on the other. The change of pre-sanction loading and unloading areas have created extra ton miles which benefited both groups, and the latter took the opportunity to dispose of their oldest units to the former group at very attractive levels considering vessels' ages. This explains why in 2023, most of the sales of second hand tankers were old or mid-aged vessels.

For the first time in seven years, the total number of transactions of large tankers for further trading decreased in 2023. Compared to 2022, it represented a volume decrease of close to 12% with 41 less transactions. Nevertheless, the values and the activity remained quite strong. Older units were favoured by buyers since 77% of the transactions concerned vessels over ten years old and slightly over 46% were for units over 15 years old.

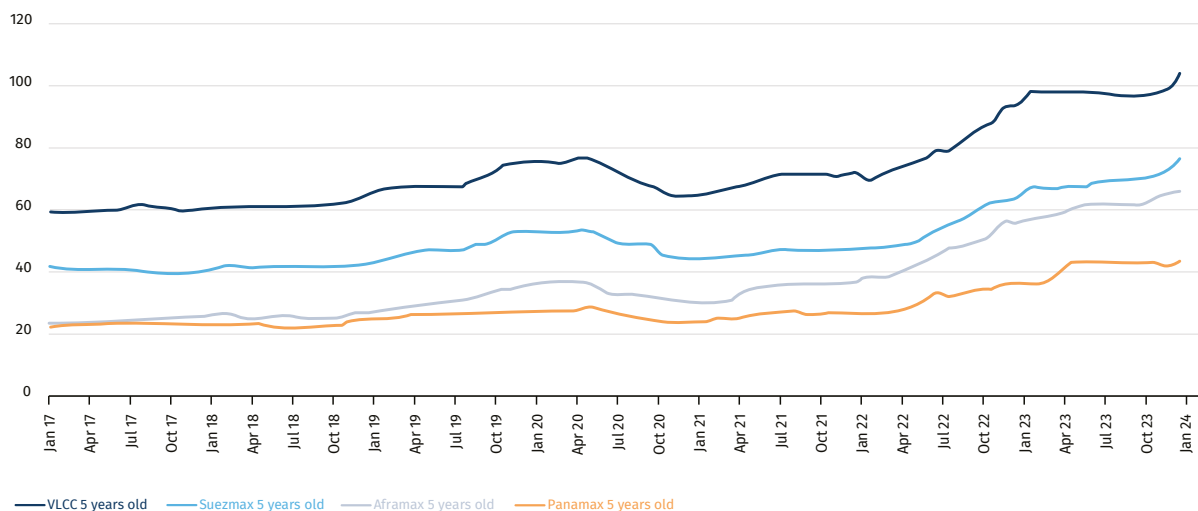
The focus on the older segment of the fleet was the result of multiple factors. First, prices for modern units continued to increase driven by the chartering and newbuilding markets. Owners of modern units saw no point in selling their ships today, anticipating an even better market tomorrow. Their price ideas were logically too aggressive for most buyers. On the other hand, older units were in high demand to maintain and increase the 'grey' fleet from buyers mostly based in China, India, and Middle East. Many owners from the mainstream fleet opted to cash in by offloading their oldest units and started to consider renewing their fleet with new building orders.

“ Trade unites people, whatever unites people allies them; consequently trade is essentially harmful to power”

— Napoléon Bonaparte (1769 / 1821) French emperor



## Tanker S&P Prices (million \$)



## VLCC

Another big year for VLCCs with 89 units reported sold for further trading in 2023, a 10% increase from what was already a strong number in 2022.

The activity once again would have been more focused on older units was it not for the Euronav-Frontline deal which helped to cover all the ages.

Almost on par with 2022, the transactions for ships younger than 5 years increased by one unit to 17. More than half of these were related to the Euronav-Frontline deal. Both prices for very modern and newbuilding tonnage remained strong. By the end of the year, the assessment for 5-year-old units broke the \$100 million mark. We also witnessed a very strong activity in the 6 to 10 year old vessel segment, which jumped from 7 units last year to 21 units in 2023. Again, we should stress that 15 of these transactions were related to this year's mega-deal which saw no less than 24 units change hands. For the vessels built 11 to 15 years ago, we noted 18 transactions, which was in line with the previous year. Oman Shipping sold 6 vessels, three of which reported enbloc to clients of SINOKOR. For the vessels older than 15 years, the number of deals was very significant with 33 units changing hands.

Although prices for vintage units eased slightly towards the end of the year, they remained at close to record highs. At the beginning of the year, 23 VLCCs were expected to hit the water, while 22 units were delivered. According to the end-December 2023 orderbook which stood at 23 units, 2 ships should theoretically hit the water in 2024. Meanwhile, no VLCC was sold for recycling in 2023.

## Suezmax

The Suezmax market S&P volume decreased with only 42 units sold for further trading in 2023 versus 59 in 2022. As with 2022, the focus was for older vessels with more than 60% of the transactions focused on units of 15 years or older.

Modern units saw their value increase substantially. Five-year-old vessels reached levels not seen since 2008. For example, the 2018 Korean-built Elandra Osprey was sold for a record \$74.0 million. Only 3 units aged less than 5 years old were sold last year, amongst which 2 were refinancing deals. Similarly, only 3 vessels built from 2013 to 2017 changed hands. There was at least a bit more activity for the older units aged 11 to 15 years since we witnessed 11 changing hands.

So clearly, buyer's attention focused on older tonnage (16 years and plus) since no less than 25 transactions for further trading took place. Grey fleet buyers were motivated by high potential earnings to pay for the strong values sellers were demanding.

The Suezmax fleet saw 8 units delivered in 2023 (versus an end-2022 forecast for 9 vessels). Only one unit was scrapped. By end-2023, the total Suezmax orderbook stood at 71 units, of which 7 are expected to hit the water in 2024.

## Aframax/LR2 and Panamax/LR1

We noticed a significant reduction in the number of transactions for Aframax and LR2s with “only” 99 transactions reported against the 142 deals seen in 2022. Mirroring Suezmaxes, the focus has been for units older than 14 years. These accounted for more than 56% of the total transactions in the segment.

Only 8 units younger than 5 years old found a new home, and a meager 6 additional units aged 6 to 10 years old. The price gap between sellers and buyers was too large for modern tonnage to permit a proper volume of exchange.

Out of the remaining 85 transactions, 41 were accounted for vessels between 10 and 15 years old. Clients of Torm took a strong position by taking 8 Korean units from SKS in an enbloc deal estimated at \$399 million. Finally, 44 units over 15 years old were sold mostly to Middle Eastern and Far Eastern Buyers.

2023 was once again a year when asset values increased for the Aframax and LR2 across different age spectrums. Particularly so for the most modern units which benefited from an increase exceeding 10% for vessels built up to 2013. The premium was less noticeable for older vintages which had already had their glorious days in 2022.

Out of the 54 Aframax (including LR2s) which were expected to be delivered during 2023, only 37 were launched. This major 17 units gap is explained by cancellations not previously officialized and slippage. In 2024, we expect another 33 vessels to hit the water while, as of late

December 2023, the total orderbook stood at 153 units. Once again, a very low two units were sold for demolition.

The number of Panamax/LR1 tankers sold once more increased reaching 72 units. This demonstrated a continued revival of interest in the segment as the previous record of 61 units exchanged in 2022 was surpassed. Three units less than 5 years old were sold, representing 6% of the segment for that age. No other units were transacted until the 10 years mark, with 4 such vessels switching hands. Again, Torm showed the way with an enbloc purchase for three vessels. Thereafter, 27 units were sold in the 11 to 15 years old age bracket with enbloc deals representing a significant portion of this activity. Finally, 38 units older than 15 years were sold, representing more than 50% of the activity in the segment. The revival of charterers’ interest in the size caught asset players’ attention, giving this market back its lost momentum and liquidity.

In the Panamax (including LR1) fleet, as expected, there were no vessels delivered in 2023 (as in 2022). There were 2 demolitions, and 32 new orders were placed. The total orderbook at end-2023 stood at 32 units, with one single unit expected to hit the water in 2024.

## MR1 and MR2

MR2 sales followed the same trend as the LR1s by increasing again in 2023. The focus was on 15 years and older units with more than 58% of the transactions involving such tonnage. The asset price increase was stronger for modern units and values were more stable for middle aged units. This explains why buyers were more interested in the 11

Image:  
MT BOCHEM HOUSTON, 25,000 Dwt stainless steel chemical tanker, built by China Merchants Jinling Shipyard (Yangzhou) Dingheng to CMB N.V., delivered on 26 June 2023.



to 15 years old category, where price momentum was lower in 2023, following strong increases in 2022.

The total number of transactions increased to 200 units compared with 176 in 2022. Only 19 units younger than 5 years of age were sold, among which, 13 were the result of Scorpio exercising their purchase options to benefit from asset prices' increase. In the 6 to 10-year-old segment, we saw 30 transactions reported. The 10–15-year-old segment was very much in demand with no less than 62 units sold. An astonishing 88 units older than 15 years were reported sold for further trading demonstrating the need to strengthen the 'grey' fleet capacity to carry clean cargoes.

Prices increased significantly over the year and in 2023 the 10-year-old MR2 almost reached the same value at which they were ordered in 2011 and 2012. The strong prices discouraged most buyers away from the more modern tonnage. Different assessments, expectations and requirements from mainstream owners to 'grey' fleet owners saw some very intense market activity.

In the newbuilding market, no less than 115 MR2s were ordered during 2023, and 38 were delivered against an initial expectation of 57. The total orderbook remains high with 189 units, of which 50 are expected to be delivered in 2024. Only 4 units were reported sold for demolition last year.

The MR1 segment once again saw strong activity as 63 transactions were reported sold for further trading. Only 2 transactions involved ships younger than 10 years old reflecting the old age of the fleet in general. Meanwhile, 20 transactions were reported for vessels aged between 10 and 15 years, and 41 for those older than 15 years. The market was dynamic, and the prices increased in line with MR2s.

As of 31 December 2023, the MR1 orderbook increased to 8 units of which 6 were ordered in 2023, and 2 are expected to be delivered in 2024. Meanwhile, 6 units were reported sold for demolition in 2023.

## OBO

Some light again on the segment with a new order from Klaveness for 3 units at Jiangsu New Yangzi Shipbuilding for the new generation of Cabu-class combination carriers. The ships are said to be costing in the region \$56 million per vessel. This represents a 10% premium compared to a standard Panamax tanker. The segment performed well in its employment with natural advantages in their trade optimization. This is a very specific niche that not everyone can master. There were no reported secondhand sales nor demolitions.

# Sale and Purchase Outlook for 2024

It is likely that 2024 will prove to be very much in line with what we lived in 2023. Geo-ecopolitical disruptions and crises will probably prevail over environmental concerns and decarbonization. Not that tanker owners disregard the urgent need for a greener fleet and a more environmentally friendly approach to their business — on the contrary —, but the safety of their crew and of their ships must be prioritised.

The future of the 'grey' fleet will become a key parameter of the tanker market. This fleet will impact all tanker owners in terms of their future earnings and in terms of asset play. We believe this fleet will either remain in its 'grey' trade or be demolished. To put it differently, 'grey' tankers will have the greatest difficulties to return to normal trading. Not only because they are among the oldest in the global tanker fleet, but also because their maintenance has often been questionable.

Furthermore, they will remain flagged by the insurance, banking, and services communities as 'delicate' units to work with (whether sanctions are lifted or not). This will create an almost irresistible call for renewal of the tanker fleet especially since it must become greener and catch up with previous years which were relatively poor in terms of contracting.

While there is still no new fuel emerging as the fuel of the future (whether ammonia, methanol, or hydrogen) it seems owners are now ready to take the risk of electing to order with conventional propulsion (with or without a scrubber) but selecting a main engine which shall allow another fuel type in the future once modified. Dual fuel readiness (for whatever it really means in terms of actual extra spending) can also enrich the specification and add an extra safety net for tomorrow.



# Specialized Tankers

Image:  
CHEMICAL CHALLENGER after installation of Ventofails, Chemical Tanker, 16111 Dwt, built by ASAKAWA Shipbuilding co, LTD, delivered in 2015, operated by Chemship BV. Copyright: Chemship BV.







CHEMSHIP

CHEMSHIP

CHEMSHIP

CHEMSHIP

CHEMICAL CHALLENGER

NO SMOKING  
DANGEROUS CARGO



The favorable currents experienced by owners in 2022, after enduring several years of difficulties and uncertainty, continued into 2023.



# 2023: Owners Sailing with Favorable Currents

## Introduction

The trend of 2022 continued in 2023, as by and large, the ton miles injected due to the shift in oil flows following Russia's invasion of Ukraine, remained. This thereby saw a favourable outcome for chemical tanker owners after several years of difficulty and uncertainty. The main reason for this was that a significant portion of swing tonnage remained out of the chemical market for most of the year. The Panama Canal grappled with the ongoing drought and faced record-low water

levels, which forced a reduction in ship transits and tightened tonnage supply. Towards the end of the year, attacks in the Red Sea added to the complexities. Despite these challenges, consistency in chemical volumes, coupled with the fact that chemical tanker supply was constrained, allowed owners to maintain upward pressure on freight rates.



Image:  
TRANS FJORD, Chemical/oil Tanker, 12,577 Dwt, built by KITANIHON SHIP BUILDING, Owned by Seatrans Chemical Tankers AS, delivered in 2023. Copyright: Seatrans Chemical Tankers.

# Chartering

## Fleet Development and Chemical Demand

The stainless-steel chemical tanker fleet has maintained a slow growth trend since 2021. From 2022 to 2023, the stainless-steel fleet grew by a net 2%, bringing the total fleet to 1,421 vessels in 2023, compared to 1,394 vessels in 2022.

The orderbook has remained limited, despite a rise in new orders in 2023, and the existing fleet is aging, supporting fundamentals for owners. The orderbook of stainless steel tankers shows 57 orders placed in 2023 and, along with the 18 orders placed in the first two months of 2024 across all sizes, the orderbook to the stainless steel fleet ratio stands at 9.8% on a number of-ships basis. The orderbook for dual fuel vessels increased from 16 to 18 ships between 2022 and 2023. Chemical tanker owners have started evaluating strategies of how to comply with IMO's targets anticipating the arrival of more dual-fuel chemical vessels in the coming years. Throughout 2023, two of the four E&S LNG dual fuel vessels were delivered. Also, orders were placed for four dual-fuel methanol tankers (6,600 Dwt each) by Norway-based Miklagard S Gemi, along with two dual-fuel vessels (16,000 Dwt each) ordered by Tune Chemical Tankers. Meanwhile, Stolt Tankers ordered six 38,000 Dwt stainless steel parcel tankers with multiple energy

efficiency add-ons, including being conversion-ready to sail on hybrid battery and methanol fuel power, featuring hull form optimization, additional 'energy-saving devices', and shore power connection. Zodiac launched orders of four 19,000 Dwt ships with various energy saving devices including an optimized hull form and high-performance anti-fouling paint.

Demolition levels in stainless steel chemical tankers have been notably low in 2023, with only three ships sent for scrap compared to 25 in 2022. The robust market conditions experienced in the last two years have refrained owners from disposing of tonnage.

Global chemical tanker demand continued to be supported by the volumes of chemical products being transported over longer distances. The year started with healthy volumes, but during the second quarter, volumes gradually softened partly due to slower Chinese economic activity. Regarding swing tonnage, where CPP tonnage was less inclined to change to chemical trade. During the summertime, activity slowed down slightly but quickly rebounded. The last quarter was marked by different external factors that put pressure on tonnage availability, such as the Panama Canal situation and geopolitical tensions in the Red Sea, where various ships were attacked. This led owners to decide to deviate via the Cape of Good Hope, thereby tightening tonnage supply.

Image:  
MT FURE VINGA passing Vinga lighthouse off Gothenburg, Sweden, 17,999 Dwt, built by CMHI YANGZHOU, Furetank Rederi, delivered in 2021, dual fuel LNG.

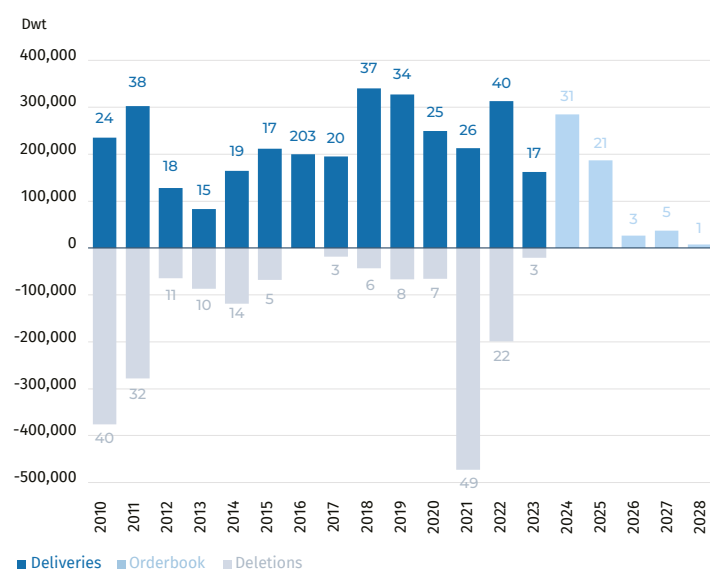




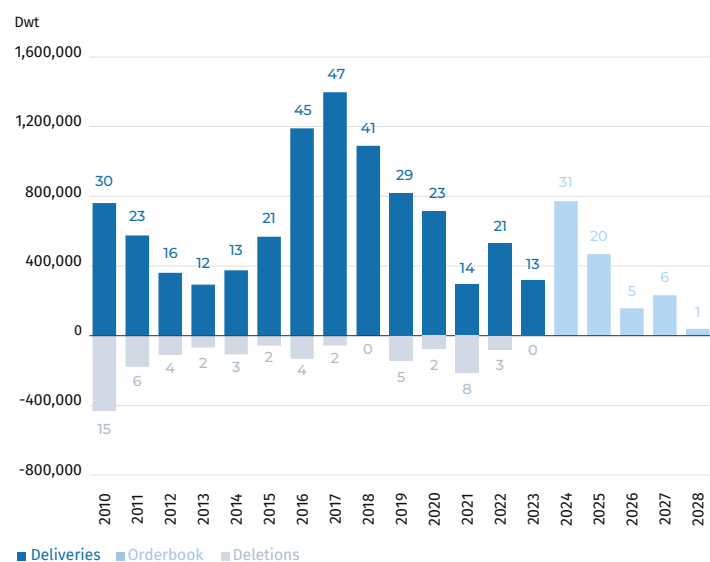
## Chemical Shipping Consolidation Through Mergers and Acquisitions

Last year saw more fleet consolidation as Japan's Mitsui OSK Lines (MOL) acquired Fairfield Chemical Carriers (FCC). The acquisition will add a further 36 units to MOL Chemical Tankers' existing 85-strong fleet. By combining the companies, MOLCT will have an expanded fleet and a more extensive service network for customers.

### SST and Part SST Chemical Tanker (<19,000 Dwt)



### SST and Part SST Chemical Tanker (>19,000 Dwt)



## The Environmental Challenge

The transition towards the decarbonization of the shipping industry is becoming more precise. In July 2023, during the IMO's MEPC meeting, the strategy for the reduction of GHG emissions from shipping was revised. The IMO's revised GHG strategy calls for international maritime to reach net-zero Greenhouse Gas (GHG) emissions by around 2050. This involves a targeted reduction in the carbon intensity of international shipping per transport work by at least 40% by 2030 compared to 2008. The 2023 IMO GHG Strategy also includes a heightened level of ambition relating to the uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources, representing at least 5%, and striving for 10%, of the energy used by international shipping by 2030.

The adoption of alternative, low, or zero carbon fuels is necessary to meet the objectives. Currently, interest among Chemical tanker owners in alternative, non-oil based marine fuels is primarily focused on LNG and methanol propulsion.

IMO policies and guidelines are expected to steer ship owners towards transitioning to new and greener ships or implementing energy-saving measures on their existing ships. In this context, Odfjell announced the installation of air lubrication on Bow Summer in 2H23, with suction sails to be installed in 1H24 on another vessel and solid oxide fuel cells (SOFC) on a different vessel by the end of 2024. Chemship has also chosen to install sails in one of their vessels, the Chemical Challenger. Stolt, on the other hand, drydocked Stolt Lotus in China to apply graphene coating technology to the hull. Stolt also signed an agreement to apply a graphene-based marine coating to the propellers on 25 of their ships. According to the company, the expected fuel savings from the graphene coating range from five to seven percent. This is achieved by reducing the friction between the hull and the water. Additionally, Stolt plans to retrofit propeller boss cap fins (PBCFs) to the vessels Stolt Condor and Stolt Tucan, which were acquired to join Stolt Tankers' Inter-Caribbean service.

Another measure impacting shipping is the EU ETS effective from 1 January 2024. Ships larger than 5,000 Gt undertaking voyages involving loading or unloading cargo at a port within the European Economic Area (EEA) for either intra-EU or extra-EU trade will be liable to pay for their emissions starting from the beginning of 2024.

In order to pay for their emissions, EU allowances (EUAs) must be purchased and then surrendered to the EU registry. The responsible parties for surrendering EUAs must surrender enough allowances to cover their emissions reported in the previous year by 30 September of the following year. For voyages between two EEA ports, 100% of emissions on the voyage will be subject to the EU ETS, while, for voyages between one EEA port and a non-EEA port, 50% of the emissions of the voyages will be subject to the EU ETS. Shipping's inclusion in the EU ETS will be gradually phased in over three years, with owners liable to surrender credits for 40% of their reported emissions in 2024 by



2025. This liability will increase to 70% in 2026 for emissions in 2025 and reach 100% from 2027 onwards. This will add a cost to the freight which will likely be passed to charterers. Concerning the ship, the more efficient the ship is, the lower its emissions and thus EU ETS liability will be. The objective is to drive improved energy efficiency amongst chemical tanker owners making the most energy efficient vessels more attractive for EU related trading before transitioning to low and zero carbon fuels in the long term. This could potentially drive the least energy-efficient vessels towards markets outside the EU.

## CPP and DPP — Baltic/UKC/Med Coasters and Intermediates

We finished last year's review with the comment that going forward in 2023 we expected that the market would see some re-adjustment in freight levels; with rates coming down to more "reasonable" levels. And in the main, this was the situation that prevailed in 2023.

### Intermediates

With the continuing sad stalemate in the war between Russia and Ukraine, the market has found its own ground zero with a situation of the "new normal". Activity for most of the year was pretty consistent and well sustained. Firstly CPP; freight levels for Intermediates did not hit the highs seen in 2022; with benchmark routes like 18-19,000 cbm Grangemouth or Kaarstoe/Mongstad to ARA usually trading around \$310-320,000 lumpsum; with bunker prices hovering around \$750/mt (compared to high on \$1,000/mt at times in 2022); there was nothing like the spikes seen the year before. Far less moments of panic and drama while scrambling around for any vessel available to load charterers' latest stem!

### DPP

As for DPP, the pool of vessels seems to continue to shrink as the fleet ages and those approaching 15 years old or older are converted to the CPP trade for the last few years of their trading life. Despite the consistent theme of a lack of available tonnage, freight levels on the benchmark route for 15,000mts Grangemouth to ARA hovered around \$365-375,000 lumpsum for much of the year. And only in August, when it was noticeable that ExxonMobil and Orlen were quiet with their respective COA programmes, did the market see any sustained drop-off in activity and subsequent freight levels (Grangemouth to ARA fell back to \$300,000 lumpsum). It is noteworthy to mention that amongst the owners, only Navix of Sweden seem to have any appetite for investment in this sector and are constantly on the lookout for additional vessels to add to their fleet. If no one else invests, they will properly corner the market in the years ahead...

## Coasters

The segment for Coasters (4-10,000cbm) on the Continent saw a year marked by more consistency with a far less dramatic showing; with activity more than reasonable. But in the Mediterranean, at times, it was all or nothing; with periods of strong momentum and strong freight levels due to a lack of tonnage (as owners felt their vessels had more chances trading on the Continent); or next to nothing going on at all and charterers having the pick of spot vessels.

## Looking Ahead

As for the future of the Intermediate (CPP) sector, Furetank of Sweden continue their appetite and ambition for newbuildings, with their competition lagging far behind. Alba (Sweden) remained on the hunt to add vessels to their fleet (4-21,000 cbm) to be a one-stop-shop for charterers, as well as Uni-Tankers of Denmark (5-22,000 cbm) in much the same vein. Just as before, Turkish owners were the ones making the most headway in the Coaster (4-10,000 cbm) sector. It also helps when you own your own shipyard (such as Acechem).

Stepping into 2024, all the drama and fuss was about the introduction of the European Union Emissions Trading System (EU ETS). However, as has been the case with the arrival of other regulations (notably IMO 2020), its introduction has been reasonably straight forward as charterers have demanded that owners include this in their freight and demurrage calculations. Accordingly, the expected spike in freight rates has not materialised as the market has subsumed this new "clause" and the usual story of supply and demand has carried the day with freight, as the market finds its natural level. But, a word of caution; there have been murmurs and mumblings that owners may not quite see things so set in stone, and look to change this state of affairs and insist on the separation of EU ETS costs from freight and demurrage if the market does radically change.

We expect the CPP market to stay rather consistent in the year ahead, with of course the occasional spike. However, although the market could move lower from time to time, we do not see levels falling back to the bad old days prior to 2022. DPP will see freight levels remaining solid for the year ahead.

## Transatlantic Market

The year commenced timidly on the eastbound leg. Despite robust COA volumes, soft European demand presented challenges for regulars in filling up their space, particularly with readily available tramp vessels due to a weak CPP market. This condition directly impacted freight, gradually eroding the gains earned in late 2022.

Unfortunately, Q2 did not bring relief. Persistent poor demand from Europe, coupled with competitive feedstock prices from the Middle

East Gulf and robust domestic demand in the US, led a continuous decline in freight. Excess tonnage capacity remained prevalent in the soft spot market, and some vessels even sailed light on occasions.

The Transatlantic market had turned a corner by the end of Q3. The CPP market experienced a slight upswing, prompting tramp vessels to shift away from the chemical market. Although spot activity did not reach exceptional levels, the space situation tightened, creating opportunities for stronger freight in the summer and extending into September, thus setting the stage for a positive Q4.

With larger lots being quoted, in Q4 available space was swiftly filled. Despite a somewhat subdued year-end rally, rates managed to climb close to their late-2022 levels.

For the westbound leg, the overall scenario was more moderate. Although the year began steadily, with tight space availability allowing owners to maintain stable freight in the first quarter, the lack of demand became increasingly evident by Q2. This led to a decline in freight which returned to levels observed the previous year. Stability was achieved during Q3, followed by a rebound in Q4 driven by increased spot demand.

In conclusion, the Transatlantic market encountered various fluctuations and challenges throughout the year. However, 2023 did not witness any transformative developments, concluding with an overall performance comparable to that of 2022.

## Northeast Asian and Chinese Domestic Market

### Chinese Domestic Market

2023 has unfolded as a bit of a roller coaster with a few ups but many downs. As China emerged from its Covid restrictions, there was widespread enthusiasm and positive anticipation. Indicators concerning consumption, services, and industrial output reveal that important economic sectors have recovered slightly, in addition to the country's robust GDP growth. However, sectors such as private investment and international trade have underperformed, highlighting an uneven recovery. In terms of shipping, the Chinese domestic market also seems to be struggling with reduced cargo volumes reflecting weaker downstream demand. Hence, the market appears to be oversupplied despite domestic shipping capacity being approved and regulated by the Chinese government on an annual basis. To tackle the situation, a couple of Chinese owners that have dual (domestic and international) licenses have moved some of their vessels to the international market i.e. the Northeast Asian (NEA) market, and this will trend is likely to gather pace going forward as this is working well for them., Meanwhile, other Chinese domestic owners are not changing their fleet utilization strategy.



Image:  
MONJASA SHIPPER,  
M/T 7,991 Dwt, Bohai  
Shipbuilding Heavy Ind  
China, built by MONJASA  
DMCC/, MONJASA HOLDING,  
delivered in 2018.

## Northeast Asian Market

In relation to the dynamics of the Chinese domestic market, the NEA market was also impacted by limited cargo volumes and increasing tonnage supply throughout the year. Hence, freight rates softened year-on-year, and this was more evident during the summer season where downstream demand for chemicals is usually weaker. As such, owners saw freight rates drop by 20-30% quarter-on-quarter. Owners that were committed to COAs also experienced empty sailings to load ports, to perform their COA liftings. Meanwhile, owners who had more flexibility on their end resorted to ballast their ships to Southeast Asia (SEA) to escape the saturated NEA market. However, things changed quickly after the summer as some shipowners quickly mobilized their fleet back to the NEA market in preparation for the arrival of winter, where the downstream demand for chemicals is usually higher. Nevertheless, some regular NEA owners instead bet on the SEA market, as they felt that market volumes and dynamics were more stable in that market. Accordingly, they were willing to reposition more ships to the region.

In the short term, fundamentals point towards the current status quo remaining in place. However, macro-economic headwinds and inflationary pressures may impact consumer purchasing power and could have a knock-on effect on NEA chemical tanker tonnage demand. In the medium and long term, it is no secret that global petrochemical companies and markets are expecting a very challenging time ahead, with margins continuing to be squeezed. This will likely lead to consolidation and some shutdowns signaling a possible turning point across 2026-28.

Over the past few years, chemical tankers owners have contended with challenges stemming from overcapacity. The year 2022 showcased how geopolitical factors, such as the conflict in Ukraine and the ensuing sanctions, could impact the supply side, leading to significant transformations within the chemical market. In 2023, external factors such as climate change also played a role, with the drought in the Panama Canal delaying vessel transits. Towards the end of the year, additional geopolitical elements influenced the market, as exemplified by the Houthis' attacks in the Red Sea. These incidents prompted owners to make strategic decisions, including rerouting their vessels away from the Suez Canal and instead via the Cape of Good Hope, thereby extending vessel employment to prioritize safety for both the ship and the crew and further constraining the availability of chemical vessels.

On the demand side, inflation poses a threat. However, with newbuilding prices remaining high and considering shipyards' long forward coverage this continues to limit newbuilding activity. Consequently, assuming that the supply side remains constrained due to geopolitical or other influencing factors, and that the orderbook remains limited, favorable currents for owners are expected to persist in the short term.

## Palmoil, Vegoil and Biodiesel — Deep Sea

### Vegoil

Vegoil exports from Argentina decreased in 2023 due to a very bad crop, with approximately 5.5 mt shipped, 12% less than in 2022. Some 148 MR1s and MR2s were chartered, of which, 107 went to India, which remains the main importer of vegoil. Biodiesel flows were also very reduced. A total of approximately 300,000 mt of SME (Soya Methyl Esther) was exported, mostly to Europe but also to Canada, fourtimes less than the previous year.

Freight rates fluctuated in 2023 following the persistently firm clean petroleum tanker market. Rates for 40,000 mt stems to India moved from a high of \$80/mt, in January, to a low of \$55/mt in July/August and ended the year around \$70/mt. These rates produced daily returns of between \$20-\$40,000/day.

In 2023, Black Sea sunflower oil exports were still negatively impacted by the Ukrainian conflict. Most of the international exports have been shipped from Romania in approximately 18,000 mt lots on intermediate-sized tankers. Very few owners are willing to call at Ukrainian or Russian ports. The rates for 18,000 mt from Romania to India have been volatile but one can estimate an average of low-mid \$70s/ton.

### Palm oils

The palm oil market was less active in 2023 with around 290 MR2s and MR1s fixed into the Mediterranean, Continent, West Africa and the US. Furthermore, 17 MR newbuildings, out of the 38 launched last year, fixed palm oils on their maiden voyage. Rates moved from \$60,000/day at their highest to \$35,000/day at their lowest.

Volumes are likely to reduce in 2024. We expect approximately 36 newbuildings to be delivered across the year which is lower than in previous years. Rates will most likely depend on the Asian clean petroleum tanker market. Nevertheless, we anticipate them to remain stable. Furthermore, exports of biodiesel and used cooking oil continued to rise in 2023. This provided good alternatives and returns to the owners willing to consider long haul routes, without having the FOSFA last cargoes history.



# Conclusion

Over the past few years, chemical tankers owners have contended with challenges stemming from overcapacity. The year 2022 showcased how geopolitical factors, such as the conflict in Ukraine and the ensuing sanctions, could impact the supply side, leading to significant transformations within the chemical market. In 2023, external factors such as climate change also played a role, with the drought in the Panama Canal delaying vessel transits. Towards the end of the year, additional geopolitical elements influenced the market, as exemplified by the Houthis' attacks in the Red Sea. These incidents prompted owners to make strategic decisions, including rerouting their vessels away from the Suez Canal and instead via the Cape of Good Hope,

thereby extending vessel employment to prioritize safety for both the ship and the crew and further constraining the availability of chemical vessels.

On the demand side, inflation poses a threat. However, with newbuilding prices remaining high and considering shipyards' long forward coverage this continues to limit newbuilding activity. Consequently, assuming that the supply side remains constrained due to geopolitical or other influencing factors, and that the orderbook remains limited, favorable currents for owners are expected to persist in the short term.

Image:  
LISELOTTE ESSBERGER, Chemical/Oil Tanker (dual fuel LNG), 7,134 Dwt, built by CMHI YANGZHOU, E&S Tankers, delivered in 2023. Copyright: E&S.



# Second Hand Market

## Small Tankers and Chemical Carriers (3,000–25,000 Dwt)

**2023 has been good to small tanker owners of all types.**

Despite vast numbers of buyers from all directions and all types of vessels, only 111 transactions were recorded in 2023. This was 20% less than in 2022 and less than half of the 2021 levels! Only 13 stainless steel tankers changed hands versus 42 in 2022 signaling a very strong interest from owners to keep their assets.

Freight rates and second hand prices remained significantly higher than the 10-year average, while forced or auction sales have simply disappeared. Asset values are estimated to have increased by 15 % year-on-year.

The average age of vessels at the time of sale remains at 13 years old for coated tankers and 7 years old for stainless steel ships. Another illustration of owners clinging to their beloved vessels is the extremely low number of units sent to breakers last year — only 20 vessels — which represented less than 0.3% of the active fleet in deadweight terms. A figure that had never been recorded before.

**All in all, asset values should remain quite firm in 2024 unless shipping demand encounters a black swan. The outlook for the years to come is quite positive as the oversupply of tonnage belongs to a distant past.**

In this context, the 20% increase in the orderbook (2.25 million Dwt versus 1.89 million Dwt in 2022) appears quite modest, with the median size ordered standing at 12,500 Dwt. This timidity can only be explained by a surge in newbuilding prices as well as very high interest rates, both of which are capping owners' ability to order new tonnage.

Bunker prices were somewhat softer last year offering stability to owners trading their vessels on the spot market.

## Outlook for 2024

As time passes it becomes more apparent that the war in Ukraine was the starting point for surging freight rates and vessel prices, but not its deeper cause. The reason is the supply and demand of vessels which is rapidly changing as the average age of the fleet is now 14 years old. Owners have their backs against the wall given the sharp rise in newbuilding prices in the aftermath of the Covid era, especially considering the 500 basis points increase in interest rates since March 2022 stemming from Federal Reserve's attempts, as well as from central banks across the globe, to curb inflation. The fleet increase is projected to be not more than 2% in 2024 but this does not consider the potential speed reductions to comply with CII or to mitigate EU ETS costs.



Image:  
Product/chemical tanker MAYOURY — 9,194  
Dwt on 6.2 m draft, built 2017 in Constanta  
Romania, sold by CFTMO to Marcab.



# Gas

Image:  
LPG/C AVANCE AVIOR. Very Large Gas Carrier 91,000 cbm Dual Fuel LPG, NH3 ready. Built by Hanwha Ocean (formerly Daewoo Shipbuilding & Marine Engineering), South Korea, delivered in 2023 and owned by Avance Gas.







Avance Avior



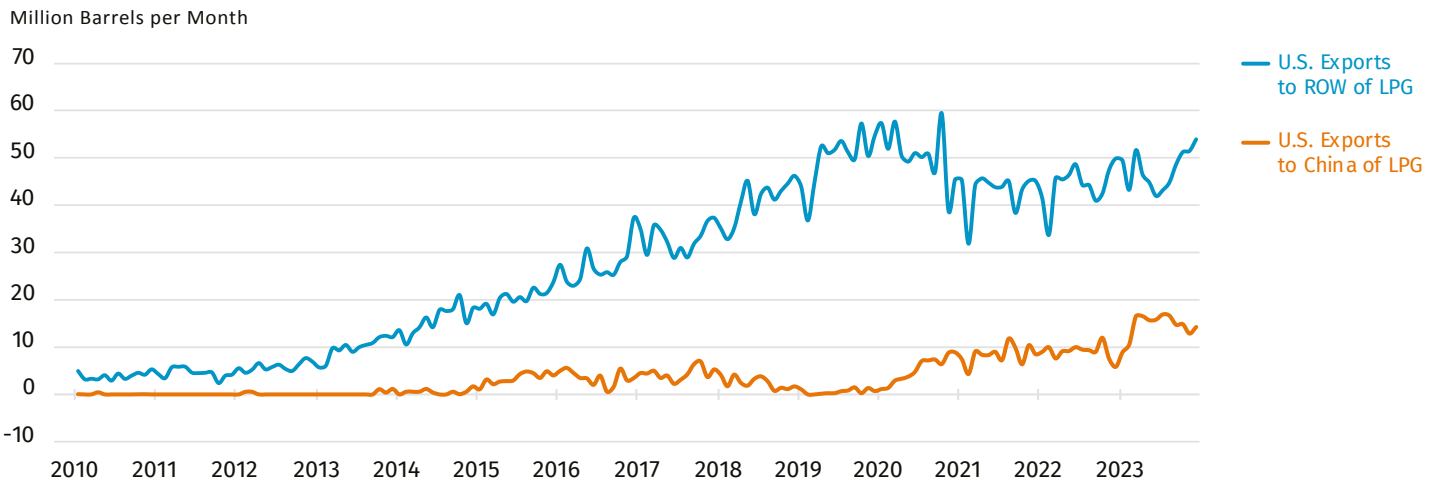
# Between a Rock and a Hard Place

As we have become accustomed to over the last few years, geopolitical tensions, and increasingly climate-related risks, remain key factors affecting global trade. The conflict in eastern Europe after Russia invaded Ukraine has regrettably stagnated, and tensions between Israel and Hamas in Gaza erupted into outright war in October. Predicting the outcome of these wars is not easy but the increasing concern for energy security is certain. Although these geopolitical risks weighed heavily in global concerns, they had minimal effect on LPG trade between the two biggest export and importer partners, the US and China. However, they were not exempt from disruptions during 2023 as severe drought reduced traffic through the Panama Canal by up to 36% in order to preserve water levels in Lake Gatun.

Notwithstanding these risks, global LPG trade increased by 6.08% y-o-y in 2023 to about 138.42 million tons, compared with 130.49 million tons in 2022. China remains the world’s major importer and increased trade by 21.25% since 2022 to 32.05 million tons. This import growth is significantly higher than the 11.23% increase from 2021 to 2022 when the country was under its zero-Covid policy.

Almost all of the increase in China’s LPG imports came from the US which increased shipments to 13.87 million tons in 2023 from 8.80 million tons in the previous year, a remarkable 57.69% increase. The US continued its export growth and surpassed 60 million tons, more than double its exports in 2017.

## US LPG Export to China and the Rest of the World



# Chartering

## VLGC

In 4Q22 VLGC rates had reached levels where owners were earning up to \$160,000/day on the spot market. Unsurprisingly, 2023 started with a downward correction due to the narrowing arbitrage between

the US and the Far East. However, this was short lived, and by the end of January rates had rebounded as the arbitrage widened again and charterers acted to secure tonnage. The market maintained healthy levels throughout the remainder of the first quarter, with the occasional quiet period or burst of activity when acceptances were announced.



Market conditions remained strong as we moved into the second quarter of the year, despite this being a traditionally quiet time. The arbitrage remained open due to strong US propane inventory levels and as we approached mid-year, TCE earnings remained above \$100,000/day highlighting the strength of the market.

At the start of the third quarter, there was finally some give in rates, which dropped by around \$20,000/day in July. The Panama Canal had its first major influence on the market in August when waiting times lengthened to around 20 days due to lack of rainfall which led to low water levels in Lake Gatun. This saw the West trade at a strong premium to the East. The premiums on offer for longer voyages led to an unbalanced position list, with most vessels ballasting towards the USGC, leaving the Middle East undersupplied. However, as soon as cargoes finally appeared in the East, the few owners with vessels in the region were able to push rates to new highs.

Rates went into overdrive in September, reaching new all-time highs of \$183/mt for Ras Tanura – Chiba and \$253/mt for Houston – Chiba, corresponding to around \$175,000/day and \$158,000/day, respectively. The surges came on the back of high demand in both regions, and a lack of available tonnage to lift the stems.

There was then a bit of a stutter as we entered the fourth quarter. Charterers took a step back which led to less fixing activity, and the US–Far East arbitrage narrowed. In less than a month, owners’ earnings had dropped by over 40% on average. However, once again, the market slump was short lived, as more issues concerning the Panama Canal created another major stir and sent rates upwards once more.

The lack of rainfall in Panama led to the Canal Authority announcing that they would severely limit the number of transits through the Canal. The restrictions were to come into force gradually, but essentially the Panama Canal Authority’s announcement meant that from early 2024 it would be unlikely that any VLGC’s would transit through the Neo locks, and any transits through the old locks would be significantly reduced. On average across January–November 2023, 38 VLGC’s transited the Neo locks southbound per month, and 32 transited northbound. The additional ton miles incurred by sailing via Suez or the Cape of Good Hope sent spot rates and forward assessments rocketing once more.

A Canal auction slot went for a new record of almost \$4m for a single transit, and owners’ earnings moved back up towards \$150,000/day. Panamax vessels started attracting strong premiums, and owners with a high-ranking on the Panama Canal booking system are reaping the rewards. There is no obvious end to the situation in sight, and the outlook for the VLGC market remains very strong for 2024 and onwards.

Looking back to early last year, the worry that the hefty orderbook would bring rates down has certainly not materialised. LPG liftings were up 10% year-on-year which has helped to absorb the new tonnage delivered. Other newbuildings have suffered delays, with those scheduled for late 2023 being pushed into early 2024. This

reduced supply threat has allowed a softer landing into the market and prevented a sudden downturn in rates.

Looking forward, in addition to increased LPG exports, the market must now consider the EEXI, EEDI and CII regulations that are affecting the fleet. With an average age of around 12 years old, there are slow steaming requirements imposed on around 50% of the global fleet. We are also seeing an increase in floating storage demand and a potential increase in premature scrapping. All told, the fleet may have a more balanced look than one would expect if simply looking at the number of vessels.

Yards are now nearly sold out until 2027, and with limited availability and high pricing, the orderbook is not expected to grow much more from where it is currently. Once the early part of 2024 has passed, the orderbook looks relatively modest in comparison to last year. By the time 2025, 2026 and 2027 deliveries start to hit the water, global VLGC fleet growth should somewhat slow down, as more of the older tonnage is scrapped as they will no longer be able to economically compete with their younger counterparts.

Infrastructure has not yet developed enough to make the transportation of ammonia by VLGCs a viable trade, but with a large drive for new orders being built with ammonia carriage capability, the market is starting to evolve towards this. If ammonia offtake happens at the scale that some are predicting, many of the new units will be absorbed by a trade that VLGC players have never really had to pay much attention to until now.

Increased demand from China’s PDH units and crackers, together with increased exports from the US and Middle East, more transatlantic flows into Europe, Panama Canal waiting days, geopolitical issues, emission regulations and so on could see rates stay firm or continue rising.

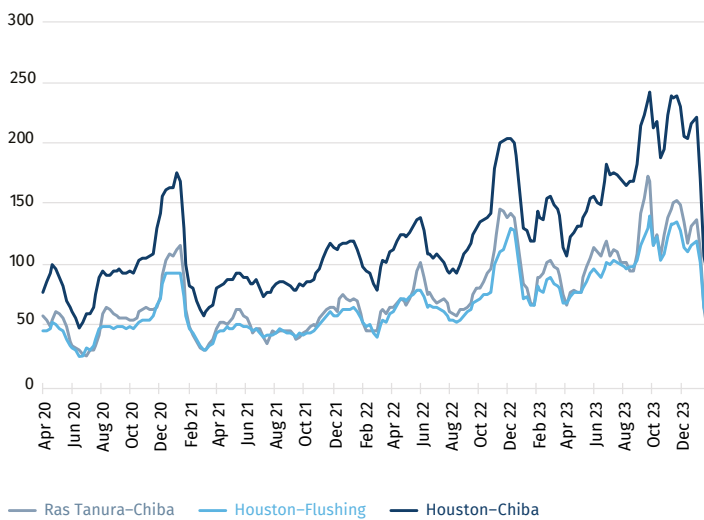


Image:  
LPG/C ECO SORCERER Midsize Gas Carrier, 40,000 cbm, built by Hyundai Mipo Dockyard, South Korea, delivered in October 2023 and operated by StealthGas.

China's PDH plant capacity increased by around 2 million tonnes in 2022, with further rises of 4.5 million in 2023 year, and 2.25 million expected to come in 2024. The rise in capacity implies that Chinese imports will also rise, and thus more VLGC demand. However, recent margins have been poor and resulted in low plant run rates, maintenance schedules being brought forward and delays to start-ups. Other economic issues in China such as a real estate sector on the brink of a crisis could lead to a drop in demand from the world's largest LPG importer. Therefore, the jump in Chinese imports may not be quite as substantial as one might initially expect.

Europe will likely continue to seek alternative solutions to North Sea-derived LPG whilst natural gas prices are high. One of the most significant market observations since the start of the Ukrainian conflict has been the increased LPG shipments from the US to Northwest Europe and the Mediterranean. These will likely continue, particularly as the US is continuing to expand its export infrastructure.

### Baltic Exchange Liquid Petroleum Gas Index (\$/t)



Source: Baltic Exchange

All in all, the general outlook for the VLGC market is a very positive one, and from the outset, 2024 appears to be another healthy one for the owners.

## LGC

In the dynamic landscape of 2023, the LGC market remained consistent, kicking off the year with daily time charter rates at around the \$35,000/day mark. Other than a slight softening over the spring and summer months, levels continuously firmed to not far off \$60,000/day by December. This reflected limited availability and owner's justifiably

bullish expectations. One notable factor was the delays to VLGC transits through the Panama Canal, which aside from the alternative longer route via either the African Cape or Strait of Magellan, meant LGCs were the next best option with the ability for prompter transits. The market initially grappled with extension proposals encountering rejection, primarily attributed to overly optimistic projections end-2022 / early-2023, which maybe took a little longer to come to fruition.

Despite well-covered redeliveries for the year, short-term opportunities remained limited. Challenges and frustrations emerged in potential charter negotiations, sparking discussions centered around forward programs and overarching market trends. The complexities of the ammonia trade, the multi-faceted dynamics of the VLGC market, and age-related concerns for LGCs were brought to the forefront. Amidst these uncertainties, the LGC sector demonstrated resilience, buoyed by strong demand, with ongoing discussions hinting at potential shifts in the future landscape.

Overall, the LGC market looks to be a non-focus for new investment with the new generation of larger MGC vessels closing the gap on the smaller VLGCs, making it the piggy in the middle, and thus less attractive for future trades. This has been reflected in the lack of orders with a mere 21 vessels currently in operation and no new deliveries since 2016, highlighting a stark lack of growth and investment in the sector. Additionally, a substantial 76% of the total fleet is now over 10 years, contributing to an average fleet age of just over 16 years. These collective indicators paint a picture of a shrinking LGC shipping market, signaling a transformative shift in the industry as owners increasingly turn their focus toward larger MGCs and the existing VLGC fleet. However, this is also maintaining upward pressure on rates for the existing fleet as they become somewhat of a rare and depleting commodity.

## MGC

The beginning of 2023 was marked by several notable developments. Before the holiday season, a scarcity of workable spot units focused attention on the order book.

The ammonia market's constant demand throughout 2023, with previous indications of a switch for current MGCs to LPG business (from their usual NH3 trade), off the back of more purpose-built ammonia carriers expected to be delivered, didn't make much of an impact. Indeed, this is expected to have a larger impact once the new vessels hit the water. However, last year this added to future uncertainty, particularly for the older vessels carrying NH3. The talk of shifting from ammonia-to-LPG added to extensions on Indian time charter tonnage, and limited spot availability, characterise the current market and reaffirm the tightness of the MGC sector and the need for more tonnage.

The second half of 2023 witnessed robust demand and a widening of the gap between the traditional 35,000 cbm and 38,000 cbm vessels,

albeit following a similar upwards trend on TC levels across the year. Additional orders, and declared options, reflected owners' confidence despite high construction costs with owners investing in new designs offering long-term economic benefits, with a trend towards dual-fuel or scrubber-equipped vessels. While nine units are yet to be delivered, approximately half of them are reportedly already committed so although many expect this to provide some breathing room for the MGC sector. Indeed, the void to be filled is considerable, with little indication of the market abating.

The MGC market continues to be controlled by a small number of owners. Ammonia's length poses challenges, and reports of delays in newbuild deliveries in South Korea add to the market's complexity. Overall, the MGC market exhibits robustness, with owners facing the dilemma of extending current time charters, committing to alternative term agreements, or taking advantage of what has been a limited but lucrative spot market.

## Ammonia

Ammonia was one of the hottest commodities within the global shipping industry in 2023, with more blue and green production projects appearing, advancements in the ammonia bunkering segment and a new generation of VLGC's, dubbed VLAC's (Very Large Ammonia Carriers) hitting the orderbook. Meanwhile, the existing ammonia market, which is still dominated by the fertilizer industry, continued to tick along in the background.

In 2022, like most shipping markets, the ammonia segment faced severe turmoil on the back of the conflict in Ukraine. One year on and the market has found a level of balance, with producers making up for the lost tonnes from the Black Sea. However, despite global ton

miles dropping year-on-year, European imports continue to come from farther afield which has allowed the shipping market to remain firm.

The export of Russian product has resumed, predominantly from the Ust-Luga complex in the Baltic via truck-to-ship operations. Fertistream also took over the ammonia export programme from Kingsiepp and have been selling on a CFR basis. The Kingsiepp site is around 130km from St. Petersburg and has an annual production capacity of around 1.1m tons.

2023 started with a large correction in ammonia pricing across the global market, with average prices dropping from over \$900/mt to less than \$400/mt by the end of the first quarter.

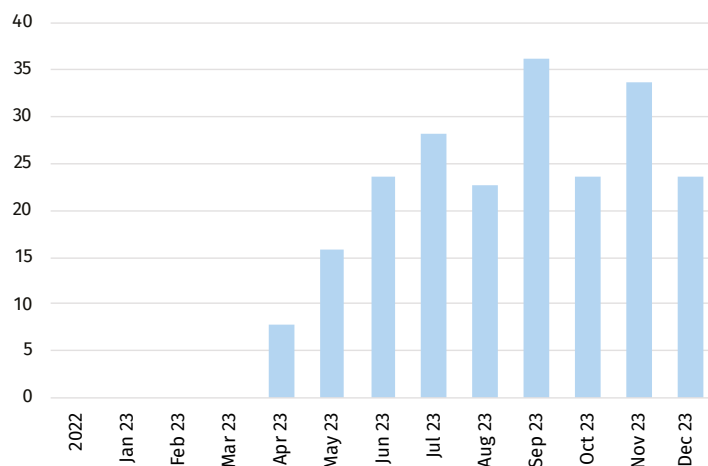
In the East, prices fell as demand from the industrial sector declined, and in the West, a warm winter allowed natural gas prices to weaken considerably, which in turn led to a drop in ammonia production costs. This meant that many European importers had the option of turning to the domestic market, instead of the long-haul shipments they had been utilising in previous months.

As demand fell, producers that were left with an oversupply started cutting prices to try and stimulate buying interest.

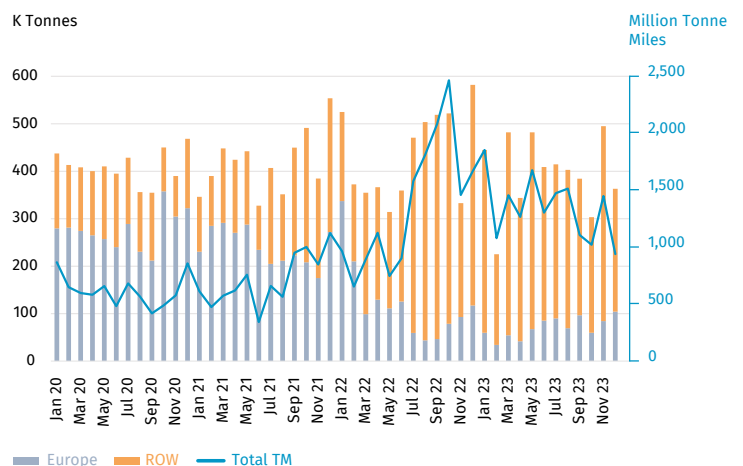
In spring, the start of the fertilizer application season was not enough to counter the looming oversupply. On top of this, plant outages in key production regions such as Trinidad, Algeria and Southeast Asia were initially not enough to arrest price declines.

The downward trend in ammonia prices continued throughout the remainder of the first half of 2023. Supply vastly outweighed demand, and by the time we reached the mid-point of the year global prices had reached a floor.

**Russian Ammonia Exports (K Tonnes)**



**European Ammonia Imports (Origin Region vs Tonne Miles)**





As we moved into the second half of the year, prices finally managed to stabilize, and then started to move up again in some regions. The main factor behind this was an increase in natural gas prices in both Europe and the US, which increased the costs of ammonia production.

The plant outages previously mentioned in Trinidad, Algeria and Southeast Asia then became more of an issue, and the market flipped into undersupply.

The autumn fertilizer season brought a fresh flurry of demand which firmed the market significantly and prices increased sharply. As more plants returned to full production, supply issues were relieved, and the market balanced out again.

As the year drew to a close, the market had a more stable feel on the back of a relatively flat fourth quarter, at the end of which saw a further price correction. Ammonia prices ended the year at an average of around \$490/mt in the main exporting hubs, around \$265/mt less than at the start of the year. A key contributor to this was falling natural gas prices which eroded production costs, as well as another lull in demand prior to the 2024 spring application season.

Moving forward, the ammonia market is expected to expand considerably across the coming years. Clean hydrogen is expected to become a major contributor to emission reductions across all types of industry. As ammonia is one of the easiest and most efficient ways of transporting hydrogen, it is expected that the seaborne trade of ammonia will increase drastically in the coming years.

Ammonia only contains around 17-18% of its weight as hydrogen, so it is likely that not only the total volumes, but also the parcel sizes of ammonia carried by sea will grow. Currently, VLGC's do not trade in the ammonia market, but shipowners are already preparing for the transition, with the ammonia-capable VLGC fleet expected to more than triple in the 6-years between 2021 and 2027.

## Ethane

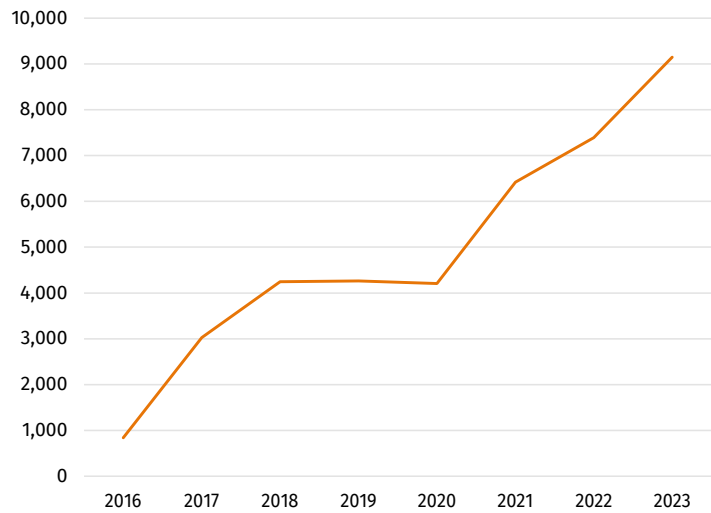
Seaborn ethane trade continues its impressive expansion since Norway and the United States first started to export from marine terminals in 2016 when it totalled approximately 840,000 tons compared with the 9.14 million tons shipped in 2023. This represents an increase of 988% over the last seven years. Exports from the United States have accounted for the bulk of expansions and now account for 99.2% of all shipments while Norway's exports have steadily reduced over the last years to total only 11,000 tons in 2023. Although Norway has exported relatively small parcels regionally to Sweden and the East Coast of the UK, they have been net importers since the early days of the industry.

After flat growth rate during 2018-2020, partly due to the economic stagnation related to the Covid-19 pandemic, growth over the past three years has averaged about 22%. Most of the increase in trade

has been related to China's growing demand for the feedstock to supply ethylene crackers for downstream production derivatives such as polyethylene, ethylene oxide then ethylene glycol used for the production of PET bottles, and ethylene dichloride used in the production of VCM, among others. Chinese petrochemical expansions have outpaced any other region in the world and producers run ethane and propane as feedstocks, instead of naphtha.

India is the world's second biggest ethane buyer, importing on average about 1.6 million tons per year since 2018. Meanwhile, Norway is the third most active buyer importing around 813,000 tons per year over the last five years, having broken the 1 million ton threshold in 2023.

Global Seaborn Ethane Trade (Kt)



Global Seaborn Ethane Trade (Kt)

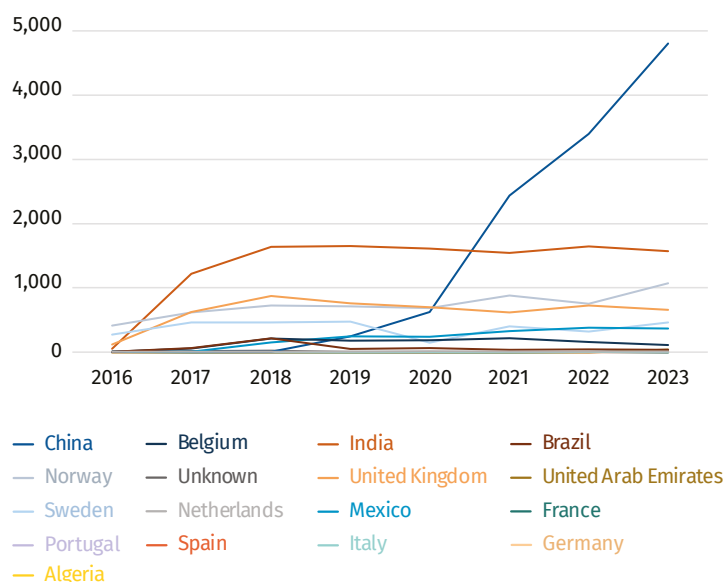


Image:  
LPG/E/C STL QIANJIANG, VLEC (Very Large Ethane Carrier), 98,000 cbm, built by Samsung Heavy Industries Co, South Korea, delivered in May 2022 and Operated by Eastern Pacific Shipping.



China is adding significant petrochemical capacity and is expected to see its share of the global olefins feedstock market, including ethane demand, grow to average around 26% across 2025-28.

India's ethane imports from the US are on course to increase significantly in the coming years as new ethane-fed ethylene projects open and existing plants switch from natural gas liquids (NGLs) stripped from Middle Eastern LNG to the US supplies.

India's ethane imports have been relatively steady in recent years. They reached 1.56 million tons in 2023, slightly down from 1.64 million tons in 2022. The country's expanding ethylene production capacity and domestic consumption will boost this in the coming years. India's ethylene demand is likely to increase to 8.7 million tons and polyethylene consumption to 6.9 million tons by 2026, Argus calculates.

## Petrochemical Gasses

The year commenced with disruptions across the world. In the USG, several producers faced shutdown and unexpected maintenance work in the first quarter of the year.

Enterprise Products Partners' 750,000 t/yr PDH unit in Mont Belvieu, Texas, was shut for 24 days during the first quarter for maintenance work and LyondellBasell's 1.134 million t/yr mixed-feed cracker in Corpus Christi, Texas, had an unexpected process issue in February that caused flaring at the unit which kept the plant offline. Motiva Chemical's 700,000 t/yr mixed-feed cracker located in Port Arthur, Texas, which is one of the two major US merchant ethylene plants, reduced operating rates to perform some repairs. By the end of the first quarter, we saw an increase in ethylene prices, but US ethylene flows into Asia remained stable at about 105,600 mt in January. Asian ethylene prices averaged \$799/mt, while average US ethylene prices were significantly lower at \$464/mt.

On US propylene, Invista's 658,000 t/yr PDH in Houston also performed a turnaround that lasted until late March and as a result, inventories drew and prices rose. Accordingly, US propylene inventories plunged by 49% in the first quarter, to their lowest since 4Q21 and US spot propylene prices for February hit their highest levels since early May 2022. Despite higher spot prices, propylene exports increased in February compared to January. Colombia received 32,300 mt and Mexico around 25,700 mt representing 54% and 43% of total US exports, respectively.

In Europe, there was a different kind of disruption as strikes over pension rights at French refineries took place at the beginning of February. TotalEnergie's 219 kb/d Donges, 109 kb/d Feyzin and 246 kb/d Gonfreville refineries and ExxonMobil's 133 kb/d all saw disruptions whereby operations were not interrupted but products movements, deliveries and loadings were halted for a few days. On average, European ethylene prices jumped by \$67/mt in February compared to January and hit 4 digits at \$1,144/mt by March.

Despite stronger prices in the US and Europe, Asia remained the biggest importer of Ethylene. China specifically, was the main destination of US ethylene exports in 2023. In 2022 almost all the exports out of the US went to Europe, with Belgium being the biggest importer. However, in 2023 China received over 485,000 mt from the US compared to 247,000 mt in 2022. As a result, we saw tightness in the activity of the ethylene handy segment which continued throughout the year. This was also supported by the lifting of Covids restrictions in China atend-2022 and by the addition of new crackers.

By end of the first quarter, and for the first time since 2H21, we saw cracker production margins in China flip into positive territory. Propane-based cracker margins firmed to \$150/mt, their highest level since June 2021. Feedstock prices continued to weaken, but olefin prices received some support from supply tightness in the region. This tight supply was a result of cracker turnarounds and from continuous run rate cuts in the wake of of depressed margins. Consequently, we saw NEA butadiene prices firm to \$1,253/mt in February compared to \$963/mt in January.



1Q23 US butadiene inventories dropped by 11% on the year, from 136 million lbs in March 2022 to 120 million lbs in March 2023. With consumers taking contract minimums and with no interest in restocking, US butadiene demand remained steady. Therefore, shipping wise, we saw owners with contracts in place move their volumes but spot cargoes in the market were quite limited.

The second and third quarters of the year were steady. As producers anticipated weak demand, many facilities underwent extended shutdowns. These included Dow's crackers at Terneuzen, the smaller BASF cracker at Ludwigshafen, one of the Ineos crackers at Cologne and the Repsol cracker at Sines. Repsol's cracker in Sines stopped operating from mid-October 2022 until January 2023. The cracker shut down again in April 2023 and has been offline since then. This caused less propane demand from the petrochemical industry, especially in Spain and Portugal. The demand for ethylene in Europe reflected a parallel reduction in European prices and European propylene premiums plummeted to \$700/mt compared to the \$900/mt levels seen in the first quarter. In Europe, cracker operations have been curtailed throughout 2023 due to a lack of demand.

The contract price for butadiene in the US for July plunged by 30% compared to June, reaching its lowest level in almost three years due to weak domestic demand. During the second quarter, the butadiene contract price dropped by nearly 47%. July was the third consecutive monthly decrease after the contract remained at 49¢/lb (\$1069/mt) from January to April. Towards the end of the third quarter, US spot PGP prices increased by 20% due to two PDH units in the Gulf Coast and a mixed-feed cracker having to shut down. On 28 August, prices stood at 31.375¢/lb. On 01 September, Dow's 750,000t/yr unit unexpectedly shut down, propelling prices to 33¢/lb, although they remained within the range observed in the quarter. The unit resumed operations on 13 September. In addition, during the first week of September, Enterprise's PDH-1 unit in Mont Belvieu, Texas shut down, coinciding with reports of a fire at a pygas tower at the BASF-TotalEnergies unit in Port Arthur, Texas. US spot PGP prices surged to 35.5¢/lb. US PGP spot prices continued to strengthen until the end of year, with Enterprise Products Partners' 750,000 mt/yr PDH-2 plant located in Mont Belvieu, Texas offline.



Image:  
LPG/C GUST, Pressurized Gas Carrier, 3,500 cbm, built by Ship and Steelbuilding (SaS) B.V. in The Netherlands, delivered in March 2023 and owned by Chemgas Shipping B.V..



Conversely, Asian prices remained broadly flat throughout the summer as weak consumer demand dovetailed with higher energy costs and inflationary pressures.

A slower-than-expected recovery in China is the main reason why cracker operators are cautious about ramping up run rates again. China lifted its Covid-19 restrictions in late 2022, with the market hoping this would raise derivatives demand, subsequently boosting product prices and resulting in higher production margins.

The sentiment coming into the last quarter of the year started off bearish. Producers with new PDH units that were scheduled to begin operations by the end of 2023 decided to postpone their start-ups into the first half 2024, citing the higher production costs and subdued demand.

South Korea's YNCC has kept the 500,000 mt/yr No.3 cracker closed since Mid-August due to margins concerns. Nonetheless, overall activity in intra-Asia remained steady with owners fulfilling their contract volumes and a few traders seen with some relet space.

LPG activity in the Black Sea through the year has been challenging. Although Russian LPG was not specifically sanctioned, the country's exports fell from about 110,000 mt to 90,000 mt. Northwest European markets have largely transitioned away from Russian product as well and many owners chose to self-sanction, thereby not calling at Russian ports but also some of the main discharge ports in the Black Sea, which made it difficult to develop any spot cargoes. Traders with their own time charter vessels also faced scheduling issues as products delivered by rail were heavily delayed making it difficult to plan their forward programmes. On 18 December 2023, the EU agreed to ban Russian LPG imports as of 1 January 2024, so it will be interesting to see how the Black Sea importers cover these volumes in the coming months.

The biggest impact in the fourth quarter was the announcement from the Panama Canal Authority who reduced the number of vessels transiting the Canal due to the low water levels. Currently, the reduction in transit is in place until February with further notice and we have seen an imminent effect on freight as traders bid for slots to transit. Naphtha prices have benefitted from higher export demand to Asia, not only due to the logistical issues at the Panama Canal that have slowed feedstock exports from the US, but also due to refinery outages in the Middle East. Chinese ethane crackers further reduced operating rates because of longer delays in feedstock ethane arrivals.

Throughout the year we saw PDH plants and crackers cutting operating rates or extending maintenance due to persistent negative petrochemical margins. Nevertheless, the expansion of the PDH sector is continuing, at least until 2025. We expect that the new plants should raise Chinese demand for LPG in the next year which should see more LPG movements.

New Chinese PDH units commissioned in 2023:

China added nine new PDH units in 2023, with capacity for 5.4 million mt/yr of propylene and 6.48 million t/yr of propane. These plants were:

- Guangxi Huayi New Materials (750,000 mt/yr)
- Yanchang Zhongran Taixing (600,000 mt/yr)
- Guangzhou Jvzhengyuan No.2 (600,000 mt/yr)
- Shandong Befar (600,000 mt/yr)
- Zhejiang Huahong No. 2 (450,000 mt/yr)
- Oriental Maoming (450,000 mt/yr)
- Lihuayi Weiyuan (600,000 mt/yr)
- Sinochem Ruiheng (600,000 mt/yr)
- Formosa Ningbo (600,000 mt/yr)

## Industry News

Abu Dhabi National Oil Company (ADNOC) has agreed to acquire a 24.9% stake in Austrian energy and chemicals company OMV from Mubadala Investment Company (Mubadala). The move will up ADNOC stakes in one of the largest European petrochemical companies, Borealis in which OMV has a 75% share.

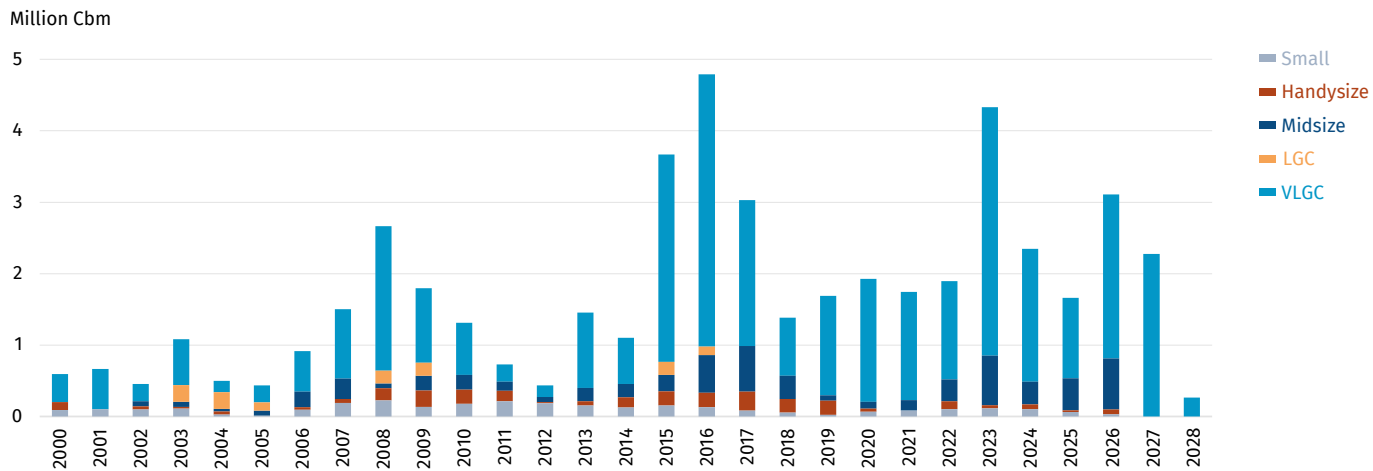
UK firm Ineos announced in July that it has reached an agreement to acquire full ownership of the Lavera steam cracker, previously operated by the Naphtachimie 50:50 joint venture with TotalEnergies. The change is primarily motivated by improving the ethylene balance in the south and east of France.

In August it was announced that Eitzen has acquired LPG shipowner B-Gas. In buying B-Gas from Bergshav Shipholding, the Norwegian company has added a fleet of LPG carriers to its expanding shipping empire.

Petroineos advised the intention to close its Grangemouth refinery in Scotland, with a daily capacity of 150 kb/d. The company stated that the refinery would continue its regular operations until spring 2025. This move is a necessary step in adapting their business to reflect the decline in demand for the type of fuels they produce. The closure may lead to a reduction in the UK's industrial gas demand. The site's gas consumption averaged 934,000 cbm/d from 1 January 1 to 20 November last year. This represented approximately one-fifth of the demand from industrial sites directly connected to the high-pressure transmission network.

# The Fleet

## LPG Tonage Deliveries and Orderbook by Vessel Type Since 2000



### VLGC

The cumulative VLGC fleet reached a total of 377 vessels as of end of 2023. A total of 40 VLGCs were delivered in 2023. Of these, Petredec received five vessels, Eneos obtained four, SK Shipping secured three, while Oriental Energy Co, Sinogas, Avance Gas, KSS Line, and ABGC DMCC each procured two vessels. At the close of the year, 66 vessels were in the orderbook, thereby constituting 17.5% of the active fleet. Of these, 21 vessels are scheduled to be delivered in 2024. One vessel under Greek ownership underwent demolition, after being sold for \$590/Ldt.

### LGC

There were no LGCs delivered during 2023 and none were ordered. The fleet composition remains unchanged with 21 vessels over the age of 15 years. Trends in this segment favor abandonment and focus today shifts to the larger VLGC, VLAC and VLECs.

### MGC

The MGC fleet grew by 13.5% in 2023 as 18 vessels were delivered across the year. Accordingly, the fleet currently stands at 133 vessels as no deletions were recorded in 2023. The orderbook is close to 22.3% of the active fleet, or 36 vessels. Five vessels are scheduled to be delivered

in 2024, GasChem Services is to receive two 40,000 cbm – Semi Refrigerated vessels with DF capabilities, between the second and the third quarter. Meanwhile, Stealth Maritime, Exmar and Ocean Yield are expecting delivery of one vessel each. Nearly 48% of the fleet is over 15 years old.

### Hand sized Gas Carriers

The current fleet of Handysized vessels numbers 133. Two newbuildings with ethylene capabilities – the LPG/C Exhibitionist and the LPG/C Enable were delivered to Fortitude Shipping during the first quarter of 2023. In addition, two newbuilding orders from both Capital Gas Carriers and Fortitude Shipping were placed in 2023. The orderbook of 7 vessels equates to is 5.3% of the active fleet. As almost 32% of the fleet is above 15 years old, the average age of the fleet is now 13 years old. One Handysize was demolished in 4Q23.

### Small Gas Carriers

The fleet of Small Gas Carriers has undergone the most alteration, with 18 new buildings delivered in 2023 and 31 vessels in the orderbook, 17 of which are scheduled for delivery in 2024. In 2023, eight vessels for a total of 38,000 Dwt were demolished, three of which were ethylene carriers and five of which were LPG carriers. These demolitions achieved a maximum price of \$700/Ldt.

## Developments Among Gas Carrier Owners

Indonesia's Samudera Shipping Line, through its subsidiary PT Samudera Shipping Indonesia, will be able to enter the growing ethylene market in Indonesia. The group took over 2 Ethylene Gas carriers built in 2010 and 2009. The vessels will be named Sinar Ternate and Sinar Tidore.

BGN and Al Seer Marine's Joint Venture ABGC DMCC received its VLGCs, Lucky Gas and North Gas from HHI in South Korea. BGN partnered with Indonesia's Pertamina International Shipping (PIS). BGN took delivery of the 2 VLGCs, Pertamina Gas Tulip and Pertamina Gas Bergenia, both DF-Ammonia ready vessels. The vessels are incorporated with Artificial Intelligence and Augmented Reality technologies. Furthermore, BGN placed orders for 2 VLGC at HHI to be delivered by 2027.

Avance Gas sold two VLGCs Newbuilding to Pertamina International Shipping for \$120m each. The 2 vessels Avance Castor and Avance Pollux are scheduled to be delivered in 2024. Avance Gas sold VLGC Venus Glory and Iris Glory for \$66m and \$60m, respectively. Furthermore, they took delivery of 4 dual-fuel VLGCs and contracted for 4 dual-fuel MGCs,

which will be delivered across 2025-26 and can carry both Ammonia and LPG.

Naftomar bought Petredec's 2015 blt VLGC Saltram for \$73.5m. The group now owns a fleet of 18 gas carriers and has placed orders for four 93,000 cbm VLACs at Hanwha Ocean to be delivered by 2026. Okpo shipyard disclosed the price as approximately \$500m for the 4 vessels.

BW LPG has recorded record earnings in 2023. Net profits were \$122.3m while revenue climbed to \$150.5m. BW sold its two 2008 build VLGCs, BW Thor and BW Princess for \$55m and \$65m, respectively. Additionally, the group also sold its two 2009-built VLGCs, BW Odin and BW Austria for \$59m each during the first quarter of 2023. Gas trading entity, BW Product Services recorded net earnings of \$32m. The firm has additionally utilized its buying options for two Japanese ships under lease: the 84,200 cbm BW Messina (built 2017) from Nissen Kaiun and the 83,300 cbm BW Kyoto (Blt 2010) from Meiji Shipping. The BW Pool now comprises of 37 vessels making it the world's largest VLGC pool.

Fresh player Pearl Petrochemical sold its dual fuel VLGCs to CSSC Leasing for \$180.4m en bloc. The 93,000 Dwt LPG vessels are scheduled to be delivered in 2024.

Image:  
LPG/C MERCATOR. Very Large Gas Carrier 91,000 cbm, built by Hyundai Heavy Industries, South Korea, delivered in 2023 and owned by Evalend.





# LNG

Image:  
CLEAN COPANO, type (LNG carrier), 200,000 (cbm), built by Hyundai Heavy Industries, Dynagas, 2022.





CLEAN COPANO





# 2023: A Dynamic and Rebalancing Year

In 2023, the global LNG market saw a modest uptick in demand (+2.14%), with growth tempered by a lack of new capacity additions and global supply disruptions. This resulted in lower spot LNG prices compared to the historical highs observed in 2022.

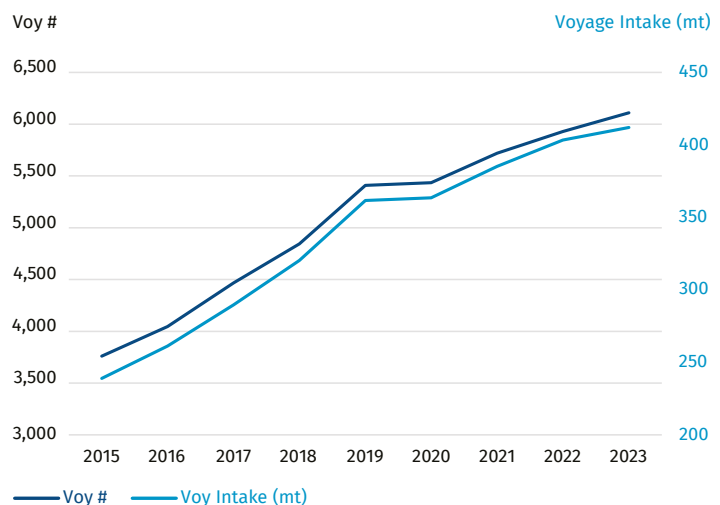
## LNG Trade

Last year, the number of LNG tanker voyages increased to 6,110 compared to 5,930 in 2022 (+3%). As a result, LNG traded volumes also continued to rise, reaching approximately 412 million tonnes compared with around 403 million tonnes in 2022, a modest year-on year (y-o-y) increase of a 2.14%.

Global LNG exports have continued to increase slightly due to higher natural gas production in exporting countries. The three major LNG exporters – US, Australia, and Qatar – together account for nearly 60% of global LNG production. In 2023, the US surpassed Australia to become the top global exporter for the first time, reaching 88.1 million tonnes. This was driven by the resurgence of Freeport LNG and the successful ramp-up of Calcasieu Pass LNG. For the third consecutive year, the US recorded the largest annual increase in exports, rising by 15%, equating to an annual increase of 11.2 million tonnes y-o-y. In contrast, the other countries in the top five saw their exports decline compared with 2022: -1% for Australia (82 million tonnes), -2% for Qatar (80 million tonnes) and Russia (32 million tonnes), and -5% for Malaysia (27 million tonnes). Australia encountered supply issues due to Shell undertaking a scheduled maintenance shutdown of Prelude FLNG from August 2023 to mid-December 2023, alongside an extended strike at Chevron's Gorgon and Wheatstone facilities.

Modest 2.14% uptick in LNG demand amid capacity constraints and global supply disruptions.

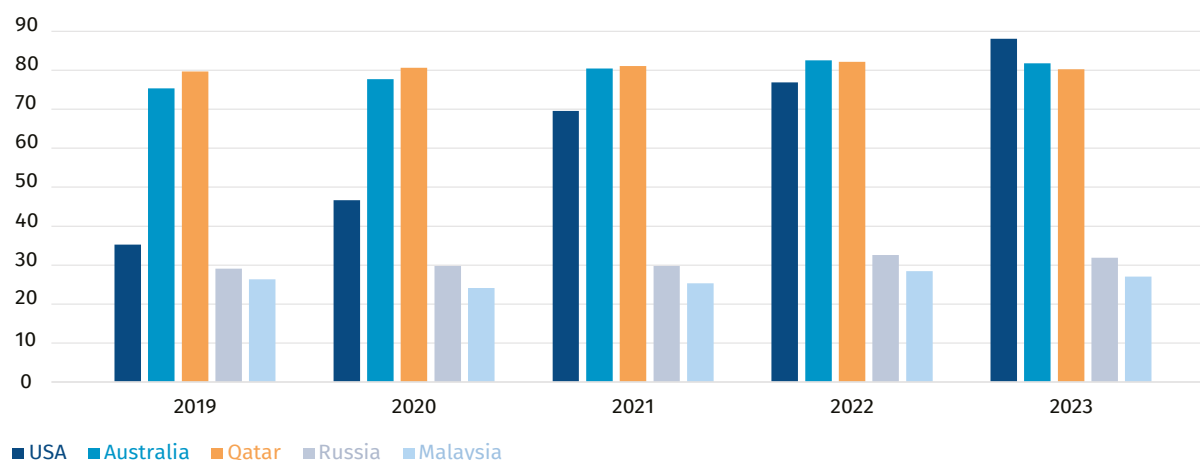
### Annual Voyage Number and Intake (mt)





## Main LNG Exporters

Voyage Intake (mt)

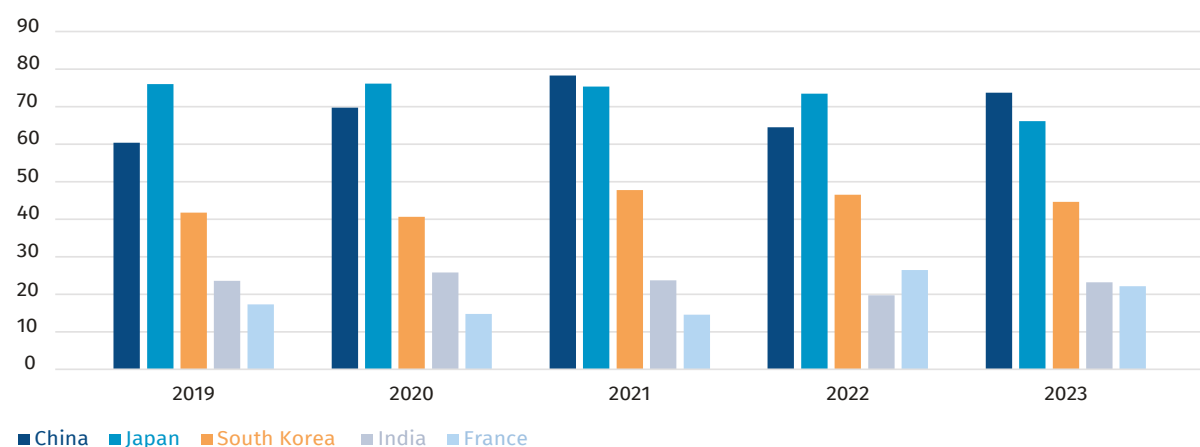


China overtook Japan as the world's leading LNG buyer, experiencing a remarkable 14.5% surge in imports. Among all LNG importers, China recorded the most substantial absolute increase last year, with volumes rising by 9.3 million tonnes, reaching a total of approximately 74 million tonnes. Nonetheless, this remained below their record level posted in 2021 (78 million tonnes). Meanwhile, Japan's imports decreased by 10% y-o-y. Following an unprecedented annual increase in 2022 (+60%), European demand continued to actively support global LNG trade, as the region imported 55 million tonnes. Although there was a 16% y-o-y decrease, it still represented a 52% increase compared to 2021. On a country-by-country basis, Germany recorded the most substantial increase in LNG imports, as volumes soared by 3,057% from 0.15 million tonnes in 2022 to 4.7 million tonnes last year. Lastly, India replaced Spain in the top 5 LNG importers as Indian LNG imports increased by 17% y-o-y.

**USA overtook Australia as top exporter in 2023 with a 15% surge y-o-y; meanwhile, China surpassed Japan as top importer in 2023 with a 14.5% increase y-o-y.**

## Main LNG Importers

Voyage intake (mt)

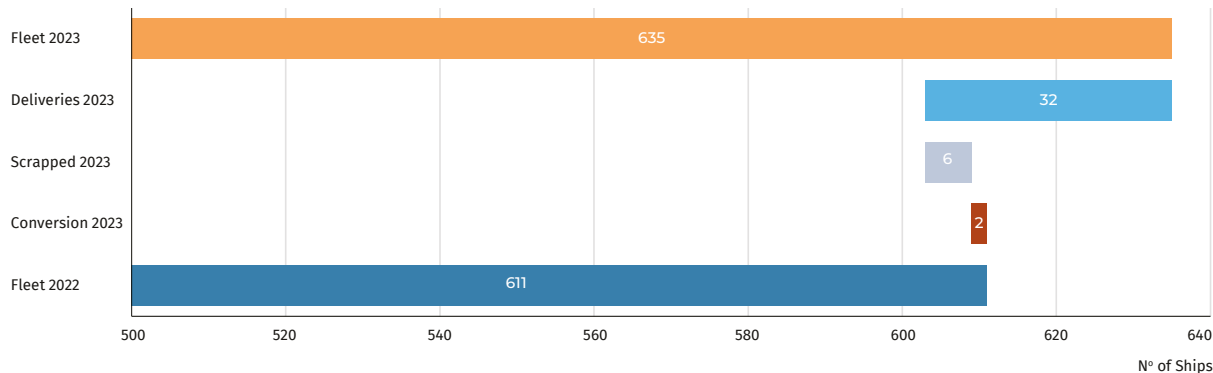


# The Conventional LNG Carrier Fleet

By the end of 2023, the fleet of large LNG carriers stood at 635 units, reflecting an annual growth of approximately 7%, with the delivery of 30 conventional LNG carriers and 2 Medmax LNG carriers last year. The fleet has increased by more than a third over the last five years. In 2023, five old steam-turbine LNG carriers (Seapeak Arctic, Adriatic Energy, Grace Energy, Gandria, Seapeak Polar) and the world's first FSRU converted from an LNG carrier (Spirit) were scrapped, compared to only 1 unit in 2022. Furthermore, the Puteri Delima Satu, a steam-turbine LNG carrier built in 2002, is slated to be converted into a Floating Storage Unit (FSU) by MISC Berhad for Petronas. She will be deployed at the Petronas LNG Regasification Terminal in Pengerang, Johor. Additionally, the Fuji LNG (ST – 2004-built), acquired by Golar LNG from TMS Cardiff Gas for \$77.5 million, will undergo conversion into a Floating Liquefied Natural Gas (FLNG) unit.

**65 large LNG carriers ordered in 2023, with 32 delivered.**

## Large LNG Carrier Fleet Evolution in 2023



## LNG Carrier New Orders

In 2023, a total of 65 large LNG carriers were ordered. The price level for a 174,000 cbm LNG carrier, equipped with the latest standards including a slow-speed diesel engine-based propulsion, a membrane-type CCS with a 0.085% boil-off rate and a reliquefaction/subcooling unit, and built in South-Korean shipyards started the year at around \$250 million. This figure increased to \$260 million in March 2023 and further rose to \$265 million in the last quarter. Meanwhile, the price level for LNG carriers with the same standards but built in Chinese shipyards began 2023 at \$235 million and reached \$250 million in the last quarter.

Contrary to expectations and the observed trend in 2022, where 66 orders were placed, including 6 units for its partner ExxonMobil in the Golden Pass project, the Qatar LNGC newbuilding project did

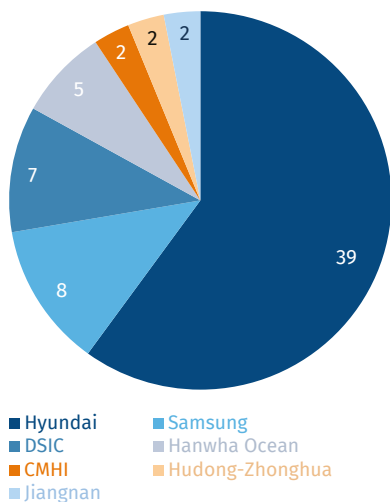
not result in a bottleneck in the orders of new LNG carriers in 2023. Originally reserving 151 slots, QatarEnergy encountered cancellations for approximately 25 slots, while 4 new slots were added at Hudong Zhonghua. In 2023, QatarEnergy initiated Phase 2 by placing orders for 17 units, all of which were sourced from Hyundai Heavy Industries (HHI). QatarEnergy still maintains reservations for 15 slots at Samsung Heavy Industries (SHI), 12 slots at Hanwha Ocean, and 8 slots at Hudong-Zhonghua (HZ). The latter eight slots are earmarked for the construction of 271,000 cbm Q-max LNG carriers.

HHI accounted for 60% (39 units) of the orders placed in 2023, thereby maintaining its position as the shipyard with the largest orderbook, currently comprising 108 LNG carriers, equivalent to 35% of the global orderbook. Meanwhile, SHI and Hanwha Ocean secured 8 and 5 orders, respectively in 2023. Chinese shipyards accounted for 20% of the

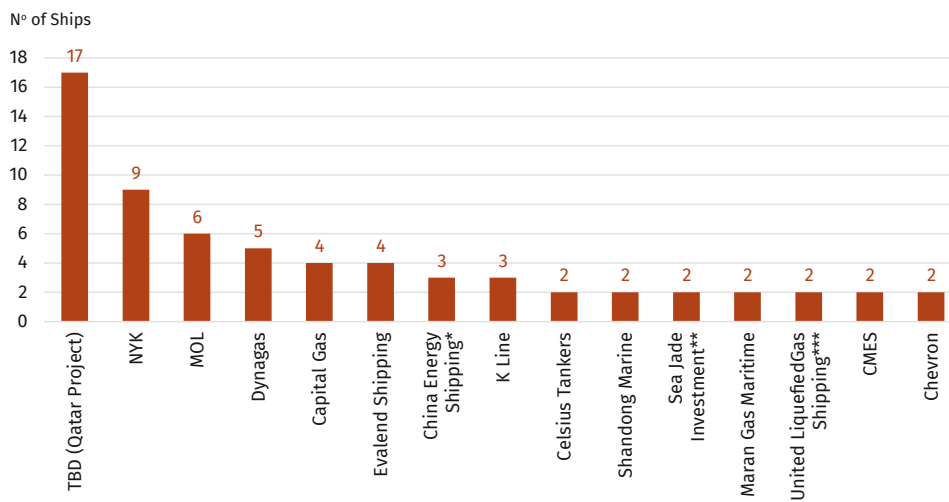
orders placed last year with 13 units, compared to capturing 26% of orders placed in 2022 with 46 orders. Nevertheless, it is worth noting that, for the first time, a Chinese shipyard has entered the top three in

terms of annual orders: Dalian Shipbuilding Industry Co (DSIC) with 7 orders secured in 2023.

### Conventional LNGC Orders in 2023 by Yard



### Conventional LNGC Orders in 2023 by Owner

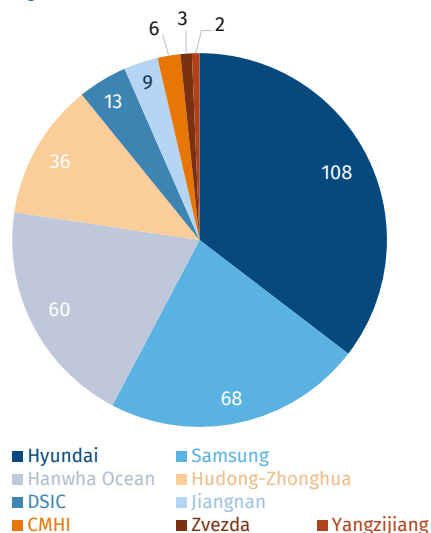


\*: JV between Cosco (51%) and Sinopec (49%)  
 \*\*: JV between Wah Kwong Maritime Transport (45%), China Gas (30%) and CSSC Shipping (25%)  
 \*\*\*: JV between Cosco (81%) and PetroChina (19%)

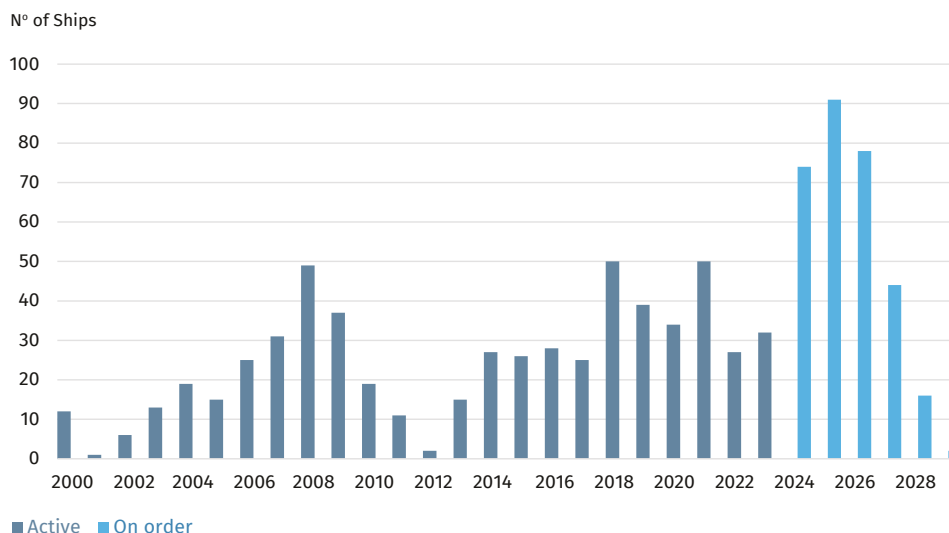
By end-2023, the LNG orderbook represented 48% of the conventional active LNG carrier fleet, with 305 vessels on order compared to the current 635 active units. The limited availability of slots in Korean shipyards continues to pave the way for the emergence of Chinese shipyards. In 2023, China's share of the large LNG carrier global order book stood at 22%, comprising 66 orders. Moreover, 2024 is poised to establish a record for deliveries, with 72 units scheduled for completion. This includes 71 conventional LNG carriers and 1 Medmax LNG carrier.

The upswing in deliveries stems directly from the remarkable number of orders placed in 2021 (82) and 2022 (165). Further demolitions in 2024 are also anticipated, as shipowners are expected to renew and upgrade their fleets to comply with new emissions regulations. Additionally, there is an anticipation that QatarEnergy will finalise Phase 2 of its extensive newbuilding program, with 35 reserved slots yet to be concluded.

### Conventional LNGCs Orderbook by Yard



### Conventional LNG Carrier Deliveries and Orderbook





## LNG Carriers Forecast

We estimate that an additional 226 LNG carriers need to be commissioned by 2033 to meet the theoretical 5% annual increase in LNG demand over the next 10 years which will see global demand hit 666 mtpa in 2033.

As of 1 January 2024, 165 mtpa of export capacity is under construction, requiring 216 standard LNG carriers based on the trade patterns associated with such liquefaction terminals. In 2023, only two LNG liquefaction terminals commenced operations: the 3rd train of the Tangguh LNG Terminal in Indonesia (3.8 mtpa) which commenced in October, and the Tango FLNG in Congo (0.6 mtpa). Meanwhile, Sempra reached Final Investment Decision (FID) in March for the first phase of Port Arthur in the US (13.6 mtpa), along with the Rio Grande trains 1, 2 and 3 (16.2 mtpa). As highlighted in the Offshore chapter (page 130), the FLNG market is poised to have a significant year in 2024, marked by FIDs, a few newbuilding orders, and the initiation of LNG carrier conversions into FLNG units.

An additional 89 mtpa of liquefaction capacity is projected to be built to meet the theoretical 5% annual increase in LNG demand over the next 10 years. This required expansion in liquefaction capacity will necessitate the construction of 113 standard LNG carriers.

Moreover, we anticipate that LNGCs over 25 years old will be taken out of active service (demolition or conversion) starting in 2025 or 2026 due to a combination of recent, stricter emission regulations, high

## An additional 226 LNG carriers needed by 2033 to meet theoretical 5% annual increase in LNG demand.

maintenance costs and elevated operational costs which rise after they hit 20-25 years of age. Additionally, from 2024 to at least 2027-2028, we estimate that the high deliveries of LNG carriers will not be absorbed by the incremental LNG export capacity coming online over the period. Consequently, we will face a period of oversupply that will mainly impact the steam-turbine LNG carriers and, to some extent, the DFDE LNGCs. In total, we estimate that 202 new LNG carriers are required for fleet renewal.

- 36 LNGCs of 174,000 cbm and 15 Q-max of 271,000 cbm to replace the existing 45 Slow Speed Diesel (SSD) LNGCs (10,150,000 cbm).
- Additionally, 151 vessels of 174,000 cbm are needed to replace 176 STs and 13 DFDEs over 25 years old (26,275,225 cbm).

With 305 LNGCs already ordered, an additional 226 vessels need to be ordered, which translates to an average of approximately 32 to 33 LNGCs to be ordered each year from now until 2030.

Terminals	Region	Start up Expected	Export Capacity mtpa	Gross Fleet Requirement Ships #
Tortue West Ahmeyim 1 (FLNG)	WAF	2024	2.5	3
Arctic 2 LNG T1	Yamal	2024	6.6	8
Energia CostaAzul	WCAN	2024	2.5	3
Plaquemines LNG	USGC	2024	13.3	20
Golden Pass LNG T1	USGC	2024	6.0	9
Golden Pass LNG T2	USGC	2024	6.0	9
Golden Pass LNG T3	USGC	2025	6.0	9
LNG Canada	WCAN	2025	14.0	17
Gabon FLNG project	WAF	2025	0.7	1
Plaquemines LNGPhase 2	USGC	2026	6.7	10
NLNG T7	WAF	2026	7.6	10
Pluto LNG T2	SEA	2026	4.9	3
North Field LNGExpansion T1	ME	2026	8.0	8
North Field LNGExpansion T2	ME	2026	8.0	8
Corpus Christi4 - T10	USGC	2026	11.5	17
ZLNG FLNG	SEA	2026	2.0	1
Port Arthur LNG T1	USGC	2027	6.8	10
Rio GrandeLNG Train 1,2 &3	USGC	2027	16.2	24
North Field LNGExpansion T3	ME	2027	8.0	8
North FieldLNG Expansion T4	ME	2027	8.0	8
Mozambique LNG	EAF	2027	12.9	17
Port Arthur LNGT2	USGC	2028	6.8	10
<b>TOTAL</b>			<b>165</b>	<b>216</b>

Status of Terminal	Export Capacity mtpa	Fleet requirement #
Under construction	165	216
Proposed	89	113
<b>Total U/C &amp; Proposed</b>	<b>254</b>	<b>329</b>

Fleet Balance	Vessel #
Orderbook at end Dec 2023	-305
SSD Fleet Renewal	+51
LNGCs >25y out of active service	+151
<b>Net Fleet Requirement</b>	<b>= 226</b>

# Chartering

## LNG Prices

LNG prices weakened throughout 1Q23, with Japan/Korea Marker (JKM) and Northwest Europe Marker (NWE) prices reaching \$13/MMBtu at the end of March, representing declines of 46% and 38%, respectively. By the end of March, the Henry Hub (HH) price was around \$2.2/MMBtu, reflecting a 45% decrease since the beginning of January. This decline was attributed to low seasonal demand, elevated European gas inventories, and unseasonal mild temperatures. Notably, Freeport LNG (15 mtpa) resumed normal operations by the end of March.

In the second quarter, both the JKM and NWE price reached their lowest levels for the year, dropping by 38% and 43.6%, respectively, from April to early June. The JKM price slumped to \$8.4/MMBtu, while the NWE price stood at \$7.9/MMBtu. Despite initial decreases, prices rebounded towards the end of the quarter, driven by supply uncertainty linked to disruptions in Norway, which incentivized strong bids, along with the expansion of European regasification capacity.

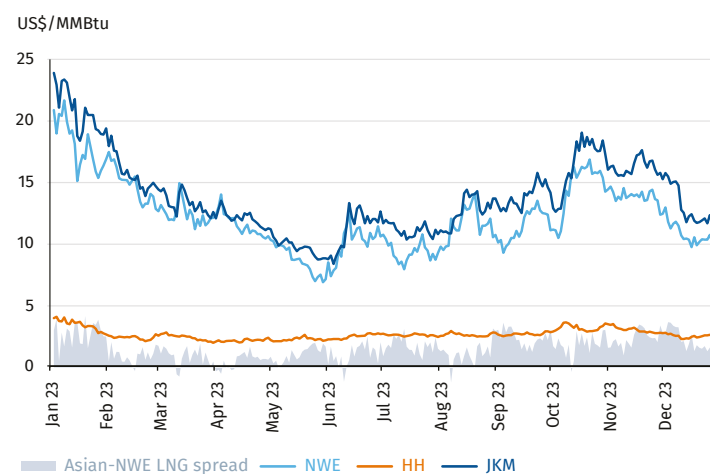
Moving into the third quarter, prices initially decreased until the beginning of August but later rebounded somewhat, driven by supply uncertainties from potential strikes in Australia, disruptions at Norwegian gas fields, and more buying in the spot market.

LNG prices weakened slightly in early October due to weak buying interest related to high inventories in Europe and Asia, warmer

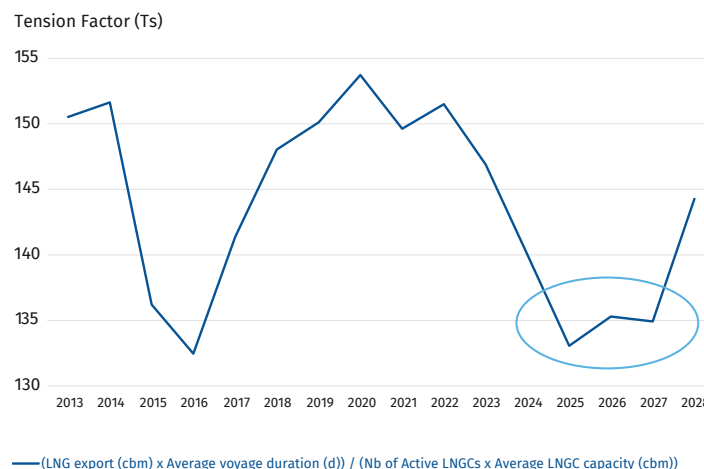
The LNG market moved towards a gradual rebalancing, with JKM and NWE prices declining by approximately 59% and 63%, respectively, compared to 2022. Nonetheless, they remained well above their historic averages.

weather, and Chinese holidays. However, from mid-October onwards, prices surged on concerns over colder winter weather amid tight supply expectations related to strikes in Australia, and geopolitical concerns. Accordingly, prices peaked during mid-October, with the JKM hitting \$19.05/MMBtu and the NWE \$16.28/MMBtu. Prices then turned a corner and gradually decreased until the end of December. This trend reflected a persistently bearish market influenced by weak demand on the back of warm winter weather and healthy gas storage levels in Europe and Asia. The competition for LNG between Northwest Europe and North Asia was less intense during 4Q23, in contrast to the fears of a supply shortage observed during the previous winter.

### LNG Prices



### Tension Factor (Ts) of the LNG Shipping Market



## Charter Rates

In 2023, LNG charter rates were volatile. The year began with a notable drop in January, followed by a persistent decline until the beginning of June, when rates reached their 2023 nadir. The trend then reversed, triggering a significant surge in rates through the summer, surpassing seasonal averages and peaking in mid-September. Following this sharp peak, rates underwent a modest downward correction, followed by a gradual rebound in November, and ultimately, another notable decrease in December.

From the beginning of 2023 until 1 June, Atlantic and Pacific spot rates consistently declined since posting record highs in October and November 2022. In January 2023, spot rates experienced a significant drop, falling from approximately \$188,000/day for a 174,000 cbm two-stroke (2S), \$146,000/day for a 160,000 TFDE and \$82,000/day for a 140,000 cbm steam-turbine (ST) at the start of the month to \$83,000/day for a 174,000 cbm 2S, \$54,000/day for a 160,000 TFDE and around \$33,000/day for a 140,000 cbm ST by month-end. Despite a slow recovery from mid-February to mid-March 2023, the downward trend persisted until June 1st, reaching the lowest levels of the year at \$55,000/day for a 174,000 cbm 2S, \$31,000/day for a 160,000 TFDE and approximately \$22,000/day for a 140,000 cbm ST — a decrease of 71%, 77%, and 73%, respectively, since the beginning of 2023. This was primarily driven by high vessel availability and low demand.

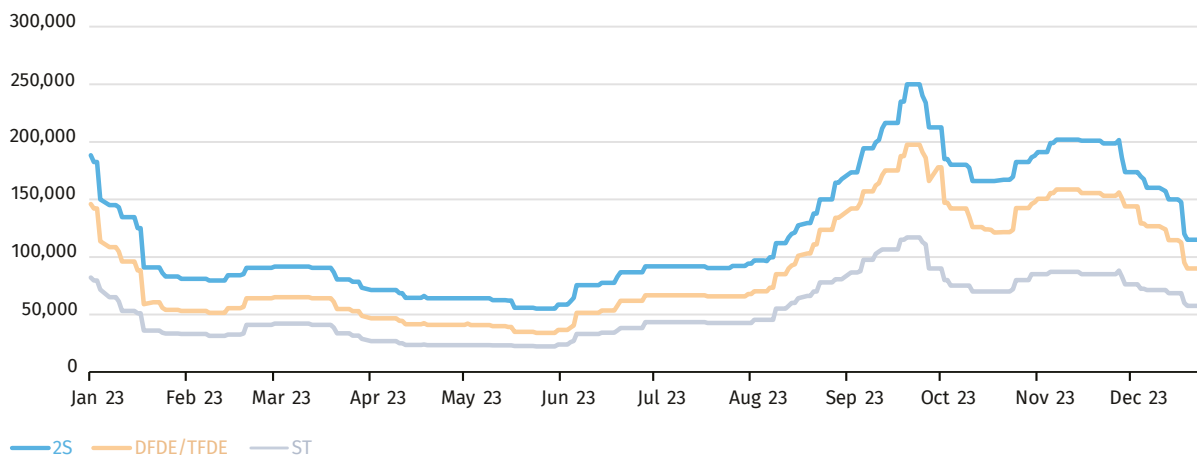
The downward trend halted on 2 June, and spot rates increased significantly throughout the month, reaching \$92,000/day for a 174,000 cbm 2S, \$67,000/day for a 160,000 TFDE and \$43,000/day for a 140,000 cbm ST end of 2Q23. This surge was largely attributed to heightened buying interest for summer cargoes and an open arbitrage to Asia, with netback forward curves pricing in US cargoes more profitable to Asia than Europe for the remainder of the summer. Spot rates remained rangebound in July before surging from early August to reach the

highest levels of 2023 between 22 and 26 September at \$250,000/day for a 174,000 cbm 2S, around \$198,000/day for a 160,000 TFDE and \$117,000/day for a 140,000 cbm ST — increases of 172%, 196%, and 171%, respectively, since the beginning of June. Spot rates in August and September exceeded seasonal averages and were driven by uncertainties over the potential impact on supply from the threat of industrial action in Australia and on expectations of a tightening market ahead of winter. Meanwhile, increased demand for LNGCs was observed, due to the open arbitrage to Asia for US cargoes open and positive floating storage economics in Europe.

LNG freight rates reversed course as Atlantic and Pacific spot rates significantly dropped from 27 September to 20 October, reaching \$167,000/day for a 174,000 cbm 2S, \$121,000/day for a 160,000 TFDE and \$70,000/day for a 140,000 cbm ST. This decline was primarily linked to weak demand and reduced trading activity due to the expectations of a warmer winter and high gas storage inventories in Europe which were around 95% full. High vessel availability also played a role as floating storage opportunities narrowed in the Atlantic.

As from 23 October, spot rates gradually climbed back some lost ground to reach their peak for the quarter on 16 November at \$202,000/day for a 174,000 cbm 2S, \$158,000/day for a 160,000 TFDE and \$87,000/day for a 140,000 cbm ST. Throughout this period, spot requirements surged, while the availability of LNG carriers for prompt chartering decreased. However, the upward trend subsided thereafter, despite issues at both the Panama and Suez Canals. Spot rates dropped to \$99,000/day for a 174,000 cbm 2S, \$80,000/day for a 160,000 TFDE and around \$47,000/day for a 140,000 cbm ST by the end of 4Q23. This decline was primarily attributed to persistently weak demand and a lack of arbitrage opportunities. Ongoing uncertainties at the Panama and Suez canals, coupled with subdued demand in Asia, constrained inter-basin arbitrage opportunities. The competition for LNG between Northwest Europe and North Asia was less intense during 4Q23, in contrast to winter 2022 period.

### Spot Rates for LNG Carriers (\$/day)





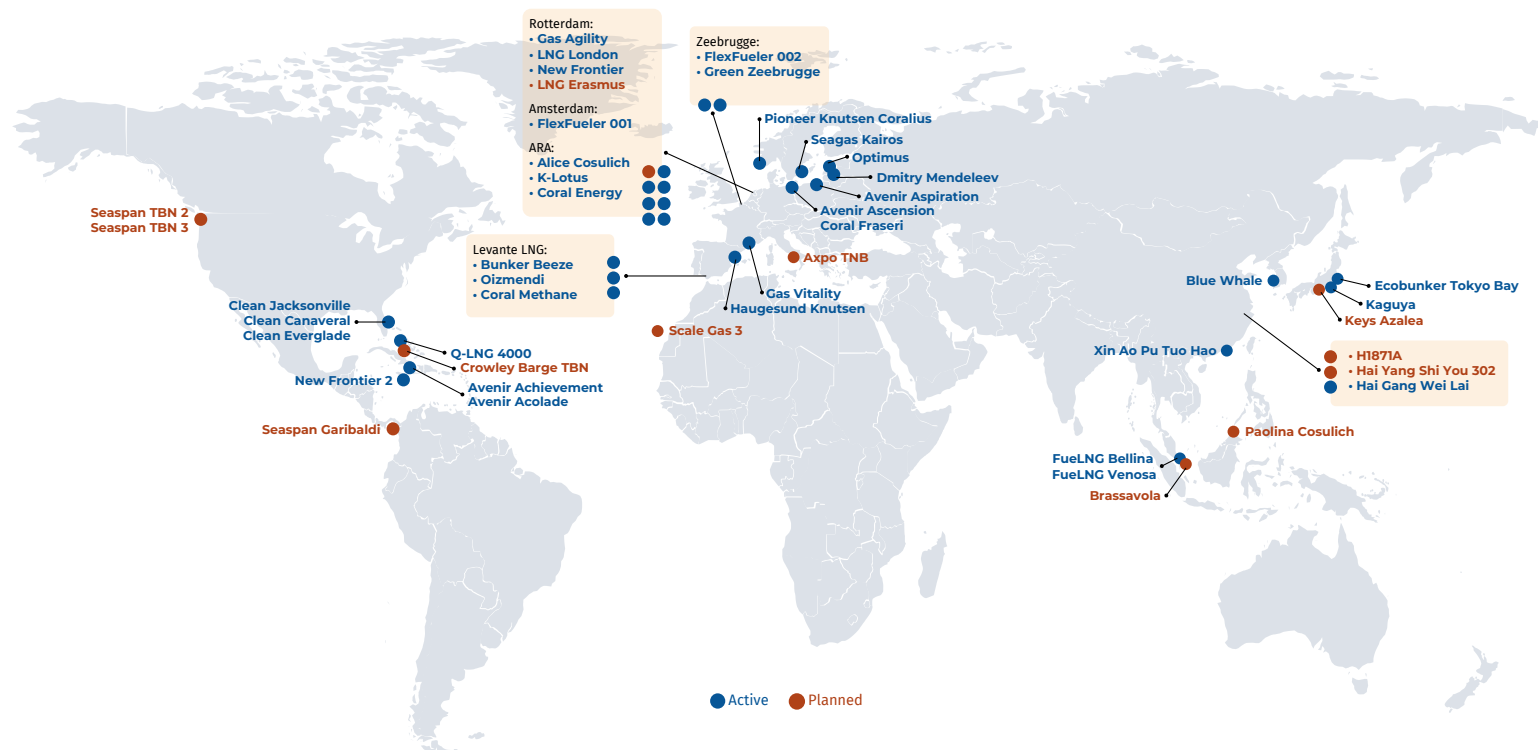
# LNG Bunkering Vessels (LBV)

In 2023, seven LNG bunkering vessels were successfully delivered. Notably, 2Q23 proved to be particularly dynamic with the delivery of the 18,000 cbm FueLNG Venosa by Hyundai Mipo, which has since been deployed in Singapore. In May, the 7,500 cbm Blue Whale, owned by Kogas, was deployed in South Korea. Deliveries in June included the 12,500 cbm Levante LNG, and the 18,000 cbm New Frontier 2, now operating in Algeciras and Jamaica, respectively. Towards the end of the year, the 2,500 cbm Ecobunker Tokyo Bay was delivered and is now in operation in Yokohama. Simultaneously, the 5,500 cbm Clean Everglade was delivered and deployed in Jacksonville. Concluding the year, the 2,500 cbm Alice Cosulich were delivered by CIMC SOE and will predominantly operate in the ARA area.

Meanwhile, Scale Gas & Peninsula have placed an order for a 12,500 cbm LBV with CIMC SOE, with delivery expected by 2026. This vessel is slated for deployment in the Canary Islands. Additionally, Gas&Heat has ordered a 7,500 cbm LBV from the San Giorgio del Porto shipyard in Piombino, Italy, set to commence operations in 2025. Axpo, a Swiss renewables producer, has committed to chartering the vessel for at least 10 years.

By the end of the year, there are currently 39 LNG bunkering vessels (LBVs) in operation, with 11 more under construction.

## LNG Bunkering Vessels Map



Source: BRS

# Floating Storage Regasification Units (FSRUs)

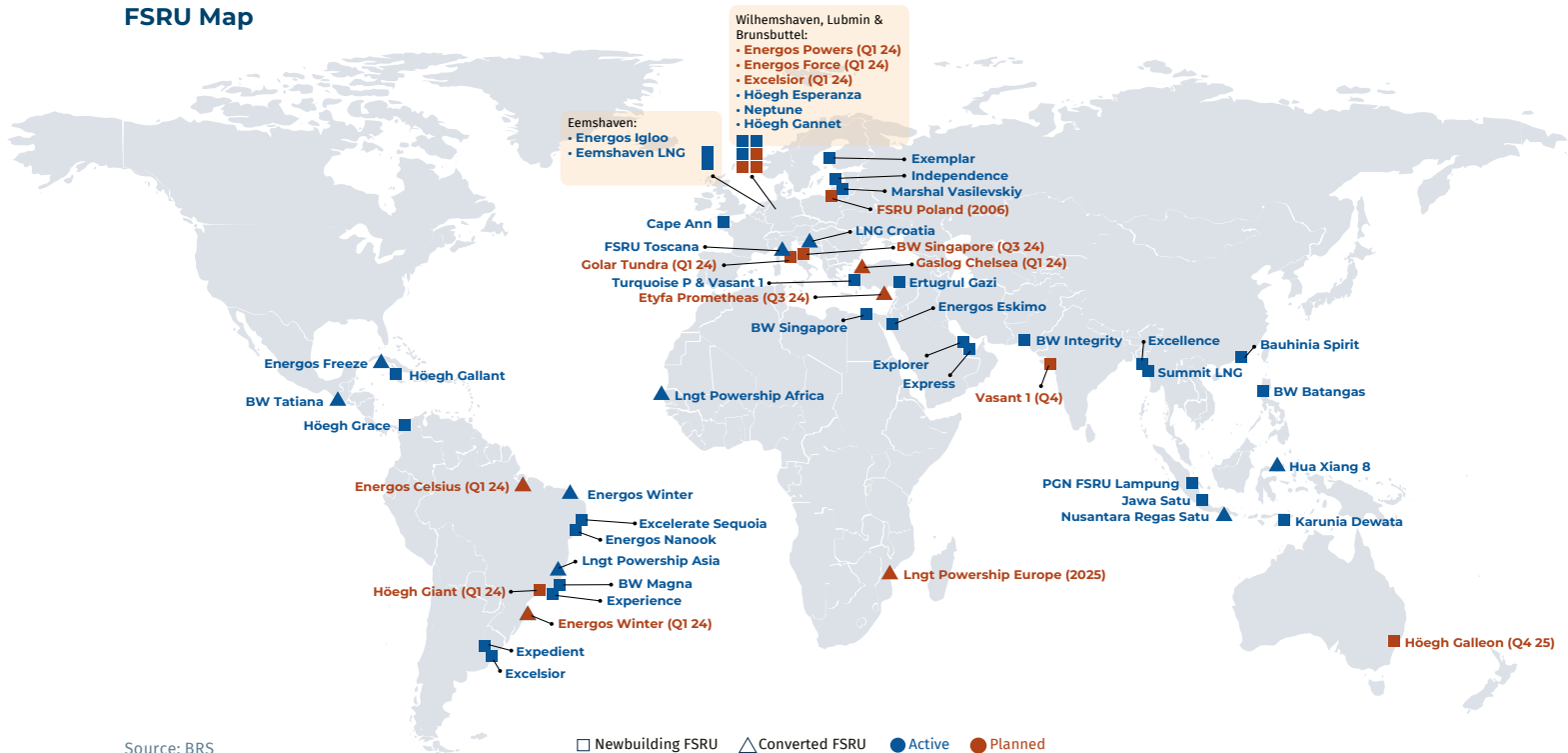
The FSRU market was extremely dynamic in 2023, with the year characterised by several operational milestones. The year kicked off with the commissioning of the 170,000-cbm Hoegh Gannet and the 145,000 cbm Neptune, both serving Germany. Following this, the 160,000 cbm Piombino FSRU (ex Golar Tundra) arrived in Piombino, Italy. Subsequently, the world’s largest FSRU, the 263,000-cbm Bauhinia Spirit, arrived in Hong Kong in May and started commercial operations in July. Simultaneously, the 162,000-cbm FSRU BW Batangas reached Batangas, Philippines, to commence operations at First Gen's liquefied natural gas (LNG) import terminal. In September, the 145,130 cbm Cape Ann FSRU arrived in Le Havre, France and commenced the delivery of natural gas supplies.

In 2024, we anticipate a dynamic year characterized by significant operational milestones, as 11 FSRU terminals are scheduled to commence operations. Among them, the 174,000-cbm FSRU Transgas Force, owned by Dynagas, arrived in Bremerhaven, and is prepared for its 1Q24 deployment at Stade, Germany. Similarly, the 153,600 cbm converted FSRU Alexandroupolis (ex GasLog Chelsea) arrived in Alexandroupolis in Greece, with commercial operations expected to begin by end-1Q24. Additionally, the 160,000 cbm Energos Celsius

left Seatrium’s yard in Singapore at the end of 2023 and should be commissioned at the Barcarena FSRU terminal in early 2024. Furthermore, the converted FSRU Energos Winter will be chartered from January 2024 to serve the NFE’s Terminal Gas Sul at Santa Catarina, Brazil. This unit is expected to start commercial operation in January 2024. After its service in Bahia Blanca during winter, the 138,000-cbm FSRU Excelsior underwent preparations at the Navantia yard at the end of 2023 for its upcoming assignment at Wilhelmshaven, where operations are expected to commence in 1Q24.

In other significant developments in the FSRU market, the 173,400 cbm FSRU Sequoia was fixed by Exceleerate Energy to Petrobras for 10-years from 1 January 2024 where it will continue to serve the Bahia regasification terminal in Brazil. Exceleerate also extended its charter deal with Dubai Supply Authority for the 150,900-cbm FSRU Explorer. Under the new agreement, the time charter period has been extended by 5 years from the end of the existing charter period in 4Q25. Consequently, the end of the new time charter period is 4Q30. Moreover, Deutsche ReGas took over the charter of the FSRU Transgas Power, owned by Dynagas, which is expected to serve the LNG import Terminal in Mukran, Germany, from the beginning of 2024.

FSRU Map



Source: BRS

# Conclusion

The LNG market exhibited remarkable resilience in 2023, navigating challenges in the shape of notable shifts in trade dynamics, fleet expansion, and price movements. The LNG market moved towards a gradual rebalancing, although prices remained well above historical averages. Major geopolitical shifts and transit restrictions through the Panama Canal redrew LNG trade patterns. This reconfiguration of LNG trade, and expectations for its continuation, significantly influenced the shipping segment.

Accordingly, the anticipated surge in LNG ton-miles is reflected by the high-level orders placed at shipyards in recent years. This is poised to directly impact the structure of LNG shipping activities in the upcoming years, affecting shipyards, shipowners, and charterers alike. The implications of this historical turning point underscore the need for adaptability and foresight in navigating the shifting dynamics of the LNG market.



Image:  
ELISA AQUILA, type (LNG carrier), 174,000 (cbm), built by Hyundai Samho Heavy Industries, France LNG Shipping, 2022.



# Offshore & Renewables

Image:  
LES ALIZÉS, Foundation Installation Vessel, 9,300m<sup>2</sup> deck area  
and 5,000t crane capacity, built in 2023, Jan De Nul.







# Towards Full Utilisation

In all segments of the offshore energies, 2023 was not only a recovery year but it became a year of full utilisation. Long term investment programs in the offshore renewable segment remain at the forefront of the industry's concerns. Meanwhile, the oil and gas segment entertains significant capex plans.

## Offshore Wind

To transition to a net zero energy system by 2050, many countries have set ambitious offshore wind capacity targets. If everything goes according to plan, the world will reach 2,003 GW of installed offshore wind capacity by 2050, against 67 GW today. Hence there is a positive outlook for vessels servicing the offshore wind market.

However, in 2023, several projects came under scrutiny. Cancellations and development delays were linked to a squeezed supply chain and

escalating costs. Wind farm developers, such as Ørsted, saw their project economics veer off course. Between the time they acquired development rights and the point at which they entered the decision-making phase for the overall investment, costs escalated to such an extent that they preferred to pull the plug and pay the termination fees.

This will undoubtedly impact several developments over multiple years.



Image:  
SEAWAY VENTUS, Wind Turbine Installation Vessel, 4,600m<sup>2</sup> deck area and 2,500t crane capacity, built in 2023, Seaway7.

**2,003**  
GW of installed offshore  
wind capacity by 2050

**67**  
GW of installed offshore  
wind capacity today



## Wind Turbine Installation Vessels (WTIVs)

2023 was a record year with the delivery of 13 WTIVs, compared to 2 in 2022. Most (10) were destined for the Chinese market. Through these deliveries, two players entered the international market: Seaway7 with Seaway Ventus and Hyundai E&C with Hyundai Frontier. Japanese Penta-Ocean Construction added a second vessel to its fleet, CP-16001. While Seaway Ventus is on its way to European wind farms, CP-16001 and Hyundai Frontier are contributing to the growing offshore wind activity in their home countries.

US-based Dominion Energy announced the delayed delivery of the first Jones Act-compliant WTIV, Charybdis. This should finally hit the water in early 2025, which will delay the Revolution Wind installation campaign.

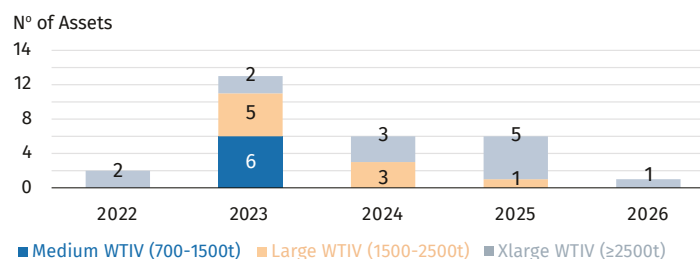
Although almost half of the WTIVs delivered in 2023 fell into the medium-size category (crane capacity between 700 to 1,500t), the market continues its shift towards larger WTIVs. 13 vessels currently under construction will have a crane capacity above 1,500t. Vessels under construction for Cadeler or Van Oord will be equipped with Huisman cranes with capacity in excess of 2,200t.

The main structuring move in the market this year was the merger between the two largest players, BW Group-backed Cadeler and Eneti. With 10 assets, including 4 already in the water and 6 under construction, the new Cadeler will become a market leader controlling 30% of the international wind turbine installation fleet, excluding China. The second largest player, Belgian DEME, controls only 4 WTIVs, or 12% of the fleet.

Dominion Energy and Maersk Supply Service are not yet part of the market players but will be upon the delivery of Charybdis (2024-25), and Sturgeon (2025), respectively.

Denmark's ZITON acquired the Chinese 800t crane Guo Dian Tou 001 and renamed it Wind Energy to meet short-term regional heavy-maintenance requirements. It is worth noting that until recently, European operators have been reluctant to incorporate Chinese specified and CCS-classed assets in their fleet.

### WTIV Count by Year of Delivery



Source: BRS and Spinerjie

### WTIVs Delivered in 2023

Vessel Name	Owner	Current Country	Main Crane Capacity (t)
Hai Feng 1001	CCCC	China	2,500
Hai Feng 1002	CCCC	China	1,800
Bai He Tan	China Three Gorges	China	2,000
Bo Qiang 3060	CIMC Raffles Offshore	China	2,200
Hyundai Frontier	Hyundai E&C	South Korea	1,200
Jing Yin 03	Keen Offshore	China	1,000
Ouyang 005	OuYang Offshore	China	800
Ouyang 006	OuYang Offshore	China	800
Ouyang 007	OuYang Offshore	China	800
Ouyang 008	OuYang Offshore	China	800
CP-16001	Penta-Ocean Construction	Japan	1,600
Seaway Ventus	Seaway7	South Africa	2,500
Zhong Tian 31	ZTT Submarine Cable	China	1,600

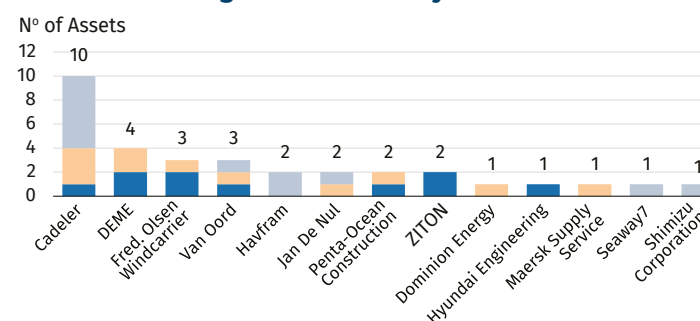
Source: BRS and Spinerjie

### WTIVs Under Construction as of January 2024

Vessel Name	Owner	Year Built	Main Crane Capacity (t)
Nessie	Cadeler	2024	2,600
Wind Peak	Cadeler	2024	2,500
Hai Jian 020	CSSC	2024	1,600
Charybdis	Dominion Energy	2024	2,200
Norse Wind	Havfram Wind	2024	3,250
Hengtong TBN-1	Hengtong	2024	1,600
Siren	Cadeler	2025	2,600
Wind Ally	Cadeler	2025	2,600
Wind Pace	Cadeler	2025	2,500
Norse Energi	Havfram Wind	2025	3,250
Sturgeon	Maersk Supply Service	2025	1,900
Boreas	Van Oord	2025	3,000
Wind Ace	Cadeler	2026	3,000

Source: BRS and Spinerjie

### Medium to XLarge WTIV Fleet\* by Owner



\*Includes vessels under construction and excludes the Chinese fleet

■ Medium WTIV (700-1500t) ■ Large WTIV (1500-2500t) ■ XLarge WTIV (≥2500t)

Source: BRS and Spinerjie



Image: GREEN JADE, Foundation Installation Vessel, 8,232m<sup>2</sup> deck area and 4,000t crane capacity, built in 2023, DEME. Copyright: DEME Group.

## Foundation Installation Vessels (FIVs)

4 large purpose-built FIVs were delivered in 2023.

In December, Van Oord announced the upgrade of its monopile installation vessel — Svanen — to increase the lifting capacity up to 4,500t, hence allowing the vessel to install monopiles for 15MW turbines.

## Commissioning and Service Operation Vessels (CSOVs)

The CSOV market in 2023 was just as busy as in 2022. 18 vessels were ordered, compared to 20 the previous year. VARD was the most active designer, winning 55% of the orderbook.

As the offshore oil and gas market gained strength and Platform Supply Vessels as well as Subsea Construction Vessels were able to secure attractive rates in their home markets, the number of conversion candidates drastically declined. Hornbeck Offshore was the sole owner to announce the conversion of one of its vessels under construction (HOS Rocinante) into a Jones-Act compliant CSOV to service the US market.

Notwithstanding this surge of newbuildings, for the second year in a row, several owners did not exercise the options they had to add to their CSOV fleet. This is especially true for certain early-mover Norwegian owners.

On the consolidation side, the only noticeable transaction was the sale of two CSOVs from Netherlands-based Vroon to Danish CBED, which belongs to the Monjasa Group.

### FIVs Delivered in 2023

Vessel Name	Owner	Current Country	Deck Area (m <sup>2</sup> )	Main Crane Capacity (t)
Seaway Alfa Lift	Seaway7	UK	8,000	3,000
Green Jade	DEME	Taiwan	8,232	4,000
Les Alizés	Jan De Nul	Netherlands	9,300	5,000
Qin Hang Gong 5000	Jiangsu Longsheng Marine Engineering	China	8,800	4,000

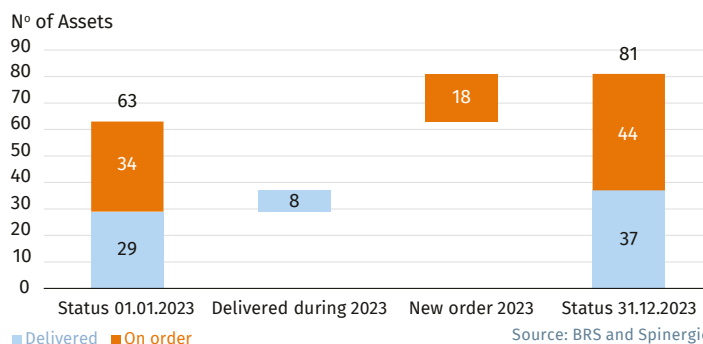
Source: BRS and Spinergie

### CSOVs Ordered in 2023

Designer	Number of Vessels	Owner	CSOV Design
VARD	4	Edda Wind	VARD 4 25
VARD	2	North Star Renewables	VARD 9 22
VARD	2	Purus Wind	VARD 4 19
VARD	2	Windward Offshore	VARD 4 19
Damen	1	Purus Wind	CSOV 9020
Damen	3	Windcat Workboats	Elevation Class
Damen	1	Ta San Shang Marine	CSOV 9020
Ulstein	2	Windea	SX 222 CSOV
HAV Group	1	CREST Wind	HAV 832 SOV (Jones Act-compliant)

Source: BRS and Spinergie

### Purpose-built CSOV Fleet — 2023 Expansion





## Power Transport and Installation (T&I) Contractors

Jan De Nul ordered the largest to date power Cable-Laying Vessel (CLV); with a 28,000t capacity, the Fleeming Jenkin more than doubles the existing largest capacity of 13,000t Leonardo da Vinci.

Other notable changes amongst market players included:

- Asso.subsea completed the conversion of Ariadne, mobilizing a 4,000t carousel on deck and a 1,500t carousel under-deck.
- Van Oord took delivery of Calypso (8,000t carrying capacity) from VARD.
- Boskalis acquired Pipe-Laying Vessel Apache II from TechnipFMC, renamed her Boka Ocean, and sent her to Rotterdam to convert her to a Power CLV.
- Two players entered the T&I market by ordering CLVs in 2023 both with VARD designs:
  - Denmark-based NCT Offshore, with a 3,500t carrying capacity VARD 9 01 vessel.
  - Japanese Toyo Construction for a larger VARD 9 15 vessel able to carry 9,000t of cable.

Image:  
FLEEMING JENKIN, Power Cable-Layer, 3  
carousels and 28,000t capacity, Jan De Nul.





## Power Cable Manufacturing and Installation Contractors

Nexans ordered an upgraded version of its 2021-delivered Nexans Aurora, this time with 13,500t carrying capacity.

Prysmian ordered two units in late December: a 19,000t carrying capacity vessel similar to the Monna Lisa currently under construction; and a 10,000t carrying capacity vessel with shallow water installation ability.

NKT ordered a 14,000t capacity CLV designed by Norwegian Salt.

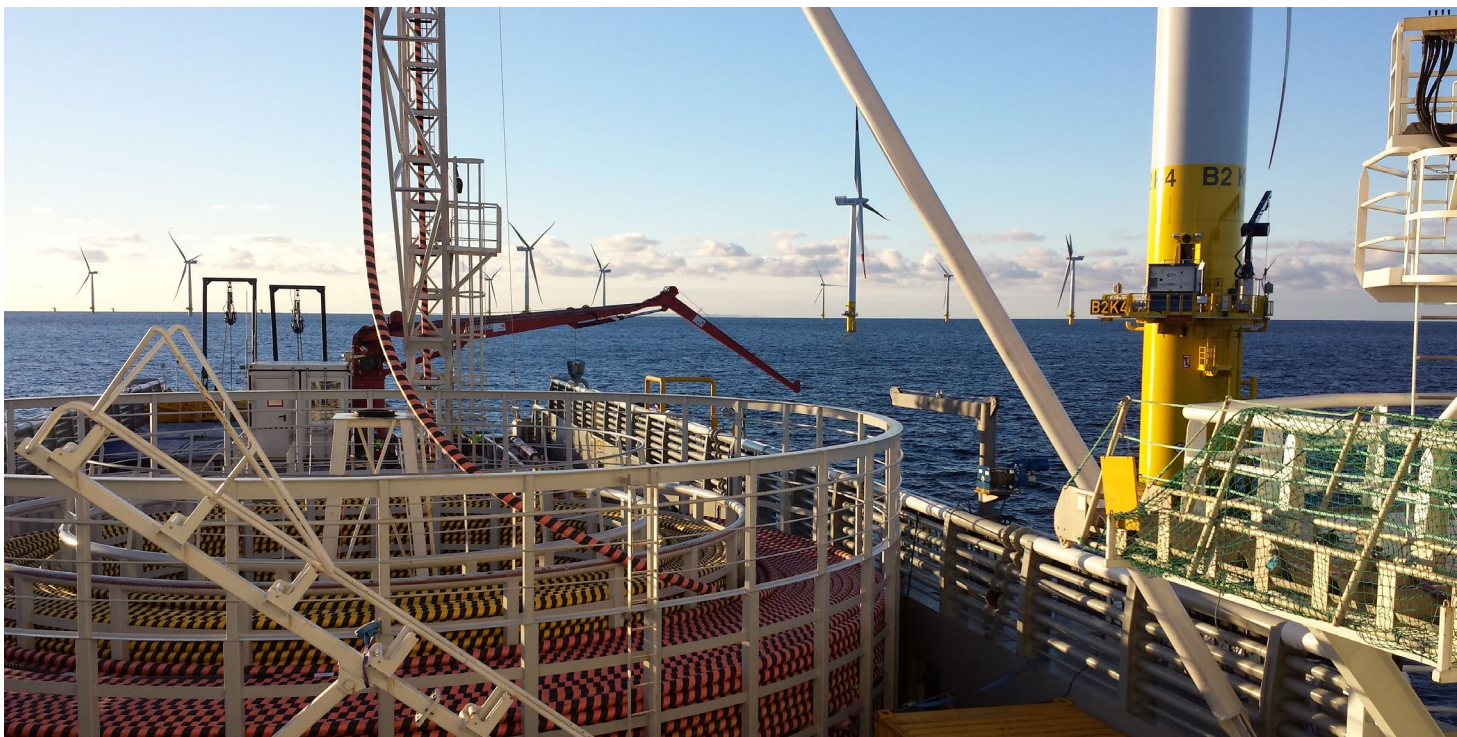
Power cable manufacturing and installation contractors also welcomed a new player with Korean Taihan Cable and Solutions acquiring Boskalis' CLV Spirit (4,000t carrying capacity) for initial deployment in the Korean market.

## Transportation Vessels

Operators of Heavy-Lift Vessels (HLVs), deck carriers and semi-submersible transportation vessels enjoyed a high level of activity from the offshore wind market in 2023:

- Hyundai Merchant Marine (HMM) ordered 2 x 182m LOA, 2x400t crane, 38,000 Dwt HLV at China's Huangpu Wenchong to double the size of its HLV fleet.
- SAL Heavy Lift exercised an option to build a 5th Orca Class vessel (150m LOA, 2x800t crane) at Wuhu Shipyard in China to be operated under the Jumbo-SAL-Alliance upon delivery in 2025.
- SAL Heavy Lift also expanded its footprint in the semi-submersible transportation market by taking over the management of newly delivered Zhong Ren 121 and Zhong Ren 122 (169m LOA, 5,320m<sup>2</sup> deck, DP2).

The major 2023 event in this market is certainly the creation of the joint venture between the largest operator of semi-submersible transportation vessels, COSCO SHIPPING Specialized Carriers, with its compatriot Guangzhou Salvage. Its combined 18 vessel fleet ranges from 4,500m<sup>2</sup> to 15,000m<sup>2</sup> deck area and counts two of the three largest vessels in the world. The joint venture controls a third of the global semi-submersible transportation fleet.



# Oil and Gas

The Offshore Oil and Gas industry is in the early stage of a multiyear upcycle which started with Russia's invasion of Ukraine in early 2022. Back then, heightened concerns about potential fuel shortages prompted an urgent push to increase oil and gas production. Over the past year, the heat has been slightly tempered as there is evidence to suggest that the energy transition is picking up pace. Nonetheless, oil and gas are needed to mitigate against a chaotic energy transition, hence the market sentiment that the upcycle is here to stay. While US shale (onshore) suffers from a new model of capital discipline among operators and declining yields, offshore production and international markets, notably the Middle East, are driving growth.

## Logistics and Mobilities

In 2023, the global Offshore Support Vessel (OSV) capacity was tight with very few new vessels entering the segment. Current market conditions favoured a prolonged upturn. Demand for OSVs rose as majors and energy companies increased their investments improving charter rates and utilisation numbers/ratios.

On the Platform Supply Vessel (PSV) side, by the third quarter, the leading edge on charter rates for the larger units (DP2, >900m<sup>2</sup> deck area) reached the \$30,000/day mark, heights not seen in the past eight years. The medium sized units (700-900m<sup>2</sup> deck area) closed in on the \$25,000/day mark, and the smaller units (<700m<sup>2</sup> deck area) crossed \$20,000/day on certain new contract awards. The bright news has been across all international markets, save for one, the North Sea, in which rates have not strengthened as aggressively.

Mounting oil and gas activity, investments in large subsea projects together with growing offshore wind markets drove higher demand for the large Anchor Handling Tug Supply (AHTS) segment. The global supply and demand balance improved in favour of the shipowners. Despite these positive macro signs and an impressive seasonal hike in 2022, rates for AHTSs, in 2023, rates did not repeat their gains seen in 2022. Accordingly, there was a muted effect on day rates with regional nuances. The North Sea saw fixtures as low as \$20,000/day for a 200t BP in September for rig moves. However, in Brazil the rates were consistently heavy in the first part of the year, with owners reporting large units fixed at over \$38,000/day.

Operators are back into positive cash operations and currently expect such positive momentum to last until the end of the decade.

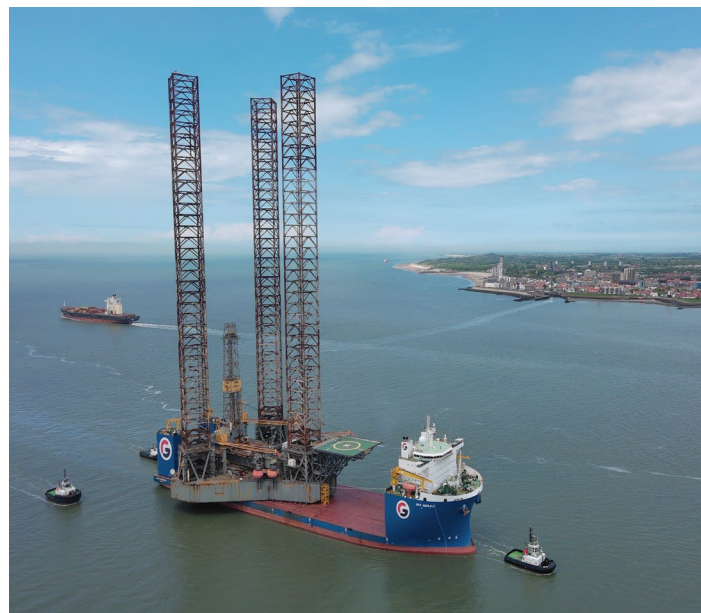


Image:  
GPO EMERALD, Semisubmersible, Dwt 63,581, built by CSBC Corporation in 2021, GPO Heavylift, discharging Dixstone's rig in Flushing, the Netherlands. Copyright: GPO Heavylift.

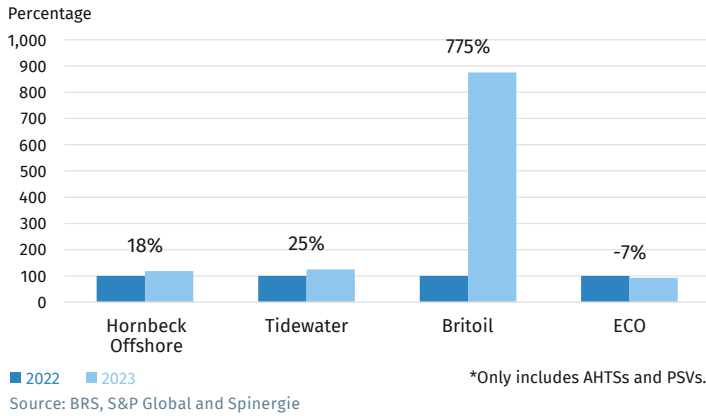
Last September, Golden Energy Offshore acquired four PX121-designed PSVs.

Four PSVs left the fleet since Fugro acquired the first two (PX121-designed) from P&O Maritime Logistics in February 2023 and the other two (WSD 1000-designed) from Seatankers in December 2023 to be converted to, and operated as, geotechnical assets. This comes against the backdrop of high demand for services and strong backlog growth, especially in the offshore wind market.

Tidewater continued its expansion as the largest actor in the segment with the acquisition of the whole of Solstad's PSV fleet, adding 37 vessels to its roster in that transaction.

In September, Vroon completed a complex financial restructuring with the sale of its Offshore segment to Singapore based Britoil. The company purchased 30 vessels together with its supporting offices in Singapore and Genoa. Before this acquisition and the delivery of Britoil Journey and Britoil Justice, in April and September, respectively, Britoil was an AHT/AHTS-focused player. The acquisition also widened the company's geographic scope to the Mediterranean region.

### The Most Dynamic Fleet\* Evolution



ECO’s PSV fleet decreased as Hornbeck Offshore acquired the vessels.

Abu Dhabi’s AD Ports Group purchased ten secondhand offshore vessels from E-NAV Offshore to fortify its footprint in Southeast Asia and the Middle East.

Evangelos Marinakis recently formed a new offshore shipping company, Capital Offshore, with acquisition of seven modern PSVs from Norwegian owners.

One large Breeze Ship Design PSV with battery hybrid propulsion is under construction for Norwegian-registered Hercules Supply. As part of the same order, the company placed an option for two identical PSVs at the same shipyard, Chinese Fujian Mawei Shipbuilding.

Owners still need to find financing for their newbuilding programs. This remains challenging and the installation of various green technologies on vessels are being discussed. Indeed, market participants are closely monitoring the choice and progress of shipowners on fuel selection and propulsion systems.

## Subsea Construction and Installation

In 2023, demand in the subsea construction market continued to grow in the wake of high activity in the oil and gas and offshore wind sectors. Throughout the year, availability was tight and day rates reached levels not seen in a decade. Judging by the number of new orders, all regions in the world are getting busier and these market fundamentals are expected to continue.

- Norwegian owner Agalas signed a newbuilding contract for a Light Construction Vessel (100m LOA, 150t Active Heave Compensated (AHC) crane, 100 POB, methanol ready), its second vessel after the multi-purpose CLV ordered in January 2023.



Image: POURQUOI PAS ? multidisciplinary oceanographic research vessel, in Brest harbor, France, built in 2005. Copyright: S. Lesbats, Ifremer.

- US owner Hornbeck Offshore settled a long-running dispute that will allow them to resume the construction of two 250t AHC crane vessels, namely HOS Warhorse and HOS Wild Horse, for delivery in 2025.
- In APAC, GO OFFSHORE started reactivating its 25t AHC crane vessel, GO EXPLORER. After months of maintenance/modifications, the vessel sailed towards its next destination in January 2024.

In the fleet of Heavy Subsea Construction Vessels (HCVs) that counts a few dozen units, each equipped with at least a 400t AHC crane, 2023 saw certain noticeable transactions:

- In early 2023, Boskalis acquired the BOA Sub C (400t AHC crane and 220t bollard pull) from Norwegian BOA Offshore and renamed her Boka Sub C. The vessel came with a Subsea7 long-term contract.
- After several years of transitioning from one short-/medium-term contract to another, the 900t crane Normand Maximus was secured by Saipem for 490 days starting January 2024.
- DOF chartered out its 400t AHC crane vessel, Skandi Acergy, to Subsea7 for 18-months, a contract which will start in January 2025 right after its current contract with BP ends. With DOF having chartered out its only other HCV to TechnipFMC ever since its delivery, the company secured its entire HCV fleet with long term contracts. The company also chartered in the 400t AHC crane vessel, Maersk Installer, from Maersk Supply Service for two years, displaying the company’s intention to grow its market share.
- Ocean Installer secured access to North Sea Shipping’s 400t AHC crane vessel, North Sea Giant. The contract will start in April 2024, right after the current contract with TechnipFMC ends.



In the Diving Support Construction Vessel (DSCV) market:

- SEAMEC acquired the 3-man single bell SEAMEC Swordfish (ex-Subtech Swordfish).
- The DP3 24-man twin bell ex-Toisa Pelagic, controlled by shipyard ZPMC was finally sold to UAE-based CCC (Underwater Engineering) and renamed Wadad Aletheia. The vessel saturation diving system, still under commissioning, is scheduled for delivery in 2024.
- The ST-246 DSCV Hai Long Ming (ex-Oriental Dragon) is being extended with its present charterer for three years.

Jackups dominated the awards, accounting for 69% of the total rig years, while Drillships and Semisubmersibles accounted for 17% and 14%, respectively.

In terms of fleet size, 2023 marked a stabilization after years of decline and an end to the stranded Drillship saga. The overall fleet size across segments landed at just over 700 units. The Jackup and Semisubmersible fleets experienced reduced attrition, while the Drillship market had two new deliveries, allowing all formerly stranded units to find homes. The expectation for 2024 includes potential Drillship reactivation.

Day rates in all three rig segments increased throughout the year to reach their highest in almost eight years.

The major owners in each category are a great representation of each market’s dynamics.

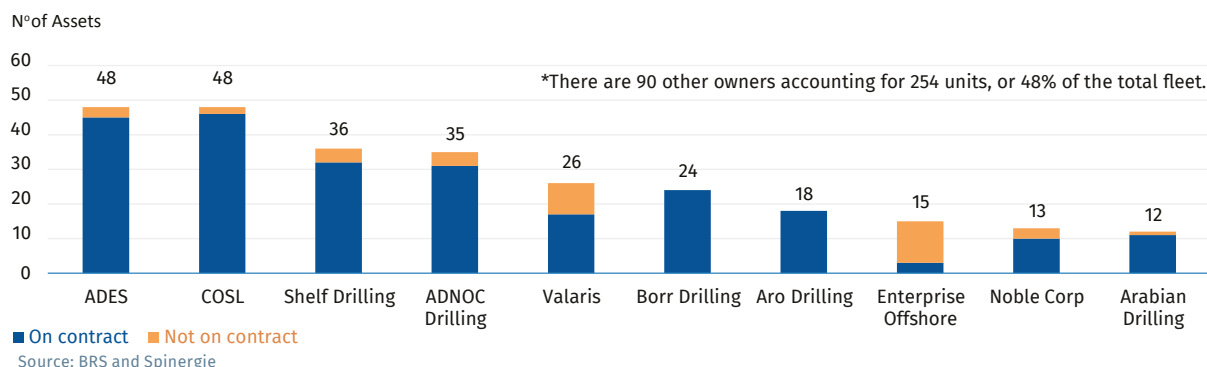
## Drilling

In 2023, the offshore rig market experienced a period of stability and prepared for the anticipated activity increase in the second half of the decade. Jackup and Drillship fleet utilisation increased slightly, while Semisubmersibles confirmed their comeback thanks to rising international demand for harsh environment units.

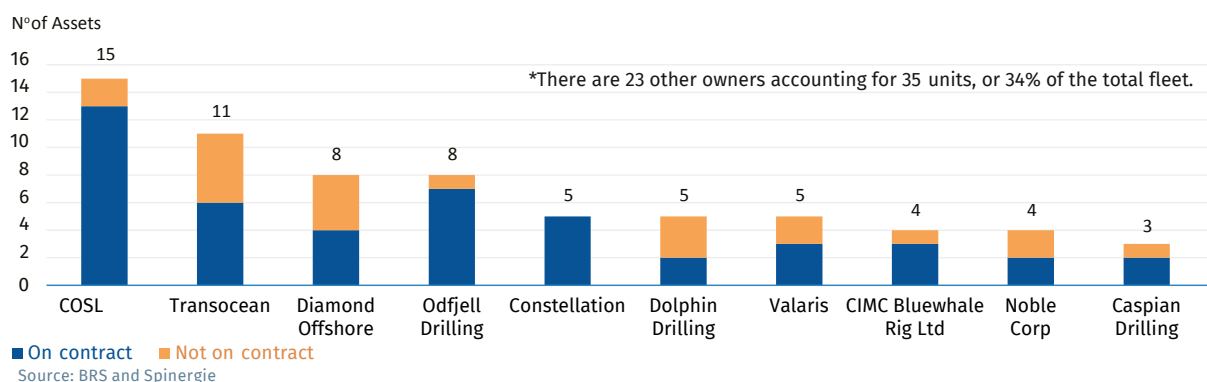
The changing Jackup owners’ rankings reflects the increasing geographic concentration and asset class segregation of this unit type. The emergence of Middle Eastern-focused companies, namely ADES and ADNOC Drilling, has superseded the dominance of diversified international drillers such as Valaris and Noble. The Middle East is the region to be in for Jackups, with 32 units added to the contracted rig count throughout 2023, the region now accounts for 42% of the contracted fleet worldwide.

The number of rig years awarded in 2023 hit a low point since 2020, with a significant drop of 43% compared to the high levels seen in 2022.

### Top 10 Jackup Owners



### Top 10 Semisubmersible Owners



Contrarily to the Jackup market, the Semisubmersible market is concentrated, with the top 10 owners accounting for two thirds of the fleet and only 23 other owners accounting for the remainder. Meanwhile, the Semisubmersible market has stabilized after years of attrition. It continues to be a challenging market with many units awaiting contracts.

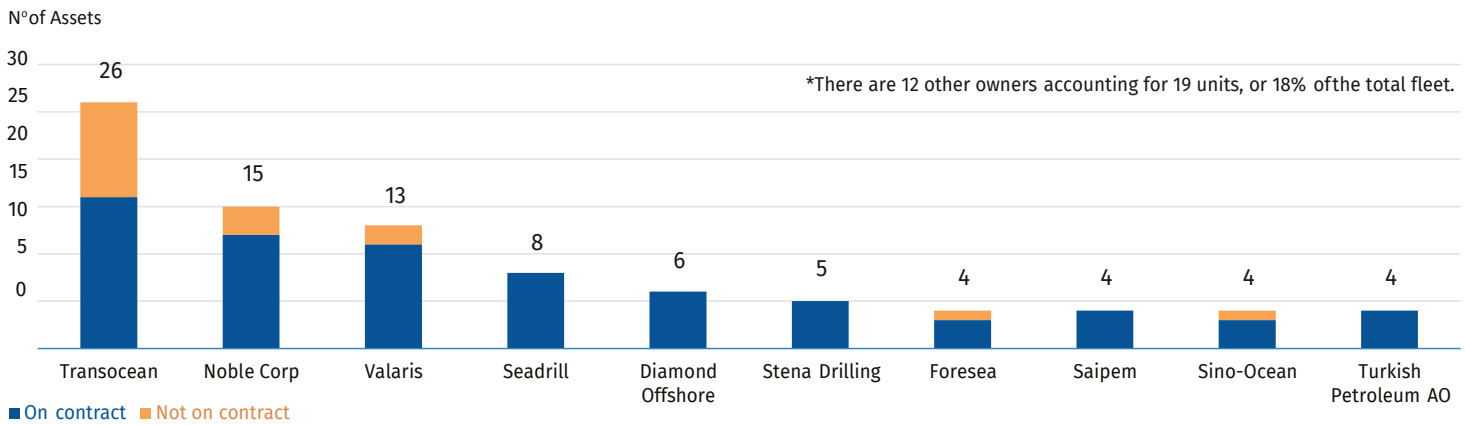
The Drillship owners' ranking has been stable since the wave of consolidation during the downturn. The biggest owners still have some units to put to work or reactivate. The concentration of the fleet allows for a more disciplined market.

In summary, 2023 presented a mixed year for the offshore rig market, with low rig years awarded but promising long-term scopes being

tendered, especially in the Middle East, South America and West Africa. The fleet size stabilised after several years of decline, and while new orders are a possibility, there is an emphasis on reactivations and international mobilisation.

Looking ahead to 2024, there are expectations for an increase in awarded rig years, driven by outstanding multi-year tenders. Petrobras is anticipated to contribute significantly, and long-term tenders in West Africa, the US Gulf of Mexico, and the Atlantic Margin could further boost overall rig years awarded. Day rates are expected to plateau in the first half of 2024 and to increase in specific segments and geographies in the following quarters as markets tighten.

### Top 10 Drillship Owners



Source: BRS and Spinerjie

## Production

### Floating Production Storage and Offloading (FPSO)

In 2023, the offshore oil and gas production sector confirmed its significant upturn.

After several years of lackluster investment, it has been mainly driven by the strong demand in deep water acreages located in the South Atlantic basin.

Brazil's Petrobras, the most active company, is set to bring 15 new units online before the end of the decade. It has already lined up an investment plan of \$64 billion to be achieved by end-2027 reaffirming the country's status as the world number one player in the global deepwater offshore oil and gas market. Worth noting that during same period Petrobras plans to spend close to \$10 billion in decommissioning activities.

In Surinam, TotalEnergies announced successful appraisal wells on Block 58 and a \$9 billion project expected to yield close to 700 mb with first production by 2028. In Guyana, the latest major market, is poised to see the deployment of six units before the end of the decade fortifying the SBM Offshore and Chevron team. FPSO Prosperity, the third in the country for the duo, started producing in November and will reach an initial production of 220 kb/d.

Angola is part of the FPSO spree with seven new units to be deployed by 2027 including the TotalEnergies Cameia Golfinho which was awarded to Saipem and built and commissioned by CMHI.

In the UK North Sea, positive signs are emerging with the sanctioning of the Rosebank project. This development underscores the ongoing vitality of mature oil and gas regions, emphasizing their enduring importance in the global energy landscape.

Challenges persist in terms of shipyard capacity, which remains tight, putting further stress on an already challenging supply chain. Addressing these capacity constraints will be crucial to sustaining the

sector's positive trajectory and meeting the increasing demand for large production assets.

Despite the positive momentum, the sector faces challenges related to accessing capital for large projects. Banks are increasingly reluctant to finance new ventures, creating hurdles for companies seeking funding for offshore oil and gas initiatives. This financing constraint necessitates innovative approaches to secure the required capital for exploration and production projects.

Overall, the offshore oil production market has a positive wave to surf for the remainder of the decade with some predicting over 40 units to be awarded to greenfield projects.

The offshore production market also benefits from the new traction provided by Floating Liquefied Natural Gas (FLNG) projects that are being launched to valorize the associated gas production of existing oil production fields and their satellites.

## Floating Liquefied Natural Gas (FLNG)

Compared to 2022 which witnessed significant activity with the placement of two crucial orders of Eni's second Congo-bound FLNG unit and Petronas' third FLNG unit, 2023 marked a transitional year, setting the stage for 2024, which is expected to be a substantial year for the FLNG market.

The main events of the year are summarized in the table below.

### Main Events of the FLNG Market in 2023

Unit Name	Asset Owner	Capacity	Yard	Location	Type	Activity in 2023/2024	Expected Delivery Year
FLNG	Perenco	0.7 mtpa	Undisclosed	Gabon	Converted FLNG	Perenco took FID in Q1 2023	2026
GIMI	Golar LNG	2.5 mtpa	Seatrium (Converted yard)	At the border of Senegal and Mauritania	Converted FLNG	Left the conversion yard in mid-November 2023	2024
Fuji LNG	Golar LNG	Unknown	Undisclosed	Nigeria (assumption)*	Converted FLNG	Golar LNG purchased the unit in March 2023. We expect the conversion to start in Q1 2024.	2025
1 <sup>st</sup> and 2 <sup>nd</sup> FLNG units	Delfin Midstream	13.3 mtpa (3.325 mtpa per unit)	Wison Offshore & Marine	Gulf of Mexico	Newbuilding FLNG	In June, MOL invested in the project and Hartree Partners and Gunvor signed a 20-year (0.6 mtpa) and 15-year (0.5-1 mtpa) Sales and Purchase Agreement, respectively.  In August, Delfin Midstream secured slots with the yard. The first slot is expected to be exercised in early 2024.  FID is expected in Q1 2024 for the first FLNG unit and soon after for the second unit. There are four units in total.	2027
FLNG	Cedar LNG	3 mtpa	Samsung Heavy Industries	British Columbia, Canada	Newbuilding FLNG	In November 2023, Cedar LNG signed a Heads of Agreement with the yard to reserve berth space.  FID is expected in Q1 2024.	2028
FLNG	UTM Offshore	1.5 mtpa	Undisclosed	Nigeria	Newbuilding FLNG	In December 2023, UTM Offshore and Nigerian National Petroleum Corporation signed a shareholders agreement with Delta State Government for the development of the project.  FID is expected in Q1 2024.	2029
Prelude FLNG	Shell	3.6 mtpa	Samsung Heavy Industries	Western Australia	Newbuilding FLNG	Between August and mid-December the unit went through maintenance shutdown.	n/a

Source: BRS



A greater number of FLNG projects are expected to come from the existence of large quantities of gas, produced from existing offshore facilities, and other reserves being part of existing offshore oil acreages.

The valorisation of this associated gas by means of an FLNG facility, hence providing on-site liquefaction, storage and straight availability for shipment, brings operators an interesting alternative to flaring, reinjection or depletion. Geological risks are minimal, and the current values of feed associated gas stands at close to zero.

Economics and trades are maturing thanks to on-going developments (such as TEN managed UTM Nigeria).

### Map of FLNG Projects Active or Under Construction



Source: BRS

2024 shall be another year of solid continuous demand for vessels and associated services in the offshore energies industries. It should span all regions and activities.

Worth noticing that 2023 further demonstrated operational overlaps between the wind and the traditional oil and gas fleets with availability and performance remaining the key selection criteria.

Facing such an increase in global demand, industry players are further developing plans to procure new modern, greener assets. That is the next challenge in sight, at a time when financing can be costly, quality resources and equipment are scarce, and (major) shipbuilders enjoy three years or more backlogs thanks to a strong orderbook of merchant tonnage.



Image:  
SEAWAY ALFA LIFT,  
Foundation Installation  
Vessel, 8,000m<sup>2</sup> deck area  
and 3,000t crane capacity,  
built in 2023, Seaway7.



# Cruise

Image:  
EXPLORA I, 63,900 Gt, built by Fincantieri Monfalcone, MSC Crociere, delivered in 2023.  
Copyright: MSC Crociere.







EXPLORA I

VALLETTA



As we cast our gaze back upon the cruise landscape of 2023, a beacon of hope and triumph emerges from the depths of the tumultuous seas that the cruise industry navigated in the aftermath of the dreadful Covid years.

# Smooth Sailing

Despite sailing through stormy waters, laden with the weight of debt, the cruise industry not only weathered the challenges but ultimately hoisted the sails of recovery, steering its way back into profitable waters. Financial prudence played a crucial role in the industry's turnaround. Cruise lines engaged in shrewd financial management, cost-cutting initiatives, record-breaking sales and strategic investments to navigate the choppy waters of debt. The return to profitability

was not only a testament to the adaptability and resilience of the cruise industry but also a celebration of the enduring spirit of cruise enthusiasts worldwide. With a renewed focus on delivering exceptional guest experiences, cruise lines offered enticing itineraries, innovative onboard amenities, and personalized services, contributing to the industry's positive financial trajectory.

## Deliveries

21 ships were delivered in 2023:

Name	Buyer	Builder	Gt	Pax
AMERICAN EAGLE	AMERICAN CRUISE LINES	CHESAPEAKE	3,344	109
AMERICAN GLORY	AMERICAN CRUISE LINES	CHESAPEAKE	3,344	109
NORWEGIAN VIVA	NCL	FINCANTIERI BREDA	143,535	3,300
ICON OF THE SEAS	ROYAL CARIBBEAN GROUP	MEYER TURKU	248,663	5,000
CELEBRITY ASCENT	CELEBRITY CRUISES	ATLANTIQUE	141,420	3,200
VIKING SATURN	VIKING OCEAN CRUISES	FINCANTIERI ANCONA	47,842	944
SCENIC ECLIPSE II	SCENIC TOURS	ULJANIK	17,592	240
CARNIVAL JUBILEE	CARNIVAL CRUISE LINE	MEYER PAPENBURG	206,285	6,631
SEABOURN PURSUIT	SEABOURN CRUISE LINE	MARIOTTI	23,615	264
EXPLORA I	EXPLORA JOURNEYS	FINCANTIERI MONFALCONE	63,621	922
BRILLIANT LADY	VIRGIN CRUISES	FINCANTIERI CASTELLAMMARE	108,232	2,800
ADORA MAGIC CITY	ADORA CRUISES LTD	SHANGHAI WAIGAOQIAO	136,201	5,246
VISTA	OCEANIA CRUISES	FINCANTIERI CASTELLAMMARE	67,818	1,260
SEVEN SEAS GRANDEUR	REGENT SEVEN SEAS CRUISES	FINCANTIERI BREDA	56,199	754
OCEAN ALBATROS	SUNSTONE SHIPS	CMHI JIANGSU	8,181	160
SILVER NOVA	SILVERSEA CRUISES	MEYER PAPENBURG	54,753	596
MSC EURIBIA	MSC CROCIERE	ATLANTIQUE	184,011	6,334
SH DIANA	SWAN HELLENIC	HELSINKI SY	12,255	192
HAVILA POLARIS	HAVILA KYSTRUTEN	TERSAN TERSANECILIK TUZLA	15,519	640
HAVILA POLLUX	HAVILA KYSTRUTEN	TERSAN TERSANECILIK TUZLA	15,519	640
EMERALD SAKARA	EMERALD CRUISES	HA LONG SB	5,315	100





Image:  
BIRKA GOTLAND, 34,728  
Gt, built by Aker Finnyards,  
Gotlandsbolaget & Viking  
Line, 2004.  
Copyright: Magnus Rietz.

## Second Hand Sales

Some of the deals reported in 2023:

Name	Built	Gt	Seller	Buyer
BIRKA STOCKHOLM	2004	34,924	ECKERO REDERI	GOTLAND
COSTA MAGICA	2004	102,587	CARNIVAL CORP	ACHEON AKTI NAVIGATION
PACIFIC VENUS	1998	26,518	SHK LINE GROUP	DUWON SHIPPING
AEGEAN GODDESS	1994	55,819	ILIOPOULOS	SEARCHLIGHT CAPITAL PARTNERS
AIDAAURA	2003	42,289	CARNIVAL CORP	SEARCHLIGHT CAPITAL PARTNERS
AIDAVITA	2002	42,289	CARNIVAL CORP	SEALIFE DENIZCILIK
CHARMING	1998	77,499	CHINA COSCO SHIPPING & CHINA NATIONAL TRAVEL & BTP CHINA COMMUNICATIONS	TANGSHAN DONFANG SHIPPING
EXPLORER DREAM	1999	75,338	NCL HOLDINGS	RESORTS WORLD
MEIN SCHIFF HERZ	1997	77,302	TUI & ROYAL CARIBBEAN GROUP	TUI

## Demolition

Notably, there were no demolitions reported in 2023.

## Market Developments and Perspectives

In 2023, cruise lines demonstrated a commendable performance, showcasing resilience, adaptability, and a strong rebound from the challenges posed by the Covid pandemic over the previous years. Several factors contributed to the positive performance of the cruise industry during this period, such as:

- **Financial Recovery:** Cruise lines successfully navigated the economic challenges that emerged from the pandemic. Despite accumulating debt during the dormant years, strategic financial measures, cost-cutting initiatives, and innovative business approaches helped the industry regain its financial footing. The return to profitability was a significant achievement, reflecting the industry's ability to weather financial storms and emerge stronger.
- **Pent-Up Demand and Bookings:** As the world gradually adapted to the new normal, there was a noticeable surge in pent-up demand for travel experiences. Cruise enthusiasts, eager to set sail once again, contributed to a significant rebound in bookings. The industry responded with attractive promotions, innovative itineraries, and enhanced onboard experiences, further fueling the demand for cruise vacations. Most cruise lines reported

record-breaking booking numbers. The industry experienced a notable shift in booking patterns, with passengers booking cruises further in advance. This extended booking window indicated a growing confidence among travelers and a willingness to plan and commit to future cruise vacations.

- **Commitment to Sustainability:** Recognizing the importance of sustainability in the modern travel landscape, cruise lines made significant strides in adopting eco-friendly initiatives. From the use of cleaner fuels to waste reduction strategies, the industry demonstrated a commitment to responsible tourism.

The strength of the second hand cruise ship market in 2023 can be attributed to a combination of factors that created favorable conditions for transactions and acquisitions within the cruise industry. Last year, the cruise industry experienced an exciting wave of innovation with the launch of several new cruise lines, each bringing a distinct flavor to maritime travel. Notable among these debuts were MSC's Explora Journeys, CFC, and the eagerly anticipated relaunch of the Crystal brand under Abercrombie & Kent ownership. While some operators successfully launched in 2023, others faced challenges, exemplified by the dramatic failure of Miray Cruises' Life at Sea in 2023. These underscore the complexities and risks inherent in the cruise industry.

However, it wasn't just the emergence of new cruise lines that added vibrancy to the industry, but also the delivery of 21 impressive

Image:  
CRYSTAL SYMPHONY, 51,044 Gt, built by  
Kvaerner MASA, A&K Travel Group, delivered  
in 1995. Copyright: Peter Keith.



newbuildings. These vessels, spanning a wide range of sizes and catering to diverse market segments, showcased the industry's commitment to expansion and innovation. The delivery of the Icon of the Seas, a colossal vessel with a gross tonnage of 250,000 Gt, marked a significant milestone for Royal Caribbean Cruise Line. This giant cruise ship features state-of-the-art amenities, entertainment options, and a capacity to host 7,600 passengers. On the very opposite end of the scale to the massive Icon of the Seas, the newbuildings delivered included coastal ships tailored for American Cruise Lines. With a more intimate size of 3,300 Gt, these offered passengers a more personalised and regionally focused cruising experience.

The delivery of the first large Chinese-built cruise ship, built by Shanghai Waigaoqiao Shipbuilding, the 135,000 Gt Adora Magic City, marked a significant milestone in the Chinese shipbuilding industry and represented a noteworthy achievement for China's burgeoning cruise market. Although she was delivered with significant delay, this development showcased the country's growing ambitions in shipbuilding and its increasing presence in the global cruise industry.

The resurgence of the domestic Chinese cruise market in 2023 reflects a positive trend, as local operators, such as Resorts World Cruises, Blue Dream Cruises, and Tianjin Orient International, have steered the

Chinese cruise industry back on track to fulfil its ambitious goals. This renewed momentum signifies a recovery and growing confidence in cruise travel among Chinese passengers and is fulfilling its aspirations for growth and expansion.

In addition to the actualization of newbuildings, the cruise industry in 2023 was abuzz with anticipation for upcoming projects, one notable example being the Boundless project led by Niels-Erik Lund of Sunstone. This endeavour, once materialised, is poised to bring substantial capacity to the expedition cruise market, signalling a strategic move towards catering to the growing demand for immersive and adventure-driven travel experiences.

The entry of prestigious hotel brands such as Ritz-Carlton, Four Seasons, and Aman Resorts into the cruise industry has signalled a notable trend where luxury hospitality ventures into the maritime sphere. This concept not only offers established hotel brands the opportunity to expand their services but also introduces a new level of sophistication and exclusivity to the cruise market. The success and interest generated by these ventures have prompted anticipation for more hotel brands to explore and enter the cruise industry.

Who will be next?

**In summary, the cruise lines' performance in 2023 was characterized by financial recovery, enhanced safety measures, increased demand, diversification of offerings, sustainability efforts, technological innovations, strategic deployment, a strong second hand market, and a positive shift in booking trends.**





Image:  
BOUNDLESS CLASS, 13,000  
Gt, designed by SunStone.  
Copyright: OSK Design.

Image:  
CRYSTAL SYMPHONY,  
51,044 Gt, built by  
Kvaerner MASA, A&K Travel  
Group, delivered in 1995.  
Copyright: Peter Keith.





# Container



Image:

The 15,264 teu CMA CGM PRIDE, a dual fuel LNG-powered 'maxi-neo-panamax' container vessel that CMA CGM is chartering from Singapore-based Eastern Pacific Shipping (EPS). Copyright: Piet Sinke, [www.maasmondmaritime.com](http://www.maasmondmaritime.com).





LNGPOWERED

CMA CGM PRIDE

LNGPOWERED

EVERGREEN

EVERGREEN

EVERGREEN

EVERGREEN

CMA CGM

APL

EVERGREEN

EVERGREEN

CMA CGM

CMA CGM

CMA CGM

CMA CGM

CMA CGM

CMA CGM

CMA CGM

CMA CGM

CMA CGM



After the exceptional 2021 and the boom and bust of 2022, the container shipping market was no longer influenced by Covid-related events in 2023 and largely returned to normality.

# 2023: The Return to Normality for Container Shipping

Cargo rates went back close to pre-Covid levels and were disappointing on East-West routes due to soft volumes and as a large number of newbuilding vessels were launched. The North-South routes were meanwhile more resilient and look promising for the future. Meantime charter rates were relatively decent throughout the year, even though they weakened across the board in the last quarter and were, overall, only a fraction of what they used to be during the post-Covid cargo boom. The market outlook for 2024 is uncertain, mainly due to the expected delivery of 3 m teu of newbuilding capacity. But a slow recovery in cargo demand and the CII regulation could help absorb part of the expected overcapacity.

Image:  
The 16,010 teu HMM  
HANBADA was built in  
2021 by Hyundai H.I. for  
South Korean carrier HMM.  
Copyright: C.H. Mercier.





# Post-Covid Demand Bonanza: a Distant Memory

Broadly, in 2023 the container shipping market returned to where it was before the Covid pandemic. The euphoric cargo and charter rates seen during the post-Covid demand boom became a distant memory, with both carriers and Non-Operating Owners (NOOs) witnessing a sharp reduction in revenues, and in some cases, returning to financial losses.

Cargo rates were particularly disappointing on East–West routes with demand insufficient to meet the introduction of over fifty newbuilding vessels of 13–24,000 teu. In contrast, North–South and regional routes, particularly Africa, South America, India, the Middle East and Intra-Asia proved more resilient and could be a catalyst of future growth. Overall, the Shanghai Containerised Freight Index (SCFI) oscillated around 1,000 points (+/- 10%) across the whole year, a far cry from its historic high of 5,100 points in January 2022. But with the global economy expected to grow by around 3% in 2024, a reduced inactive fleet of only 317,000 teu in early December and additional tonnage needed to meet the CII lower speed environment, cargo rates could rally in the coming quarters. However, the 3 m teu of newbuilding capacity expected to hit the market in 2024 could make this recovery rather timid and limited in time.

Meanwhile charter rates had a decent year, especially in the first half although they were incomparable to the stratospheric levels seen during the post-Covid demand boom. However, rates for smaller ships began to decline from the summer onwards, with the larger ships seeing weaker conditions from the autumn. But despite the steady erosion, charter rates remained slightly higher at the end of 2023 than at the onset of the Covid pandemic.

Nevertheless, the continued shortage of charter market ships, especially larger or energy-efficient units, points to a rate rebound in 2024.

Otherwise, despite a weaker trading environment, with Maersk expecting the container market to grow by between -2.5% and +0.5% in 2023, the year saw a continued ordering frenzy, mostly for ‘green’ ships, with 1.9 m teu of newbuilding contracts placed by both carriers and Non-Operating Owners. Meanwhile, new ship deliveries hit 2.3 m teu. Against this, scrapping recovered from a 17-year low in 2022 but remained largely disappointing despite continuously strong demolition prices, with only 167,000 teu removed from the market.

The massive discrepancy between new capacities hitting the market and a low amount of recycled tonnage against a backdrop of soft cargo

demand has raised fears of unsustainable overcapacity going forward. However, it was hoped at the end of the year that a recent move by the EU to consider adding Indian scrap yards to its list of authorized recycling facilities, could boost demolition sales in 2024. Likewise, encouraging signs on the cargo front, with a rally in volumes observed since last October, ships sailing at full capacity on a number of routes and a strong US economy, have been giving hope that the capacity overhang expected could turn out to be not as severe as anticipated. In this respect, MSC was one of the most optimistic carriers last year, as they banked on a recovery in volumes in 2H23, based on falling inventories around the globe. They seem to have been proved right.

Finally, 2023 was again a year of major geopolitical instability and climate-related issues. On the geopolitical side the shipping world has learned to live with the war in Ukraine, while Russia organised its own container shipping services via numerous freshly established third party carriers. In August, the only containership trapped in Ukraine since the outbreak of the war, the 9,403 teu Joseph Schulte, was finally released, after having spent nearly eighteen months stuck in the port of Odessa.

However, another conflict, this time in the Near East between Israel and Hamas in Gaza became a new threat to container shipping at the end of the year. In November and December, attacks on Israeli-controlled vessels in the Red Sea by pro-Palestine Houthi rebels, later extended to all vessels calling at Israel regardless of their nationality prompted most shipping lines to re-route their tonnage deployed on East-West routes via the Cape of Good Hope.

In the meantime, Latin America was hit by an exceptional El Nino-related drought, which caused the Panama Canal to drastically reduce its number of daily ship transits due to a lack of water. As a result, a number of carriers decided to re-route services via Suez, the Strait of Magellan or the Cape of Good Hope.

Ironically, both the Red Sea and Panama Canal crises could be a blessing in disguise for container shipping if the current disruptions persist: they will result in demand for a significant amount of extra tonnage, a boon to cut the rampant overcapacity in the industry and stimulate charter rates, and will boost freight rates which started rocketing in December.

## Unprecedented Drought Halves Panama Canal Transits

An unprecedented El Nino-related drought in Central America, with rainfall 40% below its seasonal average and freshwater levels in the Panama Canal's reservoirs falling to historical lows have forced the Panama Canal Authority (ACP) to announce severe cuts in the number of daily ship transits through the famous waterway. Starting in July the number of daily transits was reduced from 40 to 32 ships, with the maximum draft allowed in the larger neo-Panamax locks dropping by 2 metres to 13.41 metres.

In October, which was the driest month since 1950, the ACP announced further transit reductions with only 25 ships allowed daily from November, 20 from January 2024 and 18 from February 2024. However, the return of rainfalls in December allowed the canal to raise again its expected transits for January and February to 24 vessels.

Nonetheless, these draconian restrictions are unheard of in the history of the Canal and are expected to have repercussions for

shipping, with already several dry and liquid bulk shipowners planning alternative routing for their ships, including via the Strait of Magellan. Containerships which are in theory 'safer' due to having pre-booked transits a long time in advance are also expected to suffer. Illustrating this, the grouping THE Alliance (Hapag-Lloyd, ONE, HMM, Yang Ming) announced in December that three major Asia-USEC services would be routed via Suez instead of Panama going forward, and more shipping lines could follow suit. Meanwhile, a 11,500 teu container vessel operated by Hapag-Lloyd, the Callao Express, deployed between North Europe and the West Coast of South America was spotted avoiding the Panama Canal in December, heading instead for the Strait of Magellan in order to reach the Chilean port of San Antonio. An unprecedented event in the history of containerisation.

Image:  
The 2,136 teu LAURA MAERSK, built for AP Moller-Maersk by the Hyundai Mipo yard in South Korea is the world's first methanol dual fuel powered container vessel.  
Copyright: Hans Kraaijenbosch.



## Maersk and MSC Announce the End of '2M'

In January, the world's largest container carrier MSC, and the second biggest, Maersk, announced that they would not renew their '2M' East-West Vessel Sharing Agreement when it expires in 2025. The carriers have developed very different strategies since the VSA was formed in 2015 with Maersk investing massively in logistics while MSC put greater focus on the expansion of its fleet of ships. As a result, both companies agreed that they would be better off going their separate ways to pursue their respective business plans.

At the time of the announcement '2M' was the third largest major East-West Alliance, with a total capacity of 2.8 m teu. It was sitting behind OCEAN Alliance (4.2 m teu), regrouping CMA CGM, COSCO SHIPPING Lines, OOCL and Evergreen and THE Alliance (3 m teu), encompassing Hapag-Lloyd, ONE, HMM and Yang Ming.

## Maersk Ditches 'Hamburg Sud' and 'SeaLand' Brands

In early 2023 Maersk used the occasion of the 2M termination announcement to inform shippers that it would drop its 'Hamburg Sud' and 'SeaLand' brands, two illustrious names in the container shipping industry. The shipping company Hamburg Sud was bought in 2017 and was once Germany's second largest container carrier behind Hapag-Lloyd, with a focus on North-South trades, especially South America. SeaLand meanwhile, acquired in 1999 and originally spelled 'Sea-Land' was the famous US shipping line that universalised containers in the 1960s, under the impetus of legendary container shipping entrepreneur Malcom McLean, also known as the 'father of containerisation'.

After the purchase of Sea-Land, Maersk became 'Maersk-Sealand' but changed back to 'Maersk Line' only in 2006 after the Danish carrier's acquisition of P&O Nedlloyd. However, the brand 'SeaLand' was resurrected in 2014 after it was recognized that the name still enjoyed great popularity among shippers, especially in the Americas.



Image:  
The 24,346 teu MSC LORETO, delivered in April by Yangzijiang Shipbuilding is, together with the MSC IRINA delivered in March and three more 'megamax' sisters delivered later in 2023 the largest container vessel in the world. Her characteristics are impressive: deadweight 240,755 tons, length 399.90 m, beam 61.30 m, draft 17 m. Copyright: Piet Sinke [www.maasmondmaritime.com](http://www.maasmondmaritime.com).



## EU Announces End of Block Exemption for Liner Consortia

The EU announced in October that it will no longer exempt liner shipping consortia from EU anti-trust laws, known as ‘Consortia Block Exemption Regulation’ (CBER). This decision follows a process launched in 2022 where the EU pointed to a ‘low or limited effectiveness of CBER’ due to the changing nature of the liner shipping industry.

The CBER allowed carriers to co-operate without formally applying for a waiver with the European anti-trust laws, provided the partnership did not exceed 30% of the market share on a given trade. This typically applied to smaller consortia, such as the Europe-South Africa SA ECS grouping, which was established in the early days of containerisation.

The big alliances (OCEAN Alliance, THE Alliance and 2M) are not covered by block exemption, having instead to formally apply for and receive approval under general EU anti-trust law. As a result, the impact of the end of CBER on the industry will be limited, despite what certain media claimed.

## Methanol Retrofits and Mid-life Upgrades: a New Trend

As alternative fuels are gathering momentum, 2023 saw the first projects involving the retrofitting of conventionally fueled vessels to burn methanol. A strong believer in methanol, Maersk, was the first to announce such a project in June, whereby a dozen vessels will be adapted to enable the switch. The first ship will be the 15,282 teu Maersk Halifax expected to enter a yard in the summer of 2024 for three months of works. Meanwhile in July, engine manufacturer MAN signed an agreement with Hapag-Lloyd and Seaspan to provide methanol retrofit solutions for fifteen vessels. Finally, December saw COSCO SHIPPING Lines announcing the retrofit to methanol of four vessels of its ‘Camellia’ (13,800 teu) and ‘Virgo’ (20,100 teu) classes.

Separately, carriers initiated mid-life upgrades on several large series of ships, which typically (but not systematically) involve capacity upgrades, installation of scrubbers, new propellers, new bulbs and new paints. MSC (with its ‘Hamburg’ class ships of 16,500 teu), Maersk (with its ‘EEE’ units of 18,500 teu) and Hapag-Lloyd (with both their 13,808 teu ‘Thalassa’ ships and the 8,004 teu ‘TUCAPEL class) were all involved in such projects.

## MSC Nearly 1.5m teu Ahead of Maersk

Less than two years after bumping Maersk, the long-time number one container carrier, from its top position, MSC is now the world’s biggest shipping line and already nearly 1.5 m teu bigger than its rival. An incredible achievement by the Switzerland-based shipping line due to an extremely fast expansion of its fleet with both secondhand and newbuilding tonnage. Particularly striking has been MSC’s acquisition of 330 second hand container vessels in just over three years, an unprecedented event in the history of containerisation. As of 14 December 2023, MSC was operating a fleet of 5.5 m teu, versus 4.1 m teu for Maersk. The Danish carrier has seen its container shipping capacity stagnate in recent years, after the Copenhagen-based carrier strategically decided to pivot its group into logistics, at the expense, somewhat, of its fleet of containerships. The gap between MSC and Maersk will continue to widen in the future as MSC has a gigantic orderbook of 125 container vessels for 1.5 m teu. Maersk, instead, has got only 36 vessels on order for a total capacity of 456,000 teu.

Image:  
The 6,014 teu CMA CGM KHAO SOK (MARIC 5980) delivered in October is a sistership of the CMA CGM MASAI MARA, the world's first ammonia-ready container vessel. Copyright: CMB.TECH.



## Top Three Carriers Continue to Pour Millions into Logistics

The world's three largest container carriers, MSC, Maersk and CMA CGM continued to massively invest in the inland logistics business in 2023. After buying Bollore Africa Logistics in 2022 for around \$6 billion, MSC is now about to take control of the French logistics and forwarding group Clasquin, whose value is estimated at around \$350 million. Meanwhile, last year Maersk purchased the South African group Vector Logistics (over 5,000 employees) specialised in frozen transport and has also announced it would invest \$500 million to expand its logistics footprint in Southeast Asia. These investments follow the purchase by the Danish group of three logistics firms in the last couple of years, Hong Kong-based LF Logistics bought in 2021 for \$3.6 billion, Pilot Freight Services, purchased in 2022 for \$1.7 billion and Denmark's Martin Bencher acquired for \$61 million.

Finally, CMA CGM concluded its biggest ever acquisition in 2023, with the purchase of France-based Bollore Logistics for \$5.5 billion. This acquisition will significantly strengthen the carrier's presence in the field of logistics, adding to its affiliate CEVA Logistics (bought in 2019) as well as GEFCO and Colis Prive (both purchased in 2022).

## EU ETS: Another Milestone in Decarbonization

From 1 January 2024, shipping will be facing a new major EU regulation to combat climate change, the EU Emission Trading System (EU ETS). The scheme will apply to all ships of 5,000 Gt and above trading within, or to and from, the EU. It will, in simple terms, make polluters pay for their greenhouse gas emissions. It works on the cap and trade principle: ie., within the cap defined by the EU which is decreased every year to



Image:  
The 20,114 teu, Imabari-built EVER GENTLE is one of Evergreen's Europe-Far East 'workhorses'. Copyright: C.H. Mercier.

ensure that emissions reductions are achieved, industries, aviation and shipping companies can trade European allowances. Shipping companies that have no surplus of EUAs will need to buy EUAs for every ton of CO<sub>2</sub> they generate.

Although necessary to address climate change issues, with CO<sub>2</sub> emissions at a new record high globally in 2023, container shipping operators have been concerned about this new regulation which is bringing further complexities to their operations. This new law comes shortly after the IMO's net-zero emissions pledge announced in July and new rules on vessel energy efficiency (EEXI) and carbon intensity and rating system (CII) introduced in January 2023, which have yet to show their full impact on the business.

## Container Shipping Avoids the Red Sea

The rising number of attacks on container vessels in the Red Sea, organized by Yemen's pro-Palestine Houthi rebels in retaliation against Israel's military operations against Hamas in Gaza, in December prompted most carriers including MSC, Maersk, CMA CGM, Hapag-Lloyd, Evergreen, HMM, Yang Ming and ZIM to avoid the area completely and route their tonnage heading from Asia to the Mediterranean and Europe via the Cape of Good Hope. The attacks, which have occurred in and around the Bab Al-Mandab strait, the narrowest passage in the Red Sea, have taken the form of ship boardings or drone and missile strikes. While the Houthis were initially targeting Israel-related ships, they have since threatened all vessels calling at Israel, irrespective of their nationality. In mid-December four container vessels were hit by drone strikes resulting in minor damage: CMA CGM Symi (15,264 teu), Number 9 (4,253 teu), AL Jasrah (14,993 teu) and MSC Palatium III (2,546 teu). Furthermore, two additional ships were involved in near-misses.

## Decarbonization: a Multitude of Initiatives but Methanol Leads the Way

Decarbonization was again a central theme in container shipping in 2023, with shipowners multiplying projects of all sorts to reduce their carbon footprint. The year saw methanol standing out as the preferred alternative green fuel, accounting for 52% of ships ordered with dual fuel propulsion in 2023, ahead of LNG, which accounted for 31%. There have also been the first methanol retrofitting projects initiated by Maersk and COSCO SHIPPING. There is, however, growing concern about the availability of this fuel on a large scale.

Besides this, a rising number of owners have been considering ammonia. Seaspan and the Maersk Mc-Kinney Moller Center are collaborating

on a 15,000 teu ammonia-powered container vessel, while Norwegian group Yara and compatriot North Sea Container Line are planning to order a pair of ammonia-powered 1,300 teu ships.

Hydrogen is also gaining traction, with Samskip and Viasea both embarking on newbuilding projects involving this technology. Wind assisted systems are also being increasingly considered with ONE installing a wind-assisted device on the chartered vessel Kalamazoo (1,000 teu) while Hapag-Lloyd has unveiled a 4,500 teu newbuilding concept.

Other decarbonization projects have seen biofuel, batteries, wind deflectors, carbon capture devices and Flettner rotors increasingly used by various operators.

The big surprise of the year was, however, the rising interest in nuclear propulsion. American classification society ABS, as well as the Korean carriers HMM and Sinokor, and UK-based Zodiac Maritime, together with Lloyd's Register, Hyundai Global R&D and KEPCO and Core Power have been among the promoters of this technology. The Chinese yard Jiangnan has meanwhile unveiled a 24,000 teu newbuilding design just waiting for its first order.

## Carriers' Financial Results: the Return of Red Ink

After historic results in 2022, with mind-blowing profits of \$30 billion for Maersk, \$24.9 billion for CMA CGM and \$20 billion for Hapag-Lloyd to name but a few, the financial performance of most container shipping lines has been going downhill ever since. This reflects a backdrop of depressed cargo rates on many routes and a growing overcapacity fed by an uninterrupted flow of newbuilding deliveries. For Wan Hai, ZIM and Maersk the rapid changes in the market caused the three carriers to return to financial losses, with Wan Hai first to post red ink in the last months of 2022. ZIM followed suit, announcing in the spring of 2023 a loss of \$58 million for the first quarter of the year, versus a profit of \$1.7 billion in 1Q22. The Israeli shipping line posted further losses of \$213 million in Q2 and in Q3, as it was hit by a toxic combination of low freight rates and high charter costs. Maersk meanwhile announced a loss of \$27 million in 3Q23 which triggered the loss of 10,000 jobs across its organization.

However, the majority of carriers are expected to end 2023 in positive territory, with financial results nevertheless anticipated to pale into insignificance compared to the stratospheric profits achieved in 2022. Illustrating how abruptly the financial landscape changed, CMA CGM made a profit of 'only' \$388 million in 3Q23, a far cry from the \$7 billion gain posted in 3Q22. Meanwhile, OOCL saw its profits drop to \$1.1 billion in the first half of 2023, massively down from the \$5.7 billion posted in the same period of 2022.



# Charter Market: A Reasonably Decent Year

The container charter market had a decent year in 2023, with Non-Operating Owners (NOOs) enjoying reasonably good returns throughout the year for all sizes of ships despite unsatisfactory freight rates faced by their client charterers on a number of key routes. The charter rates were, however, incomparable to those seen in 2022, which reached stratospheric levels, courtesy of the post-Covid cargo demand boom. In those days, an 8,500 teu vessel would fetch up to \$155,000/day for a period of 12 months versus ‘only’ \$45,000/day at the peak of the market in 2023. A 4,250 teu ‘classic Panamax’ could meanwhile obtain up to \$110,000/day, versus \$25,000/day at its highest in 2023. Likewise, a 2,500 teu unit would command \$75,000/day versus \$18,000/day. The Alphaliner Charter Index (ACI) meantime reached its historic peak at 563 points. But those were exceptional times which might never come back.

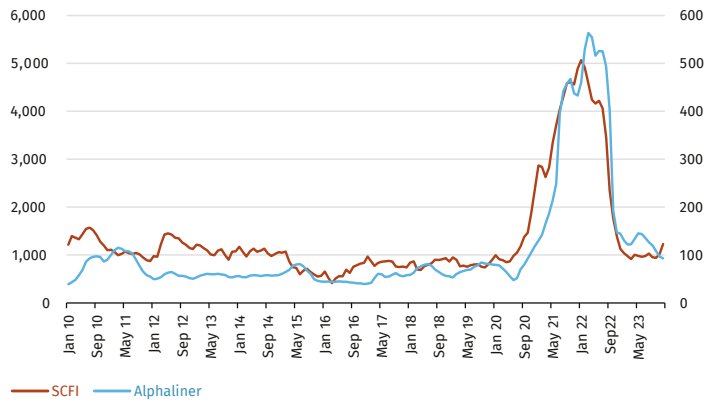
Last year saw the return of a certain normality, after charter rates fell off a cliff in September 2022, following a crash that some observers called a simple ‘correction’. The ACI collapsed from a high of 563 points in March 2022 to only 144 points in December 2022, but its evolution was much more contained in 2023, with a year starting at 128 points and finishing at 93, a level that was still higher than at the onset of the Covid pandemic.

The first six months of 2023 were the best for NOOs, with rates for all ship sizes gradually rising, in a context of tight supply and sustained demand. In May, the market reached its peak. An 8,500 teu unit would then fix at \$45,000/day for 12 months; a 5,600 teu vessel would fetch \$35,000/day; a ‘classic Panamax’ of 4,250 teu would get \$25,000/day, a 2,500 teu unit would obtain \$18,350/day and 1,700 teu tonnage would be fixed on average at \$16,500/day.

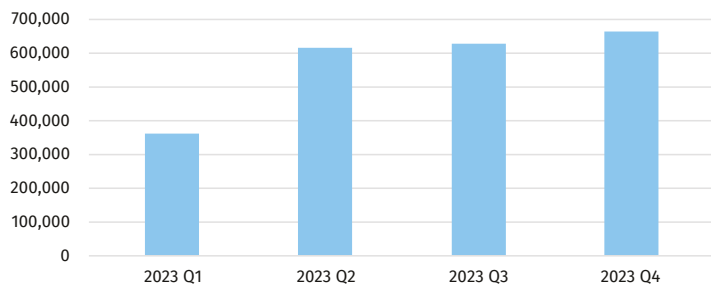
From June, the smaller sizes under 3,000 teu witnessed the first signs of a market softening, with rates beginning to gently contract. In July, the rate softening extended to ‘classic Panamaxes’ of 4,000-5,000 teu, with periods also becoming generally shorter for most sizes of ships except for the larger units (5,500 teu and over).

From September onwards all ship sizes including the larger vessels saw their rates falter, which persisted into December, despite a very high fixing activity in the later part of the year and the continued low availability of prompt ships, with less than twenty NOO vessels in spot positions across the globe. At the beginning of December, an 8,500 teu vessel was estimated worth around \$34,000/day per day; a 5,600 teu

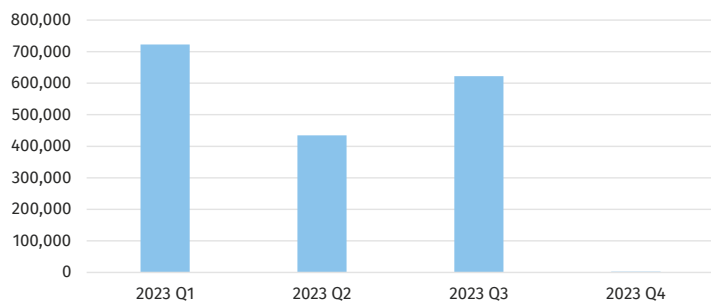
SCFI vs Alphaliner Charter Index 2010-2023



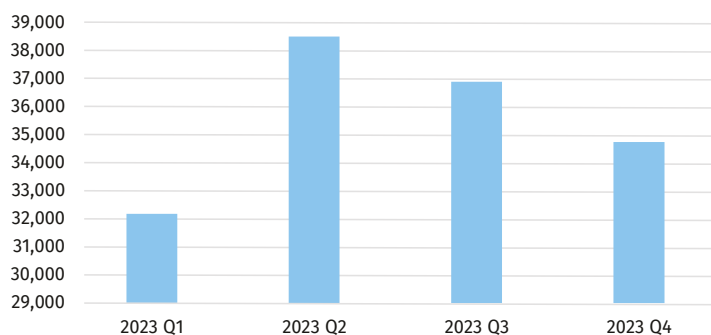
Deliveries (teu)



Orders (teu)



Scrappings (teu)



unit would obtain \$22,000/day; a ‘classic Panamax’ of 4,250 teu would fetch \$16,500/day; a 2,500 teu unit could be had at \$11,000/day and standard 1,700 teu tonnage would command, on average, \$9,500/day.

## What Can We Expect in 2024?

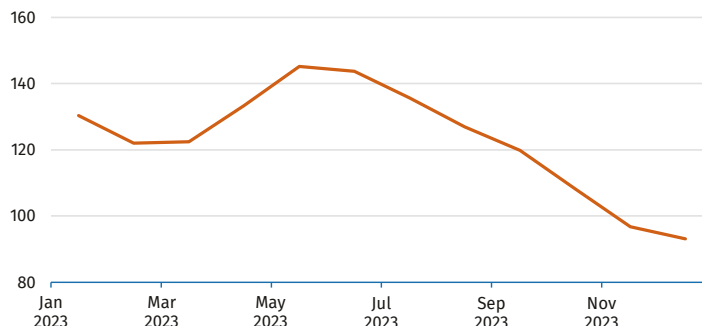
The outlook for the market in 2024 is uncertain considering the 3 million teu of newbuildings of all sizes due to hit the water for both carriers and NOOs. This massive influx of new ships could create severe overcapacity if cargo demand is not strong enough, possibly impacting charter vessels, especially the older, less energy-efficient units. However, it is instructive to see how well the market coped with the addition of 2.3 m teu of newbuilding capacity in 2023, despite disappointing demolition figures and a soft cargo demand on many routes. The low inactive fleet and a continuously limited number of spot NOO ships across the board at the end of the year bodes well for the first part of 2024 and demonstrate that despite taking delivery of a lot of new ships, carriers were also able to use existing tonnage and even had appetite for additional charter ships, including older units. However, how the market performs in 2024 will ultimately depend on cargo demand and how efficiently carriers manage their capacities. On the cargo side certain North-South and regional trades such as Africa, South America, India and South-East Asia which are proving dynamic could be a catalyst of growth helping to offset, in part, the weaknesses of the East-West trade lanes which continue to suffer from excessive tonnage.

On the supply side it is believed that demolition will finally pick up, especially after it was suggested that the EU might consider adding several yards in Alang (India) on its list of approved recycling facilities. This move would give shipowners (NOOs or shipping lines), of EU-flagged tonnage a wider range of options to scrap their ageing ships, some good news to reduce supply.

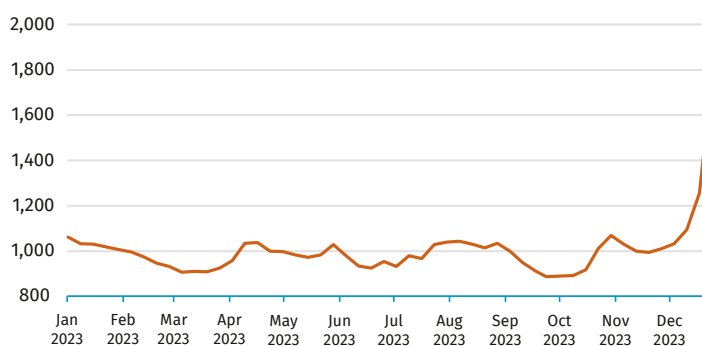
The CII, which implies lower speeds for many, less energy-efficient ships, will also continue to absorb extra tonnage, proving a useful tool against overcapacity too.

Finally, various trading disruptions around the world, such as the water level problems at the Panama Canal with reduced daily ship transits and, even more significantly, terror attacks in the Red Sea that have the potential to durably alter trade patterns, could also play a role in reducing overcapacity, with carriers having to use additional ships to bypass the problematic areas.

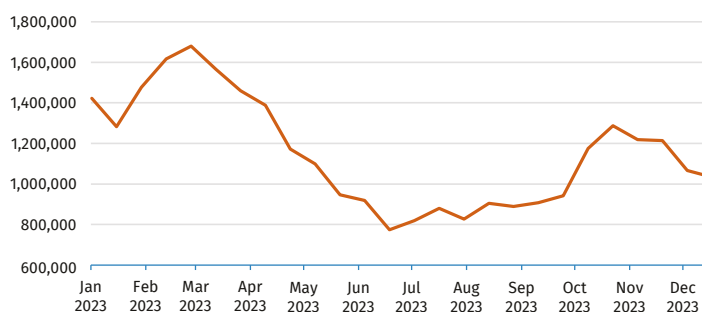
### Alphaliner Charter Index



### SCFI



### Inactive Containership Fleet (teu)



## VLCS 11,000–13,500 teu

### 2023 REVIEW

Demand for VLCS tonnage of 11,000–13,500 teu was sustained throughout 2023 but fixing activity was limited, due to a persistent shortage of NOO ships. This dearth of vessels has been instrumental in keeping charter rates healthy. Illustrating this, a trio of ten-year old units of 13,000 teu were fixed for periods of 36 months at \$54,500/day at the peak of the market in June. In November two further sisters secured employments of 36 months at a slightly lower \$51,500/day.

### 2024 OUTLOOK

There will be continued limited supply of charter tonnage in 2024. Meanwhile, on the newbuilding front, twenty-one ships are expected to hit the market in 2024 but all of them already have an employment in place. With such a limited pool of ships available next year, the market is expected to remain very firm, especially in the first half.

## Handy VLCS 7,500–10,999 teu

### 2023 REVIEW

Handy VLCS tonnage of 7,500–10,999 teu was in strong demand the whole year, but the continued shortage of ships, particularly prompt units, put a cap on the market activity. The tight supply environment contributed to keeping charter rates at relatively healthy levels, even if they were incomparable to the sky-high levels of the 2021–22 post-Covid years. At the onset of 2023, vessels of 8,500 teu could be fixed at around \$43,500/day for a year. This rate reached \$45,000/day at its peak in May before falling to \$34,000/day in December, after a significant weakening of the market from September onwards. In November, a pair of 10,000 teu ships were fixed for periods of 36 months at \$37,000/day, a rate also obtained by a trio of slightly smaller units of 9,500 teu fixed for shorter periods of 24 months.

### 2024 OUTLOOK

In 2023, around thirty vessels saw their charters end, and most of them were successfully extended or snapped up new business. For 2024, only around twenty-two ships will come to the end of their charters which is not much, especially as a number of units will likely be extended. On the newbuilding front, around forty-seven ships are expected to join the fleet but most of this tonnage has an employment lined up, except a quartet of 7,900 teu units which are believed to be unfixed.

The continued limited supply of charter tonnage bodes well for this segment. However, the large orderbook, which includes a lot of big

ships remains a threat, with modern energy-efficient units expected to replace older units on some routes. Compact vessels of 7,500 teu will remain very popular for a wide range of North–South and regional routes.

## LCS 5,300–7,499 teu

### 2023 REVIEW

LCS units of 5,300–7,499 teu were in high demand in 2023, which, given a continued tight supply of NOO tonnage, contributed to keeping charter rates at healthy levels. At the peak of the market in June, a standard 5,600 teu unit could be fixed at around \$35,000/day. Meanwhile, compact, energy-efficient units of 7,000 teu were extremely popular with over twenty newbuildings securing employments of typically 36 or 60 months, at rates ranging from \$35,000 to \$40,000/day. However, the market started to soften in September, due to a slight increase in supply. In December, a 5,600 teu standard unit could be fixed at only around \$23,000/day for a 12-month employment, a significant drop compared to the June peak.

### 2024 OUTLOOK

Around forty vessels, including twenty-five units of 20 years and over will see their charters end in 2024, up from thirty-eight units in 2022. Although this does not mean that all these vessels will lose their employments, the older tonnage could find it increasingly hard to compete against modern, compact and energy-efficient newbuilding vessels, sixty-six of which are due to hit the water in 2024. As a result, some veteran containerships might need to find new assignments on secondary routes or be scrapped. In general, demand for this segment is expected to remain firm in 2024, especially in the first half. The second half could prove more difficult for NOOs who will increasingly feel the pressure of newbuilding capacities.

## Classic Panamax 4,000–5,299 teu

### 2023 REVIEW

The ‘classic Panamax’ (4,000–5,299 teu) success story continued in 2023 with a high demand throughout the year and a sold-out supply from the end of March. Although incomparable to their historic levels of 2022, charter rates were more than decent in the first half of the year, starting at \$21,000/day in January for ‘handy’ units of 4,250 teu before reaching a peak of \$25,000/day in June. However, the market started weakening in August in the wake of the smaller sizes, and periods gradually became shorter. By December, ‘handy’ units would typically get fixed at only \$16,500/day, with periods rarely exceeding six months.



## 2024 OUTLOOK

Although charter rates for ‘classic Panamax’ significantly weakened in the later part of the year, supply remained tight. Therefore, a rebound in charter rates is possible in the early part of 2024. In the region of eighty vessels are coming to the end of their charters next year, a little above 2023, with a good proportion expected to be extended. There will be little pressure from newbuildings, thanks to a continuously low orderbook in these sizes. Nevertheless, ‘classic Panamax’ will be increasingly facing competition from modern, energy efficient, newbuildings of 5,500–6,000 teu on certain high-volume routes. As a result, the outlook for these workhorses of the charter market, especially the older ones, is mixed despite their continued popularity.

## 3,000–3,500 teu

### 2023 REVIEW

The 3,000–3,500 teu market is increasingly becoming niche, with reduced liquidity. The number of fixtures concluded in 2023 was therefore not very high due to a limited number of available ships. Nevertheless, there was a strong underlying interest from carriers which particularly appreciate these sizes for certain regional trades such as the Americas or Africa. Rate wise, standard units of 3,500 teu did very well until July, getting fixed in the region of \$20,000/day for employments of 12 months. In August the market started to soften and has since declined continuously. In November standard 3,500 teu tonnage was struggling to obtain more than \$15,000/day, and generally for short periods only.

### Alphaliner Top 25 Operators as of 1<sup>st</sup> January 2024

#	Operator	Total Existing		Orderbook		#	Operator	Total Existing		Orderbook	
		teu	Ships	teu	Ships			teu	Ships	teu	Ships
1	Mediterranean Shg Co	5,614,057	800	1,472,082	122	14	X-Press Feeders Group	154,416	81	19,616	15
2	APM-Maersk	4,121,516	676	453,117	36	15	KMTC	150,075	64	16,400	2
3	CMA CGM Group	3,578,494	624	1,198,614	110	16	UniFeeder	139,090	83	14,524	6
4	COSCO Group	3,057,488	493	836,092	48	17	IRISL Group	137,720	31		
5	Hapag-Lloyd	1,963,934	266	253,820	13	18	Sea Lead Shipping	128,931	28		
6	ONE (Ocean Network Express)	1,799,818	231	409,478	33	19	Zhonggu Logistics Corp.	124,061	88	9,272	2
7	Evergreen Line	1,644,883	211	823,522	70	20	Sinokor	123,082	82	62,676	12
8	HMM Co Ltd	783,732	70	265,027	26	21	TS Lines	87,028	44	48,136	8
9	Yang Ming MarineTransport Corp.	708,593	94	77,500	5	22	Antong Holdings (QASC)	85,378	85		
10	Zim	619,349	124	222,228	29	23	RCL (Regional Container L.)	77,153	34	37,428	4
11	Wan Hai Lines	482,837	120	125,305	18	24	Emirates Shipping Line	73,546	15		
12	PIL (Pacific Int. Line)	294,821	88	118,900	12	25	Global Feeder Shipping LLC	71,447	30		
13	SITC	161,998	102	22,092	14						

Image:

The 23,664 teu BERLIN EXPRESS is Hapag-Lloyd's first newly-built LNG-powered container vessel. She will be followed by eleven sisterships. Copyright: Hannes Van Rijn.



## 2024 OUTLOOK

This year around thirty-five vessels will come to the end of their charter, about the same number as in 2023. There will also be thirty-six newbuildings hitting the water, only marginally more than in 2023. Although these newbuildings already have an employment in place, some of them, especially carriers' units are inevitably going to replace charter market tonnage, especially older units. As a result, there could be more ships ending up in the charter market in 2024 than in 2023. However, the pool of available NOO ships is expected to remain limited. Therefore, charter rates should remain relatively decent in 2024, against a backdrop of growing cargo demand in the Africa and South America-related trades.

## 2,700–2,900 teu

### 2023 REVIEW

These sizes remain very popular with charterers especially in Asia and 2023 was no exception, with supply hardly satisfying continued high demand. Charter rates reflected this positive environment, evolving consistently in the region of \$18,000/day for standard 2,800 teu tonnage during the first six months. However, the market started to lose strength in the summer and by August, this tonnage could be fixed at a lower \$16,000/day. The rate decline continued in the last few months of the year and in December standard units were fixable in the

region of \$12,000/day. Supply was meanwhile slightly on the rise, with several sublets appearing in Asia.

### 2024 OUTLOOK

Around seventy vessels will see their charters expire in 2024. Although this does not mean that all these ships will be looking for a new employment, it appears there will be more NOO tonnage potentially hitting the market than in 2023. There will also be more newbuildings coming, with thirty-three vessels expected (twenty-eight in 2023), of which around eighteen are believed charter-free. Supply will therefore be significant in 2024, especially from the second half and will need strong demand to be fully absorbed.

## 2,000–2,699 teu

### 2023 REVIEW

Vessels of 2,000–2,699 teu, particularly the geared, high-reefer and energy-efficient ones continue to be very popular on some North–South and regional trades and charterers are ready to pay a rate premium to get their hand on the best units, especially the modern ones. In 2023 these sizes were sold out most of the time, which benefited charterers rates. The latter were healthy in the first part of the year, ranging from a low of \$17,000/day to a high of \$18,500/day in the early summer.

- The cellular fleet counts 5,977 ships for 28.14 m teu — of which 44.2% are chartered from non-operating owners
- The cellular fleet aggregates 98.6% of the total capacity deployed on liner trades in teu terms
  - Out of a total of 6,782 ships active on liner trades for 28.53 m teu and 339.5 m tdw
- The orderbook counts 844 ships for 7.1 m teu representing 25.2 % of the existing fleet) (firm orders only)
- The orderbook includes 291 ships for 1.65 m teu with charter status representing 23.2 % of the total orderbook

01 January 2024 — Existing						01 January 2024 — Orderbook					
Size ranges	All		Of which chartered from NOO			All		Of which chartered from NOO			
teu	Ships	teu	Ships	teu	% Cht	Ships	teu	Ships	teu	% Cht	O/E
18,000–24,000	184	3,951,959	67	1,424,344	36.0%	49	1,168,856	4	92,000	7.9%	29.6%
15,200–17,999	117	1,868,843	55	856,603	45.8%	151	2,400,320	38	604,144	25.2%	128.4%
12,500–15,199	291	4,007,452	139	1,922,441	48.0%	87	1,194,620	6	80,500	6.7%	29.8%
10,000–12,499	207	2,273,791	137	1,494,849	65.7%	32	355,228	0	0	0.0%	15.6%
7,500–9,999	481	4,274,052	207	1,842,132	43.1%	95	781,884	34	269,484	34.5%	18%
5,100–7,499	464	2,908,611	201	1,246,629	42.9%	84	527,312	54	330,692	62.7%	18.1%
4,000–5,099	640	2,901,620	241	1,080,367	37.2%	8	35,744	2	9,200		1.2%
3,000–3,999	292	1,004,109	125	439,105	43.7%	53	174,265	9	29,494	16.9%	17.4%
2,000–2,999	836	2,131,002	335	849,383	39.9%	70	177,259	32	87,323	49.3%	8.3%
1,500–1,999	751	1,311,533	318	563,570	43.0%	85	152,617	37	65,603	43.0%	11.6%
1,000–1,499	761	876,547	363	431,228	49.2%	94	111,822	60	71,864	64.3%	12.8%
500–999	771	571,556	353	271,449	47.5%	23	16,702	6	5,050	30.2%	2.9%
100–499	182	59,771	65	22,117	37.0%	13	2,554	9	1,824	71.4%	4.3%
<b>TOTAL</b>	<b>5,977</b>	<b>28,140,846</b>	<b>2,606</b>	<b>12,444,217</b>	<b>44.2%</b>	<b>844</b>	<b>7,099,183</b>	<b>291</b>	<b>1,647,178</b>	<b>23.2%</b>	<b>25.2%</b>

Note: the existing chartered fleet takes into account ships chartered out by non-operating owners to operators, thus it does not take into account 254 ships for 627,123 teu which are normally owned by an owner-operator but are chartered out to another operator, either for operational reasons (operational exchanges within alliances or partnerships) or because they are surplus to their owners requirements.

Modern, energy-efficient and 'Chittagongmax' units would be fixed at even higher monies in the region of \$20,000/day. However, the market started to fall in July and weakened uninterruptedly in the second half of the year. In December standard 2,500 teu tonnage could be fixed at only \$11,000/day.

#### 2024 OUTLOOK

The continued low availability of prompt tonnage, especially for modern, energy-efficient ships should push charter rates up in the short term. The longer term is however trickier as around eighty vessels will see their charters expire in 2024, significantly more than last year. Although, obviously, not all these vessels will end up looking for new employment, we can expect to see more ships in the market. On the newbuilding front, around thirty-two ships are due to hit the water, the same number as in 2023. Most of this tonnage has already lined up employment. The outlook for these sizes, considering the fairly ample supply on the way, is therefore mixed, especially for the older units.

### 1,500–1,999 teu

#### 2023 REVIEW

Last year saw the emergence of modern, energy efficient 'Bangkokmax' type container vessels of 1,700–1,900 teu as a new charter market workhorse. Their place will become more and more important in the future as the fleet of traditional, 'non-Bangkokmax', units is ageing rapidly and the oldest units will gradually phase out. Bangkokmax vessels were in strong demand during the whole year which reflected in continuously healthy rates, at least until August. The latter reached a peak of \$18,500/day in May, and even in some cases above \$20,000/day for certain specific trades, while traditional, 'non-Bangkokmax' units (such as 'Wenchong 1700s) were getting fixed at a maximum of \$16,500/day. From the summer both types saw their rates drop. A build-up of tonnage in Asia due to a large number of newbuilding deliveries hitting the water in the space of only a few weeks contributed to the correction in rates. However, the strong demand helped absorb most of the excess capacity and by November the supply situation had normalised. Charter rates had nevertheless not yet recovered by the end of the year and eventually settled in the region of \$12,000/day for 'Bangkokmaxes' and \$9,500/day for traditional ships.

#### 2024 OUTLOOK

This year should see in the region of hundred and thirty vessels coming to the end of their charters, significantly more than the hundred units accounted for in 2023. However not all these ships will end up in the market since many, especially the best units, are expected to see their charters extended. On the newbuilding front, around 70 vessels are expected to be delivered which is marginally less than in 2023. However,

only around fifteen ships are believed assignment-free, significantly less than the thirty-five accounted for in 2023. All in all, there should be more ships in the market than in 2023, but demand should help absorb much of this capacity, with modern 'Bangkokmax' units being continuously coveted by carriers. In contrast, prospects for the older 'non-Bangkokmax' units are less certain as they will become increasingly a second choice for charterers.

### 1,250–1,499 teu

#### 2023 OVERVIEW

Overall, a decent year for this segment, at least until the summer as charter rates slowly faded in the second half, against rising supply in Asia. The tonnage-tight Atlantic remained resilient for a little longer but also lost strength from September. At the peak of the market, a 1,440 teu 'Hegemann 1400' would be fixed in the region of \$14,000/day, a healthy level. In December, and despite the clearing of the fleet of spot ships, the same design would hardly fetch more than \$8,000–8,500/day for periods of six months.

#### 2024 OUTLOOK

There will be around sixty vessels coming to the end of their charters in 2024, according to Alphaliner, which is marginally more than in 2023. There will also be sixteen newbuildings hitting the water (versus six in 2023), of which, five units are believed assignment-free. Prospects for this segment are mixed. The high-reefer or ice class units should continue to be in demand and rewarded for their features. In contrast, more standard, gearless units could, on certain routes with high volume potentials, suffer from the competition of larger units of 1,500–1,900 teu, of which supply will be ample in 2024.

### 1,000–1,249 teu

#### 2023 REVIEW

Vessels of 1,000–1,249 teu had a reasonably good year in 2023 with charterers around the world showing a continued interest in this size of ships. Apart from a build-up of tonnage in November, which was quickly absorbed, supply remained tight during the year. This resulted in fairly healthy rates in the first half of the year, with standard 1,118 teu 'CV 1100' units obtaining \$13,500/day at the peak of the market in June. Fuel-efficient units, or vessels deployed on remote trades, could meanwhile be fixed at rates of \$14–15,000/day. However, the market started to soften from the summer and has been on a steady decline ever since. In December standard tonnage of 1,000 teu was fixable in the region of \$7,500/day on average, with the Atlantic generally paying higher.



## 2024 OUTLOOK

There will be around 130 vessels coming to the end of their charters in 2024, a level that is only marginally higher than in 2023. Obviously not all these vessels will end up in the charter market since many units are expected to continue to trade for the current charterers. There will also be thirty-seven newbuildings, a little less than in 2023. From this, only around a dozen ships are believed assignment free. The outlook for these sizes looks good for modern, energy-efficient, vessels which are popular on many trades around the globe. Older units, 'custom-made' for some niche routes, will likely continue to do reasonably well too but those ageing low-specifications vessels deployed on mainstream feeder loops will be increasingly competing against energy-efficient units, sometime of a larger size, and might be forced to exit the market completely.

## Sub-1,000 teu

### 2023 REVIEW

The sub-1000 teu sizes had a reasonably good year, amid sustained demand from charterers both in the Atlantic and in Asia. Fixtures were sometime concluded for relatively long period employments of up to twenty-four months, which is unusual for these sizes. Although

incomparable to their historic levels of 2022, charter rates were meanwhile very decent for most sizes until the summer. At the peak of the market, the standard 868 teu 'Sietas Typ 168' could be fixed above \$12,000/day in the Atlantic. The 698 teu 'Mawei 437' type would meanwhile fetch \$11,000/day in the same region, while Asia was returning slightly lower figures. However, in August, the market started to weaken against a growing supply of ships. The return of spot tonnage resulted in a steady decline of charter rates which continued until the end of the year. In December, the 'Sietas Typ 168' would get fixed at 'only' \$8,800/day in the Atlantic while a 'Mawei 437' would struggle to obtain more than \$7,000/day.

### 2024 OUTLOOK

The year 2024 is expected to look very similar to 2023. The number of ships seeing their charter expire, in the region of 150, will be broadly the same as in 2023. Newbuildings will continue to be very low, with only thirteen ships due to hit the water, mostly for Asian owners. The serious lack of newbuilding orders in this segment continues to raise doubt on the future of these sizes. Unless there is a rally in the coming years, smaller cellular vessels under 1,000 teu might gradually disappear, except on specific niche routes. Elsewhere, they will be gradually replaced by larger and more modern energy-efficient tonnage.

## Alphaliner 2023–2022 Cellular Ships — Essential Figures

	Ships	teu	% Change y-o-y
Fleet as at 31 Dec 2023	5,977	28,140,846	8.25%
Orderbook as at 31 Dec 2023	844	7,099,183	-5.1%
Orderbook as % of fleet		25.2%	
<b>2023 — Containerships Activity</b>			
Ordered 2023	202	1,782,327	-32.8%
Value of new orders (Est.)			
Delivered 2023	343	2,271,060	124.8%
Deleted 2023	79	142,284	1270.9%
<b>Breakdown</b>			
Scrapped	77	139,585	1613.9%
De-celled			
Lost/Sunk	2	2,699	20.7%
Average inactive fleet 2023		1,152,612	29.0%
Inactive fleet at end Dec	248	1,033,256	-28.0%
Average SCFI 2023		1,006	-70.5%
SCFI end Dec		1,760	58.8%
Av. Alphaliner charter index 2023		123,1	-70.8%
Index at end Dec		93,1	-35.7%
Average FO \$/ton 2023 (Rtm/Sin)		466	-9.3%
FO \$/ton end Dec		453	19.5%
Average VLSFO \$/ton 2023 (Rtm/Sin)		594	-22.0%
VLSFO \$/ton end Dec		579	0.7%

	Ships	teu
Fleet as at 31 Dec 2022	5,706	25,996,005
Orderbook as at 31 Dec 2022	938	7,478,031
Orderbook as % of fleet		28.8%
<b>2022 — Containerships Activity</b>		
Ordered 2022	363	2,654,940
Value of new orders (Est.)		
Delivered 2022	182	1,009,923
Deleted 2022	5	10,379
<b>Breakdown</b>		
Scrapped	3	8,144
De-celled		
Lost/Sunk	2	2,235
Average inactive fleet 2022		893,002
Inactive fleet at end Dec	261	1,436,698
Average SCFI 2022		3,410
SCFI end Dec		1,108
Av. Alphaliner charter index 2022		421.2
Index at end Dec		144.8
Average FO \$/ton 2022 (Rtm/Sin)		514
FO \$/ton end Dec		379
Average VLSFO \$/ton 2022 (Rtm/Sin)		762
VLSFO \$/ton end Dec		575

# Fleet and Orderbook

As of 1 January 2024, the world cellular containership fleet stood at 5,977 units totaling 28 m teu. The fleet grew by 2.1 m teu compared with 1 January 2023, with 343 new vessels joining the fleet. This is twice as much as in the previous year, when the fleet grew by 1 m teu only to 25.9 m teu, with 182 newbuilds hitting the water.

Among the significant new vessels delivered in 2023 was the 24,346 teu MSC IRINA which, together with five subsequent sisters delivered during the year, became the largest container vessel in the world. Significant deliveries also included the 6,014 teu CMA CGM Masai Mara, the world's first ammonia-ready container vessel and the 2,136 teu Laura Maersk, the world's first methanol dual fuel-powered container vessel.

On the demolition front, 2023 saw a rebound from the historic lows of 2022 and 2021, as 167,000 teu of cellular capacity was sold for recycling. Despite continuously attractive demolition prices ranging from \$500 to \$600/ldt on the Indian Sub-Continent and from \$300 to \$370/ldt in Turkey, many owners preferred to keep trading their ships in a container market that proved better than expected, with decent charter rates throughout the year.

Meanwhile, newbuilding orders totaled 202 vessels for 1.8 m teu, significantly down from the 363 ship orders of 2.6 m teu placed in 2022 and far below the 556 ships of 4.2 m teu ordered in 2021. The orderbook clearly turned 'green' in 2023 with more than half of the orders being for methanol dual fuel or methanol-ready ships (108 vessels). LNG remained popular, with thirty-six orders while ammonia has also been getting traction, with a dozen ammonia-ready vessels contracted. The largest number of orders was for or on behalf of CMA CGM (35 ships), Evergreen (23) and MSC (19). The world's second largest carrier, Maersk continued to be very conservative with its fleet development plans, having only ordered six new vessels.

2024 will see the cellular fleet growing even faster than in 2023, with a whopping 3.2 m teu of newbuilding capacity due to hit the market that will push the fleet over 30 m teu. Although 2023 was surprisingly good at absorbing the new capacity delivered despite disappointing scrapping, it is doubtful that the market will be strong enough in 2024 to deal with another second huge influx of ships. Nonetheless, the current trade disruptions in the Red Sea and Panama could help absorb tonnage, if they persist.

Image:

The 6,014 teu CMA CGM MASAI MARA built for Belgian owner Delphis (part of the CMB Group) by the Chinese yard Qingdao Yangfan is the world's first ammonia ready container vessel. The ship has been fixed to CMA CGM for a long term charter. Copyright: CMB.TECH.



# Second Hand Sales Fall for Second Year in a Row

Last year, the number of cellular container vessels sold fell for the second year in the row after the peak in 2021, when an exceptional 598 vessels for a combined 2 m teu changed hands against the background of post-Covid demand boom. A total of 285 ships for 936,708 teu changed ownership in the last twelve months, down from 1.07 million teu in 2022. However, this volume of transactions remained in line with the average seen over the previous decade.

The receding number of transactions since 2021 is, in part, a consequence of the enormous orderbook, which exercises a growing pressure on supply, thereby impacting by extension secondhand activity. The implementation of CII is also to blame, as the new regulation particularly impacts older, less efficient tonnage.

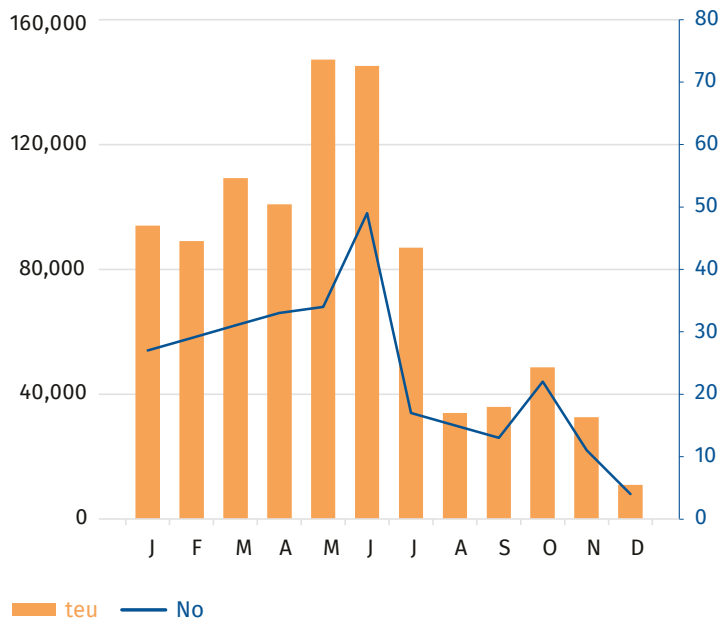
The most active buyers in 2023 were, again, liner operators, with MSC leading the pack once more with the acquisition of 48 vessels for 218,176 teu (against 420,000 teu purchased in 2022). CMA CGM was the second largest buyer with 11 units for 80,444 teu (against 102,500 teu in 2022).

Among other busy buyers in the group of shipping lines were FESCO (5 vessels), Transworld Group (5) as well as AP Moller-Maersk, Linea Messina and Medkon Lines, each acquiring four vessels. Messina was an interesting case, as the Italian carrier took the strategic decision to replace its fleet of large and modern Conros of 2,900 teu with fully cellular ‘classic Panamax’ tonnage of 4,300 teu.

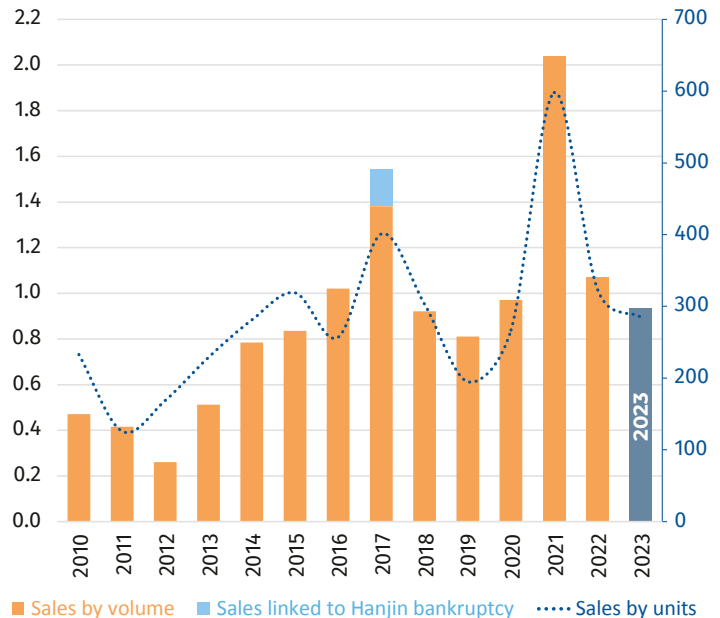
## Continuously Falling Prices

Following a major correction after the exceptionally high, Covid-driven, levels of 2022 and 2021, vessel prices continued to soften throughout 2023 to lose 20–30% of their value, depending on ship type. As a silver lining in this bleak environment, lower asset prices have prompted the return of smaller shipping lines and Non-Operating Owners (NOOs) who had been somewhat priced out of the market. Arkas, FESCO, Mahoney, Medkon, NPD and Transworld are among a few carriers that have been busy buying tonnage.

Breakdown of 2023 Sales by Month (teu)



Container Ships Sales by Year Since 2010 (m teu/n° of ships)





On the NOO side, MPC Container Ships (buying seven vessels for 15,488 teu), Cosmship (6 units for 19,000 teu), GSL/Technomar (6 units for 51,700 teu), Peter Doehle Schifffahrt/Ernst Russ AG (6 ships), Conbulk and Crios Shipping (5 each) were among the most active buyers. The year also saw a number of little-known Chinese investors actively securing tonnage in the 2,000-5,000 teu sizes.

It is yet unclear what 2024 has in store for secondhand vessel prices. Before the problems in the Red Sea appeared, with extra tonnage needed to offset the Cape of Good Hope re-routings, 2024 was widely

expected to be one of overcapacity, with a huge influx of newbuildings putting ever growing pressure on supply. This was expected to have a negative knock-on effect on the sale and purchase market.

However, with fast rising cargo and charter rates driven by the events in the Near East, the whole dynamic of the market could now change. Despite the larger orderbook, a rebound in demand, even for older ships, and a recovery in asset prices is becoming possible again, especially if the conflict finds no quick resolution.

### Top Buyers Second Hand

Operator	Units	Total Size/ Average Age
MSC	48 units	218,176 teu / 18yrs
CMA CGM	11 units	80,444 teu / 11yrs
Hainan Yangpu	7 units	20,865 teu / 20yrs
Global ship Lease / Technomar	6 units	51,700 teu / 20 yrs
Cosmship	6 units	19,000 teu/ 15yrs
Crios Shipping	5 units	13,200 teu / 12yrs
FESCO	5 units	7,387 teu / 9yrs

### Top Sellers by Units

Sellers	Units	Total Size/ Age
Lomar Corp	20 units	40,196 teu / 13yrs
Goto Shipping	19 units	27,347 teu / 7yrs
V Ships	14 units	63,674 teu/16 yrs
A.P. Moller-Maersk	12 units	99,450 teu / 21yrs
MPC Group	12 units	29,743 teu / 17yrs
Wan Hai Lines	12 units	21,938 teu/22yrs
TS Line	10 units	27,034 teu / 12 yrs
Sea Consortium	10 units	20,698 teu / 17yrs

Image:  
The 9,034 teu, Navigare Capital Partners-controlled UASC ZAMZAM, built by Hyundai Samho in 2014 was sold to German owner D. Oltmann for a reported USD 71 M. It was one of the significant transactions of 2023. Copyright: C. H. Mercier.



## Analysis of 2023 Transactions by Size

### Contershops Total Transactions Breakdown

Size	N° of Transactions 2023 vs 2022	Variation
>10,000 teu	9 vs 7	+22%
Over Panamax	42 vs 45	-6.7%
3,000–5,100 teu	46 vs 52	-11.5%
2,000–3,000 teu	52 vs 62	-16%
900–2,000 teu	113 vs 111	+2%
<900 teu	23 vs 31	-26%

Image:  
The 24,116 teu MSC RAYA was built for MSC by Jiangnan Shipyard in China and delivered in March 2023. Copyright: Etienne Verberckmoes.



**Number of sales of units over 10,000 teu:****9 sales (7 in 2022)****Average age 9 years****Units breakdown per quarter:** Q1: 3, Q2: 1, Q3: 4, Q4: 1**LARGEST BUYERS:****LARGEST SELLERS:**CMA CGM: **3**Yang Ming Marine: **3**Shoei Kisen: **3**Navigare Capital Partners: **3**Claus Peter Offen: **3****Number of sales of Overpanamax:****42 sales (45 In 2022)****Average age 17 years****Units breakdown per quarter :** Q1: 14, Q2: 25, Q3: 2, Q4: 1**LARGEST BUYERS:****LARGEST SELLERS:**MSC: **17**Global ship Lease/Technomar: **6**Seaspan: **4**AP Moller-Maersk: **4**CMA CGM Group: **4**AP Moller-Maersk: **12**Seamax Capital Management: **4**V. Ship (Hamburg): **3**China Merchant Bank: **3****Number of sales of units between 900–2,000teu:****113 sales (111 In 2022)****Average age 15.0 years****Unit breakdown per quarter:** Q1: 32, Q2: 51, Q3: 17, Q4: 13**LARGEST BUYERS:****LARGEST SELLERS:**MSC: **7**MPC Group: **4**Transit LLC: **4**

Goto Shipping (Starocean

Marine Co Ltd): **12**Lomar Corp.: **12**Wan Hai Lines: **9**Sea Consortium: **6**TS Lines: **6**MPC Group: **5**Boehe Schifffahrt: **4**SITC: **4****Number of sales of units between 3,000–5,100 teu:****46 sales (52 In 2022)****Average age 17 years****Units breakdown per quarter:** Q1: 14, Q2: 15, Q3: 10, Q4: 7**LARGEST BUYERS:****LARGEST SELLERS:**MSC: **14**

Hainan Yangpu Newnew

Shipping: **5**Massina: **4**CMA CGM Group: **3**Conbulk: **3**

V. Ships (Hamburg)

GmbH & Co. KG: **8**Zhonggu Logistics Corp.: **4**

V. Ships (Hamburg)

GmbH & Co. KG: **3**Lomar Corp.: **3**Eastern Pacific Shipping (EPS): **3****Number of sales of units between 2,000–3,000 teu:****52 sales (62 In 2022)****Average age 16 years****Units breakdown per quarter:** Q1: 19, Q2: 17, Q3: 7, Q4: 9**LARGEST BUYERS:****LARGEST SELLERS:**MSC: **11**Cosmoship: **4**MPC Group: **6**Lomar Corp.: **5**

V. Ships (Hamburg)

GmbH & Co. KG: **3**Hammonia Reederei: **3**Doehle, Peter: **3****Number of sales of units below 900 teu:****23 sales (31 In 2022)****Average age 23 years****Unit breakdown per quarter:** Q1: 5, Q2: 10, Q3: 5, Q4: 3**LARGEST BUYERS:****LARGEST SELLERS:**FESCO: **2**

Goto Shipping (Starocean

Marine Co Ltd): **3**Sea Consortium: **2**HS Schifffahrts: **2**



# MPP

Image:

BBC XINGANG — MPP, built in 2013, 9279 Dwt, gear: 2x250ts cranes combinable 700ts, owned by Briese Schifffahrt, shipyard: Xingang Shipyard. Copyright: BBC.









# Challenges and Realisations — The Multipurpose Market in 2023

In 2023, the multipurpose market was confronted by challenges of various natures which it will continue to face going forward. Declining market rates from sky-high levels, a lack of new tonnage, pressure from other shipping segments (Container, Bulk and Coaster), the Panama Canal drought, the ongoing war in Ukraine and its implications for doing business with Russian entities, EU ETS charges and the recent attacks off the coast of Yemen are major contributing factors, that our special shipping segment must overcome.

Weakening freight rates for container liners lines and dry bulkers sector hit the MPP market continuously across 2023. Multipurpose shipowners no longer have the privilege of record high market rates gained by transporting Containers in 2021 and 2022, which was predominantly driven by Covid Restrictions in China and the associated disruptions to the logistic chains. The Chinese government announced the lifting of all Covid restrictions in China in late 2022. Thus, 2023 was characterized by a “back to normal” shipping market in the Far East.

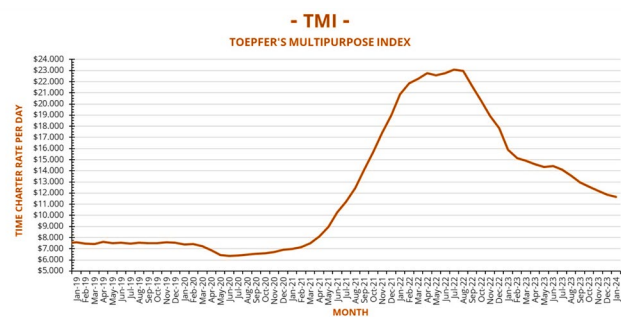
When looking at the fixing activity throughout 2023 we noted in the beginning of the first quarter more spot than period deals. Fixtures of larger MPP’s of around 30,000 Dwt for time charter trips have been reported in the mid-high teens and in specific trades up to \$20,000/day. On short-medium periods, the same vessel types were fixed at around \$12,000/day for 3–6 months. By the end of Chinese New Year, earlier predictions and estimations of a market recovery by Q1, and at the latest by Q2 were already re-evaluated to take place in Q3. A stabilizing container market supported these predictions. Transitioning from Q1 into Q2 we faced a tough Atlantic market with very little cargo available at the time. The Far Eastern market was blessed with much healthier results, when comparing sister vessels’ fixtures in the Atlantic versus the Far East. A substantial contributing factor for this has certainly been Russian controlled business which, in rare cases, almost doubled the daily hire rates of non-Russian controlled business. By the end of the year, this gap had narrowed to \$4–5,000/day.

The seasonal lull during the summer months dragged on unusually into Q3 and Q4 as normally a market recovery arrives by late Autumn. The Atlantic market remained under more pressure than the Far East which saw some corrections as well, down to low teens on period charters. Vessels opening in the south Atlantic started ballasting northwards in hope of higher rates which were then in four digits and driven mainly by the soft bulk market.

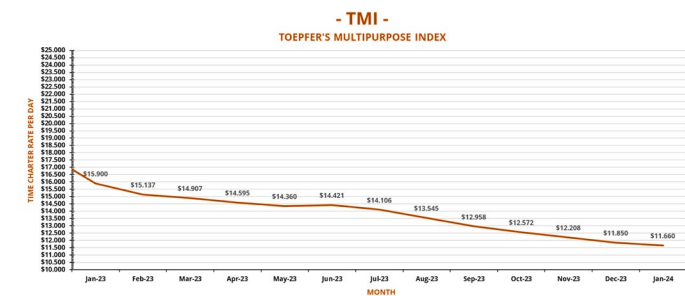
The compact MPP market (10,000–12,500 Dwt), which is dominated by the well-known E/F Types, (12,500 Dwt with 2x150 mt gear – combinable 300 mt and it’s later version with higher lifting capacity) has therefore suffered as well in a constant rate decline from time charter rates of \$15,900/day in January 2023, to \$11,660/day in January 2024. With 87 E/F Types on the water and most under long term charter, there is unchanged limited tonnage available for the spot market. Just as much as the large bulkers going after project cargoes, the new super large MPP fleet (62,000 Dwt or larger) on the water as well as those on order increased the competition for compact MPP’s.

Not to underestimate the large coaster orderbook (3,800–8,500 Dwt), which will also have a significant impact on the traditional MPP trades with an optimized designs and hybrid/diesel electric propulsion. Indeed, considering the recently introduced EU ETS regulations, this should be especially apparent for those of less than 5,000 Gt.

## BRS has been a Panel Broker for the TMI since October 2018



This Index (TMI) represents the monthly average timecharter rate assessment established by a panel of Operators, Owners and Brokers for a 6 - 12 months timecharter for a 12,500 tons deadweight MPP / HL "F-Type" vessel. Source: TOEPPER TRANSPORT GMBH



This Index (TMI) represents the monthly average timecharter rate assessment established by a panel of Operators, Owners and Brokers for a 6 - 12 months timecharter for a 12,500 tons deadweight MPP / HL "F-Type" vessel. Source: TOEPPER TRANSPORT GMBH  
Disclaimer: This index is a statement of opinion only and no guarantee can be given that the index value will be achieved during a market transaction. Neither Toepfer Transport GmbH, nor its Directors or employees will be responsible for the consequence of reliance on or any transactions upon this index. A detailed definition and methodology of the index is available upon request.



As previously mentioned, the Panama Canal drought exerted a significant impact.

Messrs. BBC, among many other major operators announced during November “We do not expect any of our vessels to pass the Panama Canal in a foreseeable timeframe.”

Obtaining a Panama Passage Ticket through so called auctions, soared to sky rocketing costs more than \$2 million. Consequently, we saw more demand and some recovery in the Atlantic, mainly the USG / ECSA and the South African bulk markets, which in return pushed MPP rates up to some extent.

Looking at the main players in the MPP segment, an interesting example of a major merger in the MPP-bulk segment, is the Danish takeover of former Thorco Projects into Danish giant Norden A/S. A newly established Project desk, enabled them to use a large fleet of bulkers with the expertise of project operators. On the other hand, various other players including BBC and Centurion MPP employed open hatch box shaped Handysize vessels for project and MPP cargoes.

A general outlook at how the big players prepared their future — Briese as major shareholder and tonnage supplier for BBC ordered so called 10 x 13,000 Dwt laker max vessels which can be considered as improved F500 types with the bridge forward. AAL sold some of their older 32k Warnow type vessels and are expecting their first out of six deliveries

of the Super B-Class (32,000 Dwt, geared up to 700 mt during spring 2024. On a long-term basis, the Super B-Class aims to replace their older A-Class (31,000 Dwt, geared up to 700 mt. HMM ordered 4x 38,000 Dwt MPP new buildings at Chinese yard SY which will replace the older Superflex design. Chipolbrok and Coscol have invested in 62,000 Dwt super large MPP's (geared up to 500 mt lifting capacity) newbuildings.

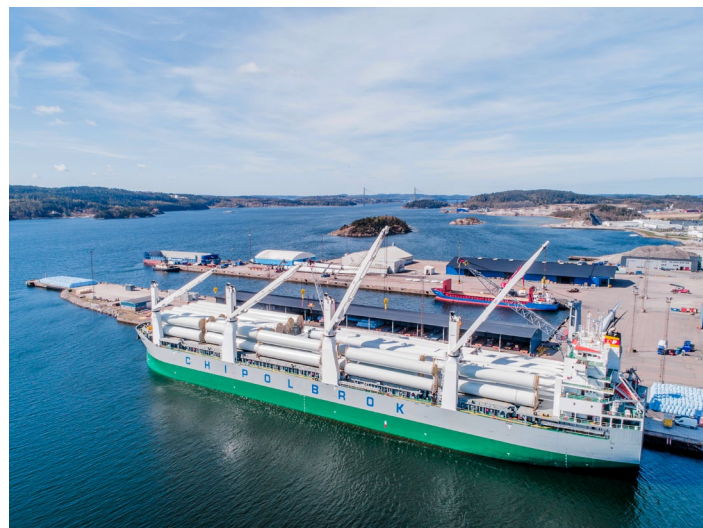


Image:  
MV HERBERT — MPP, built in 2021, 61250 Dwt, gear: 2x80 ts, 2x150 ts combinable 300ts, owned and operated by Chipolbrok, shipyard: Chengxi SY. Copyright: Chipolbrok.

Image:  
MV AAL FREEMANTLE — MPP, built in April 2011, 18,762 Dwt, gear: 2x350 ts gear combinable 700 ts, managed/owned by AAL/Schoeller Group, shipyard: Sekwang Shipyard. Copyright: AAL.





Image:  
MV AAL MARS — MPP, built in June 2011, 32,387 Dwt, gear: 4x60 ts cranes combinable 110 ts, vessel has been sold in 2023 by AAL/Schoeller Group to MACS/Hamburg now called MV "Lilac Roller", shipyard: Zhejiang Ouhua Shipbuilding Co./PR China. Copyright: AAL/Arne Kuehn.

Other leading owners and operators such as Amasus, SAL Heavylift, Royal Wagenborg, Briese, Spliethoff and DShip are looking at MPP newbuildings ranging from 12–15,600 Dwt and various design differences as follows:

- 2 x Amasus Offshore Rotra Type of 15,600 Dwt with bridge forward, Ro-Ro facilities at stern, gear and gantry system in a long-term collaboration for an offshore wind project with Siemens Gamesa Renewable Energy, Deugro and Deck Maritime.
- 5 x SAL Heavylift Orca Type of 14,600 Dwt with bridge forward, fully electric cranes of 2x 800 mt, a hold of 107m length and Polar code. Scheduled for delivery starting in mid-year 2024, the first two ships will be exclusively involved in the transportation of offshore wind turbine components in a long-term commitment with Siemens Gamesa Renewable Energy.
- 3 x Wagenborg Easymax of 14,330 Dwt with bridge forward and ice class 1A able to trade in the great lakes.
- 10 x Briese Lakemax 13,000 Dwt with bridge forward and 2x 250mt, combinable 500 mt gear and one very long hold.
- 2 x Spliethoffs' B-Class of 12,332 Dwt with bridge forward and 2x 500 mt, combinable up to 10000 mt. The vessel is an open hatch box type, DP2 fitted, ICE class 1A and has a hold length 82.3 m.

The limited compact MPP orderbook reflects extremely high newbuilding prices which can reach the mid to high \$30 millions subject to final specifications.

The outlook for 2024 is somehow difficult to predict. We can see several uncertainties, which could have a short to long term impact on our niche market: Various elections will take place in 2024, ongoing wars and other serious conflicts which may escalate, the Far Eastern economy in general, the intercontinental and geopolitical relationships and trading sanctions to name a few. On the other hand, we see a lot of projects being revived, which were pushed back during the Covid-19 restrictions.

Projects like NEOM, the largest manmade structure in human history, among other Middle Eastern projects, the renewable energy sector as well as the oil and gas industry will continue to require a large amount of Multipurpose tonnage.

In times of political, energy and environmental uncertainties, we remain hopeful to see a slow but steady market recovery with the equally slow and steady renewal of the MPP fleet and purpose-built greener vessels for servicing the renewable energy industry.





Image:  
BBC SEBASTOPOL — MPP,  
built in 2022, 12,400 Dwt,  
gear: 2x250 ts cranes  
combinable 500 ts, owned  
by Brieze Schifffahrt,  
shipyard: TAIZHOU SANFU  
SHIP ENGINEERING.  
Copyright: BBC.

Image:  
MV KEITH — F500 design,  
built September 2019,  
12,248 million Dwt on  
8.10 m draft, gear 2x250  
mts cranes combinable  
to 500 mts, operated by  
dship Carriers, shipyard:  
Taizhou Sanfu. Copyright:  
Dship Carriers.





# Ro-Ro

Image:  
GREAT LAGOS, ConRo with 4700 LM + 2500 CEU + 2000 teu capacity. Delivered in August  
2023 by Hyundai Mipo Dockyard in South Korea to and operated by Grimaldi.





GRIMALDI LINES

GREAT LAGOS  
NAPOLI  
IMO 935026

GREAT LAGOS  
NAPOLI  
IMO 935026



# Steady As She Goes

The Ro-Ro sector's charter market dynamics in 2023 followed on from the simple mismatch in demand for tonnage versus available supply established in 2022. Macroeconomic problems and uncertainties that led to stagflation in most European economies were no match for the structural shortage of modern and new tonnage, keeping charter rates stable or rising at a steady pace as the year progressed. Inflation played a key role in determining owners' and charterers' economic rationale, with owners stressing the impact of rising costs when negotiating time charter extensions and charterers seeking extensions well in advance of contract expiration dates to lock-in tonnage and limit inflation-linked rate hikes. Large, modern tonnage was available for spot charter only sporadically to cover re-positioning and pre/post drydocking needs and many smaller, older units were co-opted into secondhand car carrying trades. The lack of tonnage options meant that by the time geopolitical uncertainty surged towards end of the year, the charter market had created some stability and predictability of its own. However, how long this will last in view of the evolving conflicts in the Ukraine and the Near East is open to debate.

Reduced cargo demand in the first quarter was countered by a scarcity of tonnage and the continued spill-over of demand from the car carrier sector. Launching of new services and shuffling or consolidating of existing ones started in January with Smyril Lines announcing the start of a new twice-weekly service from Denmark, Faroe Islands and Iceland to Lithuania. P&O Ferries ceased operation of its Teesport–Rotterdam (Europoort) freight service, and then announced in February that it was joining forces with Finnlines and introducing new sailings on the Zeebrugge–Teesport route. CLdN increased capacity for its freight customers on North Sea routes to/from the east of England via charter of the Tundraland — 2,774 lane meters (LM). Public M&A activity for the year started with CMA CGM's announcement that it had entered into exclusive discussions with the STEF Group to acquire 100% of La Méridionale. March saw CLdN announce an expansion of their existing service to London (Purfleet) and the start of new services from the European mainland to Teesport, while DFDS heralded the start of a new line between Izmir and Sete. March also saw the extension of four ships ranging between 1,600 LM to 4,100 LM from established owners to established charterers at levels that confirmed the firmness of the market and lack of choice for charterers.

The second quarter started with less period fixing but plenty of car-driven activity. Soon owners and charterers were back chalking long term business and extensions for ships both young and old. Owners became increasingly bullish and May witnessed peak forward extension, with Doehle extending two ships — Caroline Russ (1,610 LM) and Elisabeth Russ (1,625 LM) to Grandi Navi Veloci (GNV) for 12

months — 5 months in advance of their current contact expiration dates. This forward extension precedent was followed in June with CMA CGM securing the Pauline Russ (1,610 LM) for 24 months in direct continuation. Bucking the extension trend, Estraden (2,307 LM) was freshly fixed to Grendi for 18 months from end-June dates (rather than continuing with P&O Ferries). Mistral (1,625 LM) that was under charter by Smyril Line was fixed to Flota Suardiaz for 6 months plus options from January 2024 dates.

The start to the third quarter and the slack summer season did nothing to alter market dynamics. Tonnage scarcity left charterers with no real choice but to extend or risk being left without a ship, resulting in extensions totaling 154 months on thirteen ships being agreed in July and August. Lower cargo volumes pushed some large operators to release tonnage on a short-term basis, including Transfennica, DFDS and Grendi. The quarter also saw automotive logistics newcomer Erkport double down on its voracious charter-in appetite. If a large Ro-Ro was available, Erkport was there to snap it up.

The fourth quarter began more serenely with a decrease in reported charter activity in October, before a flurry of fixtures and extensions in November. Erkport struck again, but by mid-December there was talk of a drop in spill-over demand from the car carrier sector which was clearly in evidence as the year closed with a small car carrier unable to find business after opening in Fos. This ending raised the possibility that several large modern Ro-Ros with open or option declaration dates in 1H24 might genuinely become available on the wider market.

Aside from the spillover of demand from the car carrier sector, traditional Ro-Ro cargo volumes did not markedly increase or decrease during the year. Route closures and openings were more indicative of lines following their corporate strategy, customers' route preferences and general jostling for competition. In November, Irish Ferries Freight announced the launch of sales for a freight service between Northern Ireland and Scotland for early 2024. DFDS announced the closure of its Calais–Tilbury service in December, having recently re-started its unaccompanied trailer service between Calais and Dover. Stena Line alerted the market of its plans to launch a new freight service between Dublin and Liverpool following the closure of the service by P&O Ferries which was unable to secure an appropriate berth in Liverpool to guarantee continuity.

Near-shoring, the trend for manufacturers to relocate production from the Far East to nearer Mediterranean hubs, continued apace spurred on by geopolitical instability and the sustainability agendas of European markets. DFDS and Maersk took concerted steps to orientate services



around the near-shoring needs of their customers. In addition to its new Izmir/Sete line, DFDS in September entered into an agreement to acquire FRS Iberia/Maroc, a division of the German short-sea ferry company FRS GmbH & Co. KG. Starting in December, Maersk launched a new weekly service between Cagliari and Rades plus their hub port of Tangier with the Wedellsborg from Grendi. Orientation of lines and ships around the near-shoring agenda is sure to be a theme for 2024 and beyond.

## The Fleet

Sale and purchase activity was spread evenly throughout the year which featured two blockbuster transactions, one of which truly set tongues wagging. Following its April purchase of a new Flensburger 4100 type and an older 2,600 LM Japanese built ship, in July Abu Dhabi Ports (AD Ports) bought the four remaining ConRos of Ignazio Messina built at STX in South Korea totaling approximately 25,500 LM of capacity. This assertive move saw AD Ports join the exclusive club of ConRo owners overnight but for a staggering price of around \$100 million per vessel.

There was rife market speculation around AD Ports' use of the newly acquired ships, but it transpired that actual delivery and transfer into the new owners' service would be a more staged process. DFDS in October executed an impressive but more standard sale and leaseback deal that saw Navigare Capital pay \$212 million for three China Merchants-built 6,690 LM sister ships, with charters back to DFDS for five years. In terms of lane meter capacity, these two deals comprising seven units accounted for 40% of the annual total that changed hands. Overall, 36 vessels were sold for further trading, a marginal increase on the total of 34 in 2022, with an average age of 19 years — markedly younger than the 2022 average of 25.7 years. The oldest vessels sold were Festivo (1,040 LM) built in 1986 and Aviva (1,475 LM) built in 1983. Within this smaller size category there is definite demand but virtually nothing being built, so it makes sense for existing ships to be operated well beyond their normal commercial lifespans.

Comparing 2023 with 2022, 5 ships versus 10 were ordered with a combined capacity of 6,800 LM — an 82% decrease in lane meters year-on-year (y-o-y). Only two conventional straight stern ramp vessels were ordered in 2023, namely a pair of 2,800 LM featuring dual-fuel methanol propulsion ordered by Stena Ro-Ro that will serve on Stena



Image:  
GREAT ANTWERP, ConRo with 4700 LM + 2500 CEU + 2000 teu capacity. Delivered in April 2023 by Hyundai Mipo Dockyard in South Korea to and operated by Grimaldi.

Line's Heysham–Belfast route in the Irish Sea. Otherwise, contracts placed were for specialized tonnage, with Amasus ordering two ships from Jiangsu Zhenjiang in China for the transport of offshore wind components and Neoliner contracting a sail equipped 1,200 LM ship at RMK Marine in Turkey.

19,936 LM in total was delivered, a 74% y-o-y decrease compared to 2022. Besides the Flensburger 4100 type Abu Samrah (ex Tendor Ocean), deliveries of three of Grimaldi's G5 series from Hyundai Mipo Dockyard (HMD) in South Korea constituted the vast majority of lane meter capacity introduced to the market during the year. Marfret took delivery in December of Ferrymar which as a 1,150 LM single ship newbuilding is a true exception, while the 700 LM Japanese built JFE Kokuryu brought the annual tally to 6 ships — a paltry number compared to the 2022 haul of 21 ships.

The complete absence of speculative ordering was noticeable but can be explained in part by group-think — owners and operators observing each other's actions or lack thereof and building only for pre-defined trades or time-charterers despite the firmness of the market. The smaller end of the fleet (1,000–2,500 LM / 156 ships / average age 26 years) is in dire need of renewal, but many owners in the segment lack the financial firepower required to attract real engagement from yards. Owners with sufficiently deep pockets and strong balance sheets are reluctant to spend large sums on small ships knowing that for similar money they can acquire larger ships. It therefore appears that large series of smaller Ro-Ros will have to be ordered to enable yards to achieve the economies of scale they require to consider building smaller ships — food for thought for enterprising tonnage providers and designers.

Fewer ships were sold for demolition in 2023 than 2022 — 6 versus 9. They were on average older at 42.5 years versus 39.2 and had a smaller combined capacity of 7,222 LM versus 18,236. Only one ship over 2,000 LM was demolished. This is unsurprising given the current fleet structure and in all likelihood ships demolished in the near future will increasingly be smaller and older on average. Demand side pressure is unlikely to let up in the foreseeable future and newbuilding supply is strictly limited — regardless of ships' age, there is limited scope for scrapping.

Newbuilding deliveries anticipated in 2024 reinforce this point. A total of 31,648 LM of Ro-Ro tonnage is expected to join the fleet, of which 45% is accounted for by the remaining three ships in Grimaldi's G5 series, 25% by CLdN's 8,000 LM hybrid under construction at HMD and the remaining 30% by a Flensburger 4100 type for Searoad, a 3,000 LM Visentini Ro-Ro that is committed to be chartered by Mann Lines and a 2,500 LM quarter-stern ramp ship for Japan's RKK Line. (The capacity of two units under construction at CSSC Guanxi ordered by Tianjin Desail International is currently unknown and so not included).

In simple terms orders, deliveries and demolitions could each be counted on two hands or less. This is perhaps indicative of a lack of dynamism resulting from years of consolidation, with the consolidators not willing or able to address and rectify structural issues in the market. It remains to be seen if in 2024 a consolidator will become an innovative disrupter, stepping up to the plate to commence restructuring work.





Image:  
FERRYMAR, Ro-Ro  
with 1150 LM capacity.  
Delivered in December  
2023 by Jiangsu Dajin  
Heavy Industry in China to  
and operated by Marfret.



Image:  
Cars being loaded  
inside ABU SAMRAH  
(ex TENNOR OCEAN)

FLENSBURGER 4100 type  
Ro-Ro. Delivered in April  
2023 by Flensburger  
Schiffbau-Gesellschaft  
in Germany to Tennor  
Holding B.V. and  
subsequently resold  
to Abu Dhabi Ports.



# Car Carrier

Image:  
CMA CGM INDIANAPOLIS, third in the series of car carriers ordered by Eastern Pacific Shipping (EPS) with post-Panamax beam and with approximately 59,000 square meters on 12 decks equivalent to approximately 7,050 CEU with 4 hoistable decks endowed with dual-fuel LNG propulsion. Delivered in December 2023 by CMJL Weihai in China and operated by CMA CGM.





CMA CGM

LNGPOWERED

CMA CGM INDIANAPOLIS

TUG

*Our thoughts and prayers go out to the crew of the Galaxy Leader, to whom we wish a swift and safe return to their families and homes.*



# New Heights

With charter rates and asset values remaining steady at all-time highs throughout the year, the car carrier sector sailed onwards and upwards. Record-breaking Chinese vehicle exports [+58% year-on-year (y-o-y) with approximately 4.9 million vehicles, of which 1.2 million new energy vehicles (NEVs), up +78% y-o-y] combined with continued port congestions in several regions, to counter-balance a normalisation of logistical and supply chains, as well as a release of pent-up demand, to deliver another tremendous year, characterized by continued scarcity of supply.

Never-before-seen charter rates and asset values persisted throughout 2023. By the end of the year, the time charter rate for a mid-size ship of 4,900 car equivalent units (CEU) had stabilized in the mid-\$40,000/day range for five years' time charter, whereas that of a Panamax beam ship of 6,500 CEU was in the mid-\$60,000/day for five years' time charter. Moreover, freight rates were negotiated at commercially sustainable levels.

Traditional operators and tonnage providers alike reaped the rewards, with many posting record earnings. It proved to be the right time for AP Møller-Maersk to cash out of their investment in Höegh Autoliners, in which they had been the second largest shareholder since 2008. The same goes for Klaveness Marine, which in March sold their 50% stake in Norwegian Car Carriers (NOCC) to their investment partners J.P. Morgan Asset Management. As one player exited the sector, another one stepped in. Polaris Autoliners broke onto the stage with a series of chartering activities and a bold acquisition of two distribution vessels from Gram Car Carriers (GCC). Chery Automobile Co. Ltd. and Anhui Provincial Port & Shipping Group established a car shipping joint venture — Anhui Hangrui International Ro-Ro Transportation Co. — in which Chery and the port group each hold a 44.44% stake, with the balance of 11.11% held by another original equipment manufacturer (OEM) based in the Anhui Province, Anhui Jianghuai Automobile Group Co. Ltd. (JAC Motors). On the back of its investment in CEVA Logistics, container giant CMA CGM also joined the fray, securing precious tonnage through charter commitments from tonnage providers. In this red-hot environment, investment appetite continued unabated with 86 ships being inked for construction. After spreading its wings and taking off, the sector soared to new heights.

Looking ahead, the expectation is that the momentum should spill over into 2024. The disruption to global shipping caused by the Houthis in the Red Sea has ironically exerted further pressure on already tight supply, with operators re-jigging their services around the Cape of Good Hope to avoid the area altogether, thereby adding more sailing days. Nevertheless, downside triggers on the demand side remain high with tight monetary policy leading to tighter credit conditions, the ongoing

conflicts in the Ukraine and Gaza, simmering general geopolitical tensions, recurring climate-related natural disasters, plus the ever-present possibility of a “black swan” event. In 2024, 55 units are due for delivery, but they represent only about 8% of the current fleet, a manageable size to absorb for a fleet that has been shrinking over the past five years, especially if prevailing market dynamics endure. With a bit of luck, therefore, demand side volatility could continue to be offset by the supply side.

## The Ongoing Anti-Trust Investigation

The sweeping investigation into the global car carrier price fixing scandal that has been ongoing since 2012 saw some developments last year. In February, the United Kingdom's (UK) Court of Appeal scheduled the £143 million class-action suit on behalf of UK motorists against a group of shipping companies to take place in early 2025. In September, Compañía Sud Americana de Vapores (CSAV) reached a collective settlement agreement of £1.5 million, which, in a landmark decision, was approved by the Competition Appeal Tribunal (CAT) in December. Elsewhere, in August, Nippon Yusen Kaisha (NYK) and Kawasaki Kisen Kaisha (K Line) were respectively fined \$1.5 million and \$460,000 by the Ontario Superior Court for their role in an international conspiracy that reduced competition for the shipment of vehicles to Canada.

Image:  
LAKE HERMAN, first in the series of car carriers ordered by Eastern Pacific Shipping (EPS) with post-Panamax beam and with approximately 59,000 square meters on 12 decks equivalent to approximately 7,050 CEU with 4 hoistable decks endowed with dual-fuel LNG propulsion. Delivered in October 2023 by CMJL Jiangsu in China and operated by MOSK.



Car Carrier

Both companies pleaded guilty to one count of conspiracy under the Competition Act of Canada. In addition, K Line pleaded guilty to one count of bid-rigging.

After over a decade of penalties and convictions, we still haven't seen the end of this unfortunate chapter.

## The Fleet

Based on a capacity of 1,000 CEU and above, at the turn of the year, the fleet counted 723 vessels equal to approximately 4.1 million CEU, with an average age of approximately 16 years. It marks the first time since 2019 that the 4.0 million CEU threshold was breached. Compared with 2022, fleet and capacity growth were marginal, rising by a mere 1.2% and 1.8% y-o-y, respectively, whilst average age rose by approximately 12% y-o-y. Nevertheless, annual fleet growth rose tenfold, improving the average over the past five years to approximately -0.3%. To add perspective, the average fleet growth over the past ten years is barely 1.0% and the last time the fleet experienced double-digit growth was in 2014 (13.6%). The overall orderbook ended the year at a whopping 205 units, representing approximately 28% of the current fleet, stretching out up to 2028, and accounting for a total of approximately 1.6 million CEU, representing approximately 40% of the current capacity. The orderbook to fleet ratio rose by 56% y-o-y. Looking back over the past ten years, the previous peak occurred in 2015 at 11%. 194 units, or approximately

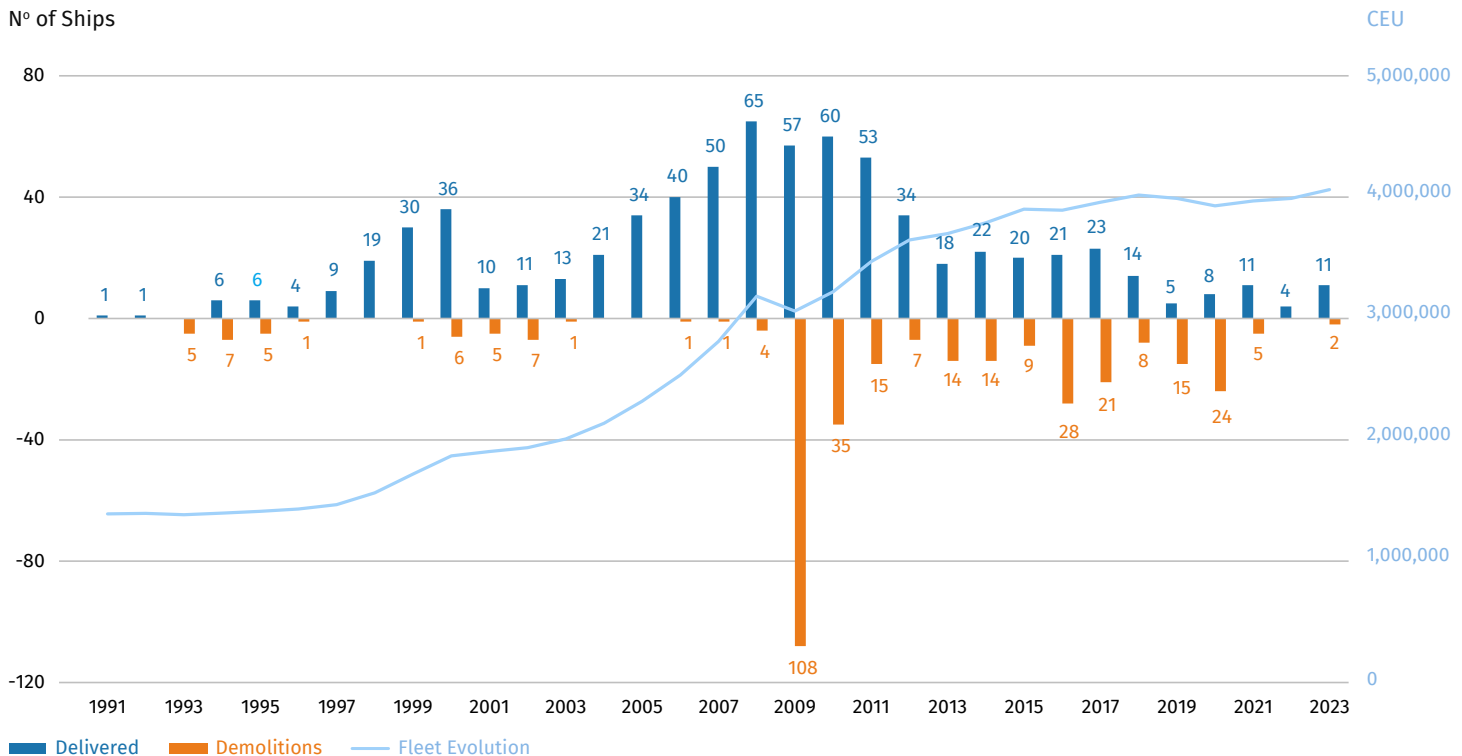


Image: EMDEN, car carrier with post-Panamax beam and with approximately 59,000 square meters on 12 decks equivalent to approximately 7,000 CEU with 4 hoistable decks endowed with dual-fuel LNG propulsion. Delivered in September 2023 by Guangzhou Shipyard International Co. Ltd. (GSI) in China to SFL Corporation Ltd. (SFL) and operated by Volkswagen Konzernlogistik (VWKL).

95% of this orderbook, are post-Panamax beam vessels, accounting for approximately 1.5 million CEU, equivalent to approximately 96% of the CEU capacity on order. More importantly, 158 units, equivalent to approximately 77% of this orderbook, are endowed with dual fuel liquefied natural gas (LNG) propulsion. While this technology remains the sector's preferred choice to cut greenhouse gas (GHG) emissions and to decarbonise, 2023 also witnessed the adoption of methanol dual fuel, methanol-ready, ammonia-ready as well as multi-fuel-ready (ammonia and methanol) fuel propulsions, with respectively 10 units, 11 units, 20 units, and 12 units ordered. A mere 5 units, equivalent to approximately 2% of the orderbook, are mid-size capacity (<5,000 CEU), suggesting that once all the orderbook is delivered there will be

### Fleet Evolution

N° of Ships





a substantial imbalance in the fleet’s size distribution. Last but not least, approximately 37 units, or approximately 18% of the orderbook, are without committed employment upon delivery, equating to an estimated capacity of 265,000 CEU.

A massive 86 new orders were placed during 2023, equivalent to approximately 730,000 CEU with an average intake of approximately 8,500 CEU. This marks the second consecutive year of huge investment (there is just a slight reduction of approximately 5.5% y-o-y), confirming the continued appetite for new orders by the industry players, spurred on by a sizzling charter market. Of note is the fact that the Chinese-controlled fleet rose by 60% y-o-y to 61 ships equivalent to approximately 480,000 CEU. Hyundai Glovis set a new industry record for the largest ever vessels at 10,800 CEU, of which they will take twelve on charter from Hyundai Merchant Marine (HMM) and Seaspan Corporation.

Eleven units were delivered during the year, accounting for approximately 77,000 CEU, with an average capacity of 7,000 CEU. Deliveries surged 175% y-o-y, up from the previous 4 units, as did capacity with an approximately 261% rise, up from 21,400 CEU. It is a prelude of the pace of deliveries to come, with 55 units due in 2024, 69 in 2025, 60 in 2026 and, so far, 20 in 2027. Of note are the deliveries of three units to Eastern Pacific Shipping (EPS), who were the first pure tonnage providers to take a bet on the market’s turn and on dual fuel LNG propulsion.

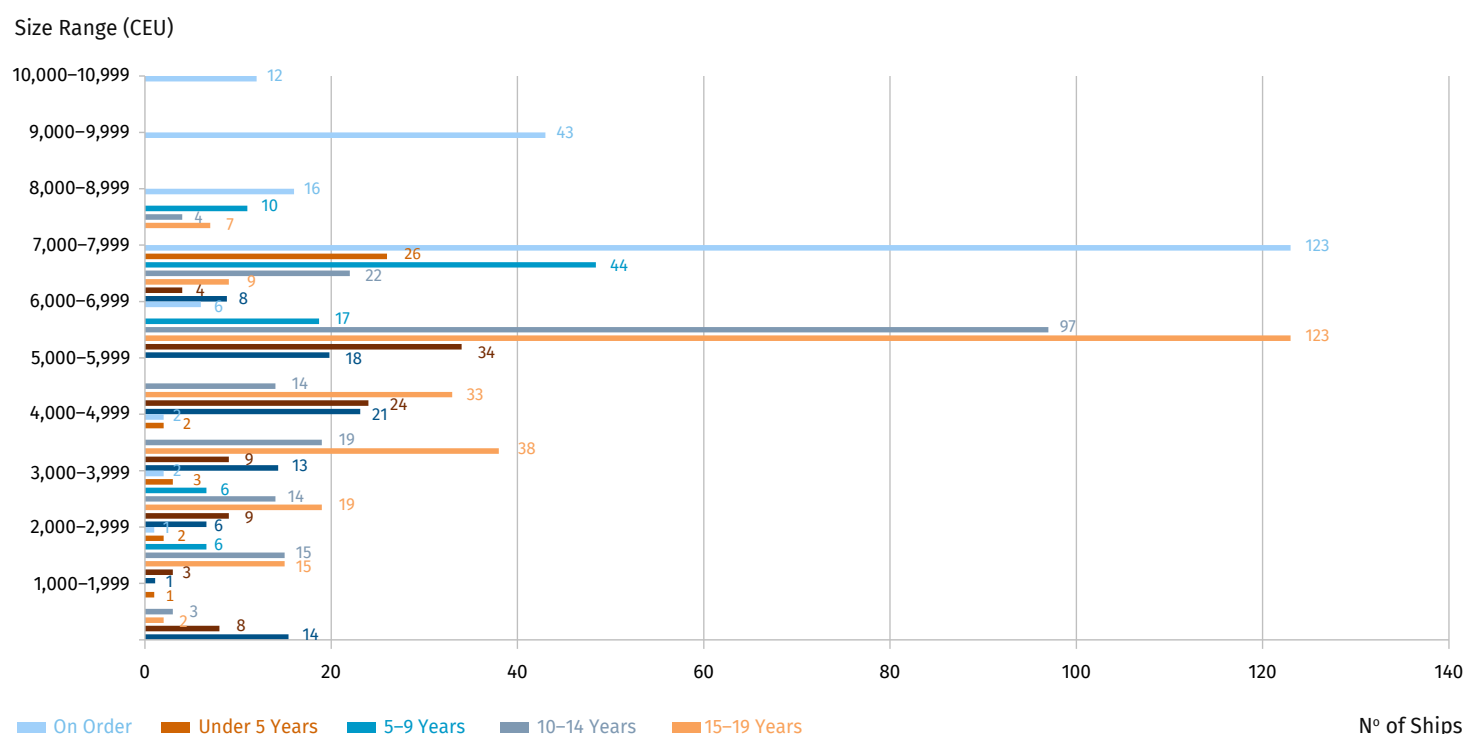
Five units saw their delivery dates deferred to 2024, accounting for approximately 35,000 CEU. They are comprised of three units under construction at CIMC Raffles shipyard in China and of two units under construction at Imabari Tadotsu shipyard in Japan.

As was to be expected, due to the booming market, demolition activity was virtually non-existent, with only two units sold for recycling and one single casualty, the Diamond Highway.

Looking ahead, 23 ships, or approximately 100,000 CEU, representing approximately 3.2% of the current fleet, will be 28 years old and above in 2024. In 2025, 32 ships, or approximately 140,000 CEU, representing 4.4% of the current fleet, will be 28 years old and above. We expect the prevailing hot market dynamics to endure throughout the coming year, delaying the retirement of this overaged section of the fleet. Nevertheless, with 55 newbuildings due for delivery in 2024, it is logical to expect that they will most likely replace some of these vintage units, which will either be re-absorbed by the market or recycled.

In line with our expectations, sale and purchase activity almost halved to 26 transactions, down approximately 42% y-o-y. The average age was 15 years, and the average size was 5,800 CEU, for a total of approximately 150,000 CEU. The activity was a mix of financial sales (9) and arms’ length sales including purchase options (17). As long as asset values remain at their current prohibitive levels, we do not expect activity to pick up in the coming year, rather the opposite.

### Existing Fleet and Orderbook by Age Class and Capacity Range



# Mercy Ships



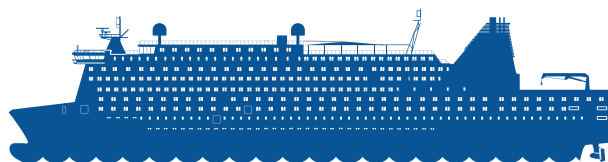




9 out of 10 people  
living in sub-Saharan  
Africa don't have  
access to safe  
surgery. **It's time we  
change that.**



# Floating hospitals. Vessels of hope.



Length: 174m, Breadth: 28.6m  
6 operating theatres  
199 Hospital beds  
641 crew members  
Hospital surface: 1,200 m<sup>2</sup>

## Global Mercy

37,000 Gt, is the world's largest civilian hospital ship, constructed as the first purpose-built floating hospital for the humanitarian organization Mercy Ships with 6 operating theaters, 199 hospital beds and 641 volunteers onboard.

Build by Stena Roro, Gothenburg Sweden.



Length: 152m, Breadth: 23.7m  
5 operating theatres  
80 Hospital beds  
750 crew members  
Hospital surface: 7,000 m<sup>2</sup>

## Africa Mercy

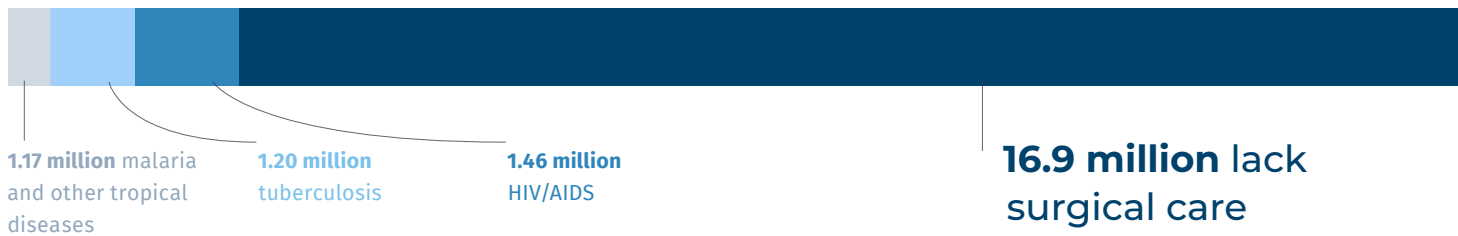
16,572 Gt, a former rail ferry named Dronning Ingrid (Queen Ingrid), converted into a hospital ship by Mercy Ships with 5 operating theaters, 82 hospital beds with 450 volunteers onboard.

Build by Helsingørs Værft AS, Elsinore, Denmark

The Lancet (international medical journal) study estimates that **17 million people die each year** due to a lack of access to reliable, affordable, and needs-based surgery.

This number is four times higher than the annual deaths from HIV/AIDS, malaria, and tuberculosis combined. Moreover, millions suffer from chronic pain, financial hardship, or marginalization due to untreated injuries or deformities that could be corrected through surgery.

**It is urgent for this to change!**



**0.2 Physicians per 1,000 habitants in the Sub-Saharan Africa.**

In Switzerland we have **44 Physicians per 1,000 habitants.**



**For this, Mercy Ships has been providing vital, free surgical and healthcare services to people.**

Mercy Ships uses hospital ships because over 50% of the world population live less than 150 km from a coast.

**Mercy Ships provides first class medical care to the poorest people to give them a new chance in life.**

## Mercy Ships Cargo Day

- Since 2016, the Shipping and Trading community has worked together to raise funds for Mercy Ships through the Mercy Ships Cargo Day, held annually.
- Charterers are giving “Mercy” Cargoes to Shipbrokers who in their turn donate 50% of their commissions to Mercy Ships. Other participants such as Shipowners, Ship Agents and Marine Survey Companies can also make a donation.
- The Cargo Day online fundraising event raised **\$9 million** in 8 years by the shipping and trading community!
- In 2023, Mercy Ships Cargo Day broke its all-time record with \$2.2 million that will help change the lives of thousands of people in Africa.
- Cargo Day 2024 online fundraising event will be launched at the beginning of November 2024.

**Next Cargo Day in November 2024**



Year	Result (\$)
2016	314,000
2017	673,000
2018	860,000
2019	1,300,000
2020	787,000
2021	800,000
2022	2,000,000
2023	2,262,000
<b>Total amounts</b>	<b>9,000,000</b>



Join us now on [www.cargoday.org](http://www.cargoday.org)

## Two Hospital Ships Serving Together In West Africa

Mercy Ships, an international humanitarian NGO, was founded in 1978 by Don & Deyon Stephens in Switzerland. For more than 45 years, this humanitarian NGO has been providing surgery to the most vulnerable people in Africa.

2023 was a year of fulfilled promises and realized hope for Mercy Ships. Mercy Ships and its local partners surpassed these achievements by providing over 3,200 life-changing surgeries and training more than 1,200 healthcare professionals.

The ship served patients from three countries — Senegal, The Gambia, and Sierra Leone. This work was only possible thanks to more than 1,318 skilled volunteers from over 67 countries, including 660+ Senegalese, Gambian, and Sierra Leonean national crewmembers.

Beyond the *Global Mercy*'s outreach to Senegal, The Gambia, and Sierra Leone, during 2023, Mercy Ships' work in eight countries included:

- 3,295 surgeries for 2,953 patients
- Training in nutritional agriculture for 93 farmers
- Training for 56 dentists

Mercy Ships volunteers provided 94,076 hours of training for 1,297 professional healthcare workers.

### Global Mercy

Mercy Ships arrived in the Port of Freetown in August 2023 to begin a 10-month field service. This marks the sixth time Mercy Ships has visited Sierra Leone — and the first visit for its newest hospital ship, the *Global Mercy*™!

During this field service, Mercy Ships anticipates providing more than 2,350 surgeries while also working closely with national partners to strengthen Sierra Leone's surgical and anesthetic systems. More than 200 healthcare professionals will receive in-depth training and mentorship across areas like nurse anesthesia, biomedical technology, and ophthalmology. The Mercy Ships team works in collaboration with the leadership of Sierra Leone, alongside partners like Connaught Hospital in Freetown, the Pan-African Academy of Christian Surgeons, and the West African College of Surgeons.

### Africa Mercy

The Africa Mercy returns to Madagascar for her next field service. The hospital ship is planned to initially dock in the port of Toamasina in February 2024.

During this first 10-month field service, Mercy Ships will collaborate closely with the Ministry of Health with the aim to provide more than 1,150 free specialized surgeries as well as targeted training for healthcare professionals working in the surgical ecosystem.

Mercy Ships has already embarked on the beginning of a five-year country engagement plan that further strengthens the partnership between the organization and Madagascar's government and healthcare leadership. This includes carefully aligning with the country's current strategic healthcare plan to ensure all planned programs best serve the people of Madagascar.

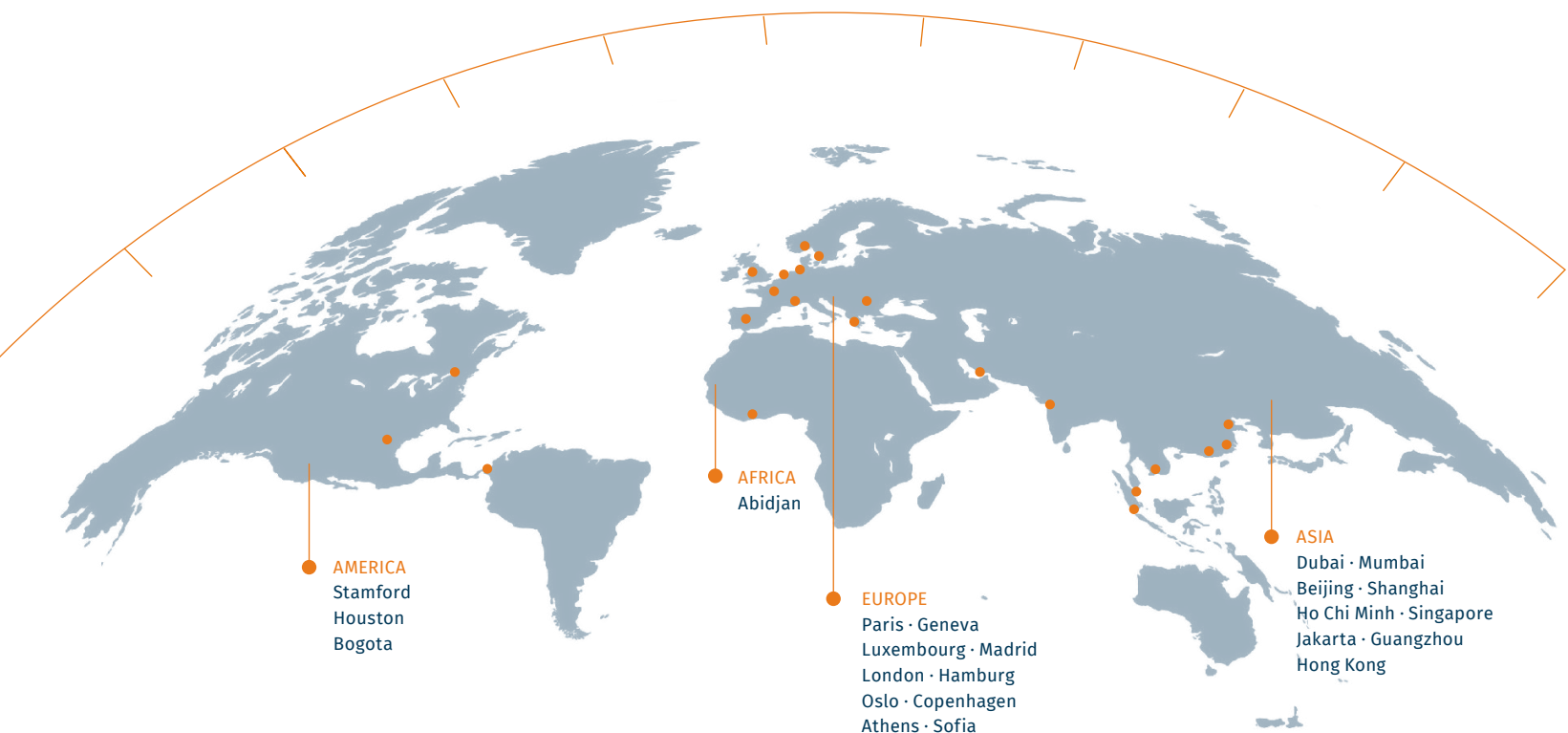
**Shipping and Trading community help make these deployments possible.**



Overview of the Last impact 2023 in Africa

<https://mercyships.africa/mercy-ships-celebrates-lasting-impact-in-2023/>

# Global Shipbroking and Market Intelligence Services



## Our Companies:

**AXSMARINE**

[www.axsmarine.com](http://www.axsmarine.com)

**BRS** Shipbrokers  
Since 1856

[www.brsshpbrokers.com](http://www.brsshpbrokers.com)

An online version of this Annual Review is available in English and Chinese at [brsshpbrokers.com/publications](http://brsshpbrokers.com/publications)



## General Enquiries:

[communication@brsbrokers.com](mailto:communication@brsbrokers.com)