



The Future of Shipping

Greece is the “Authentic
& Visionary leader”

KPMG in Greece / Shipping & Ports
May 2026



An aerial photograph of a large port facility, likely a container terminal, with numerous colorful shipping containers stacked in rows and several large gantry cranes. The port is situated along a body of water, and the sky is blue with scattered white clouds. The image is used as a background for the document's title page.

Table of Contents

1	Executive Summary
2	Global Shipping
3	Greece: A Powerhouse of Global Shipping
4	Greece in Global Shipping: Strengths & Challenges
5	Strategic Forces: Infrastructure, Energy & Geopolitics
6	The Future of Shipping: Strategic Outlook to 2035
7	Our Team
8	Glossary

Objectives

01

Global Shipping
Overview

Present the evolution of global seaborne trade over time, demonstrate key trends in the development of the global fleet—both in terms of vessel count and carrying capacity. Additionally, illustrate the progression of freight rate indices and the progress of the global fleet toward greener and more sustainable vessels.

02

Greek Shipping
Overview

Conduct an in-depth analysis of the Greek shipping sector by examining the position of Greek shipowners within the industry across key metrics and a range of vessel categories. Additionally, assess the key advantages and disadvantages that influence the performance and competitiveness of the Greek shipping sector.

03

Key Maritime &
Adjacent Sector
Dynamics Overview

Provide an overview of key shipping adjacent dynamics by presenting insights on port activity and infrastructure developments related to shipping, as well as the investment of shipowners into energy and metals. Evaluate the impact of the Middle East conflict on vessel transit patterns in and out of the Strait of Hormuz.

04

Future of Shipping
Overview

Present information regarding the industry's efforts and initiatives to transition toward green shipping, as well as the utilization, associated challenges, and key considerations related to the adoption of artificial intelligence in the shipping industry.



1. Executive Narrative

Global Shipping overview in numbers

Below are presented some high level metrics for the global shipping industry



115,999

Global Fleet Number



6,983

Global Vessel Orderbook



~57%

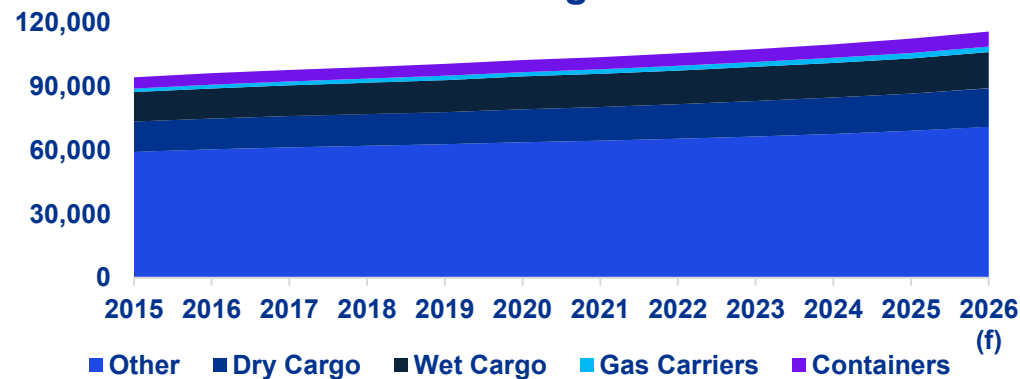
Of global fleet is owned by 10 countries



~53%

Of global fleet is registered under 10 flags

Evolution of global fleet



+22.8%

Overall Increase in global fleet number

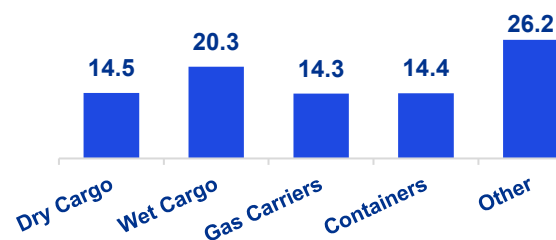
+57.5%

The highest Increase in Gas-Carriers ships

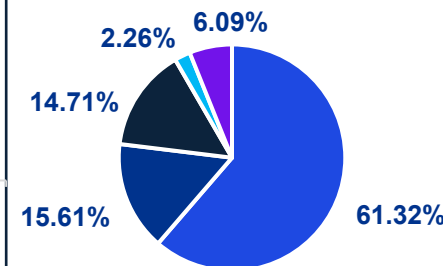
+32.2%

The second highest increase in Containerships

The average age of the global fleet is 22.5 years in 2026



Global fleet's categorization (2026)



68%



of the global fleet commercial value is owned by 10 countries

Ownership of world fleet by commercial value (billion USD) in 2026 for top 10 countries



Source: Clarksons.net, as of 31/3/2026

Global Shipping overview in numbers

Below are presented some high level metrics for the global shipping industry



2,539m DWT

capacity of global fleet



483m DWT

Dwt capacity of Global Orderbook



~68%

Of global fleet capacity is owned by 10 countries

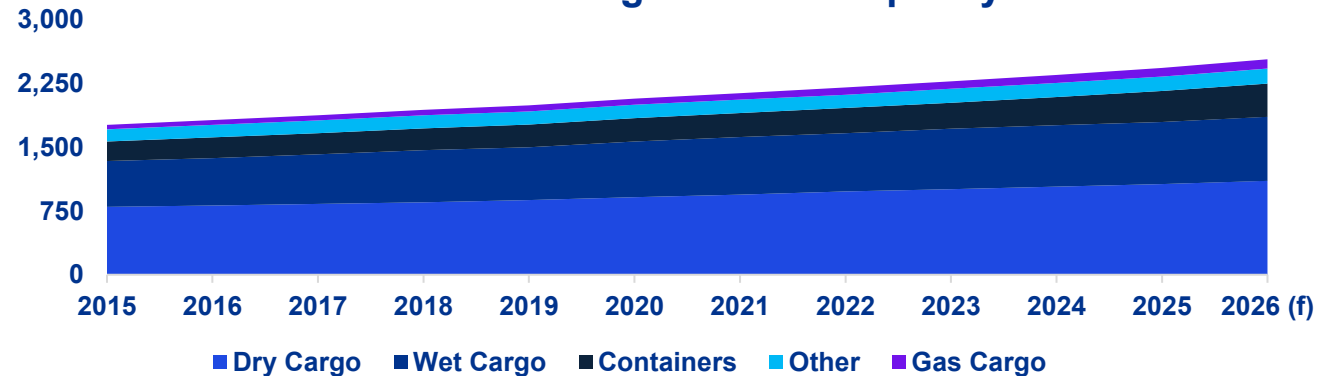


~73%

Of global fleet capacity is registered under 10 flags

DWT Million

Evolution of global fleet capacity



+43.9%

Increase in global fleet capacity

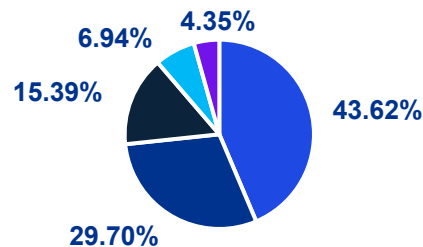
+120.1%

Increase in gas cargo capacity, the highest increase

+38.4%

Increase in dry cargo capacity, the lowest increase

Global fleet's capacity categorization (2026)



Dry & Wet Cargo vessels only represent ~30% of the global fleet, however they account for more than 70% of the global fleet capacity

Cargo vessels only represent ~40% of the global fleet, however they account for more than 90% of the global fleet capacity

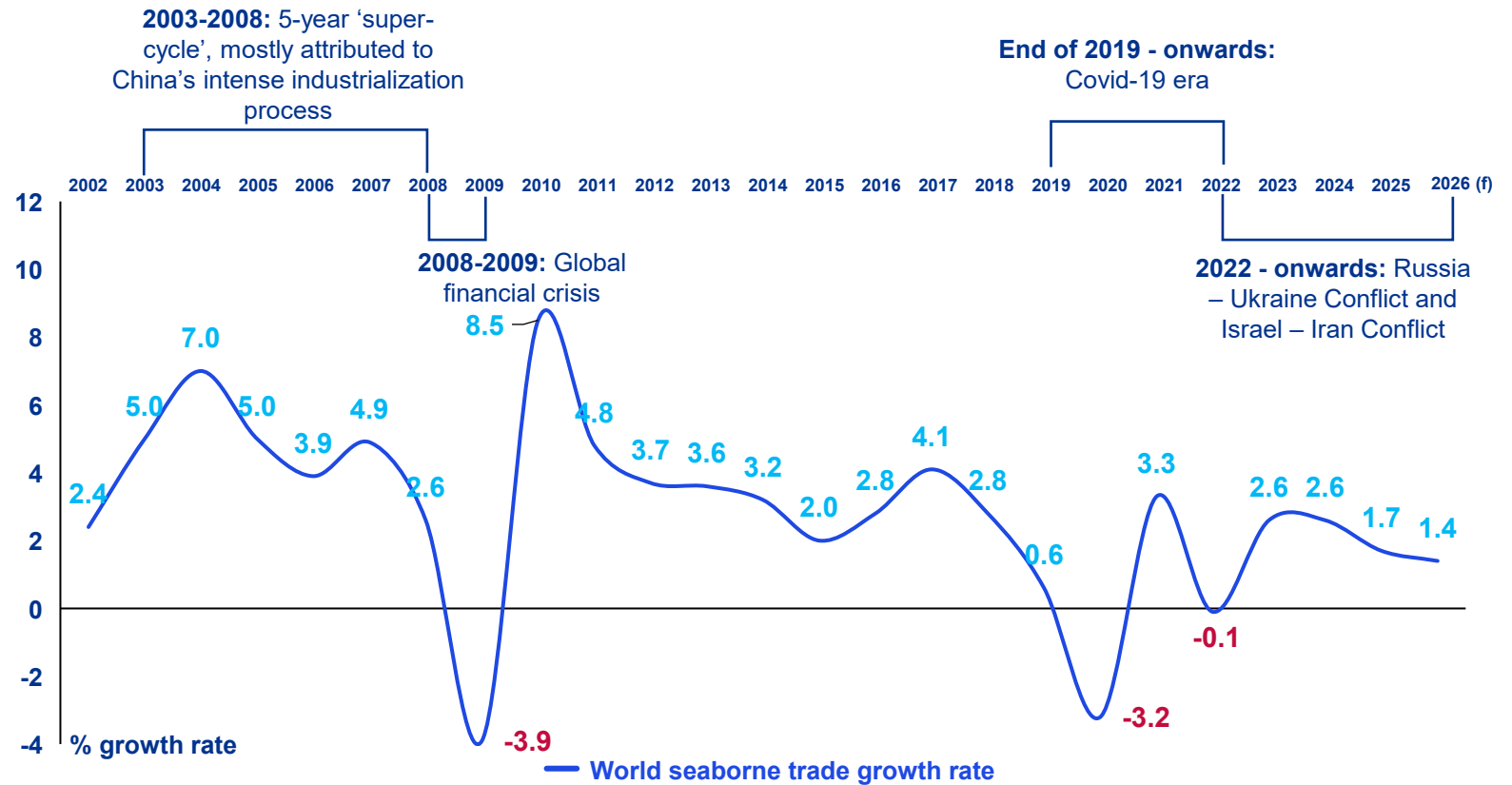
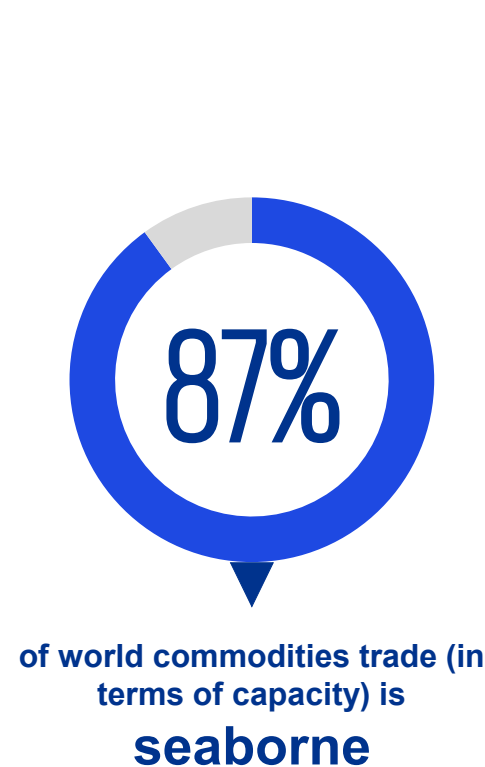
Source: *Clarksons.net*, as of 31/3/2026

Seaborne trade

Below is presented the global seaborne trade overview and its correlation with major global economic and geopolitical events



Global seaborne trade has demonstrated a resilient **long-term growth** trajectory, expanding steadily despite multiple geopolitical and economic disruptions throughout the years.



Source: *Clarksons.net*, as of 31/3/2026

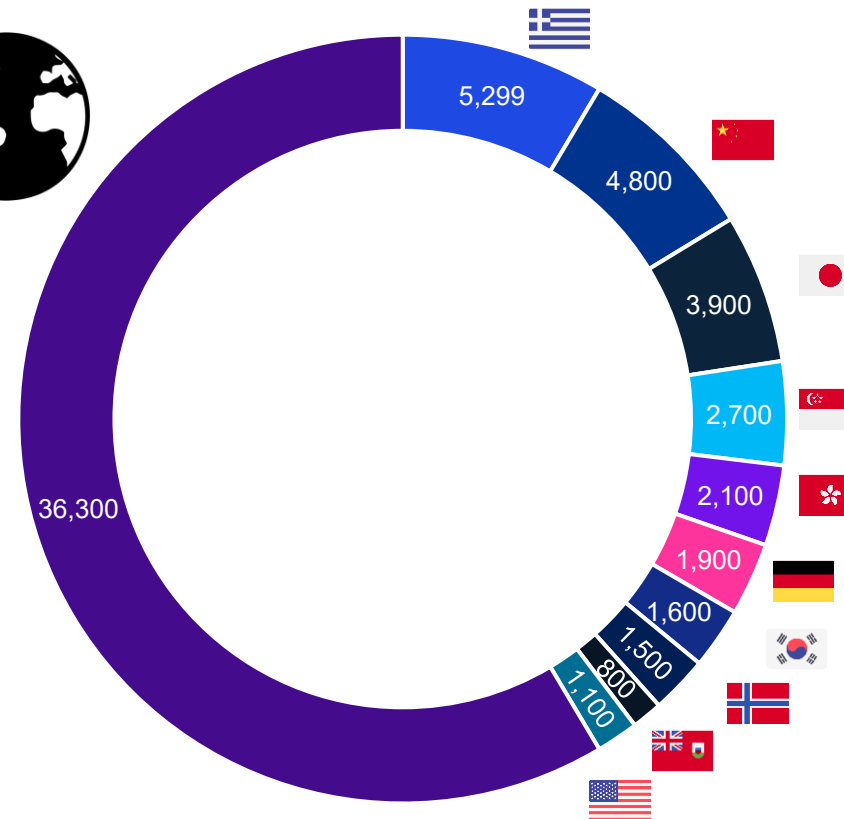
Greece's position in the global market

Below is presented the leading countries by vessel count

5299
vessels



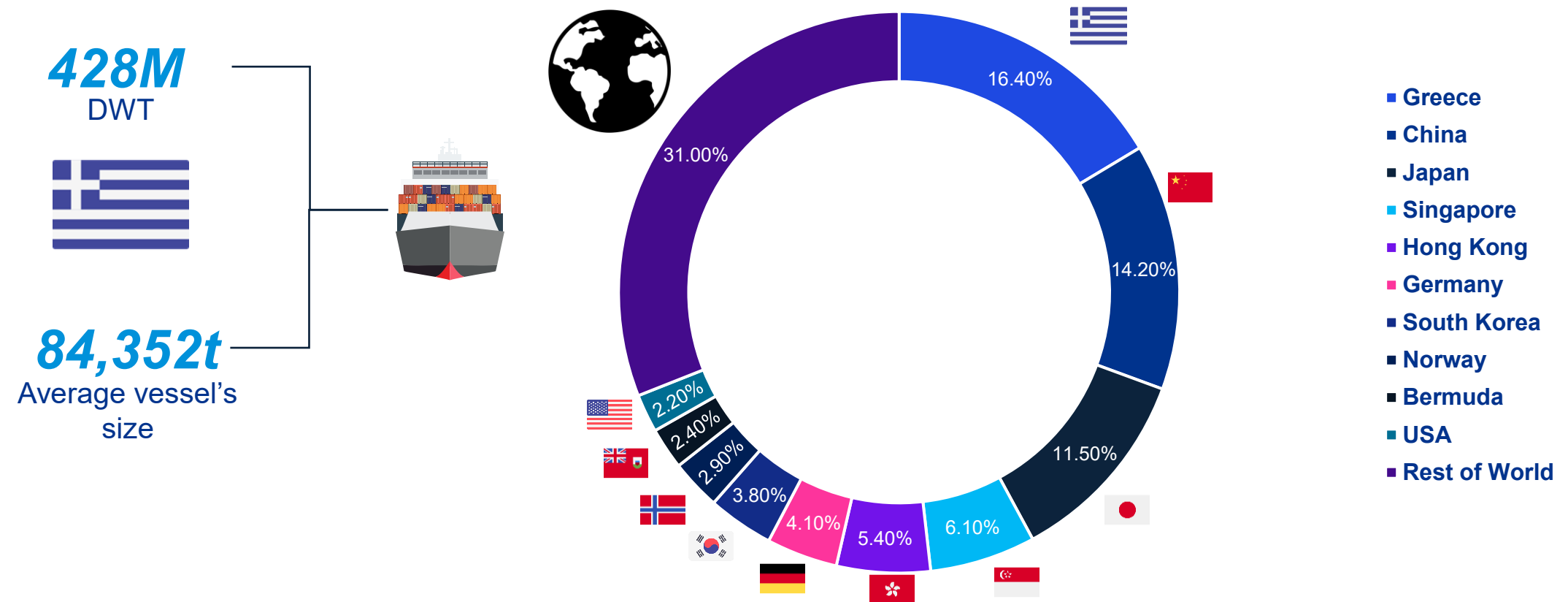
16.8
Years
Average Age



- Greece
- China
- Japan
- Singapore
- Hong Kong
- Germany
- South Korea
- Norway
- Bermuda
- USA
- Rest of World

Greece's position in the global market

Below is presented the leading countries by capacity in DWT





2. Global Shipping

Sector's size and historical growth



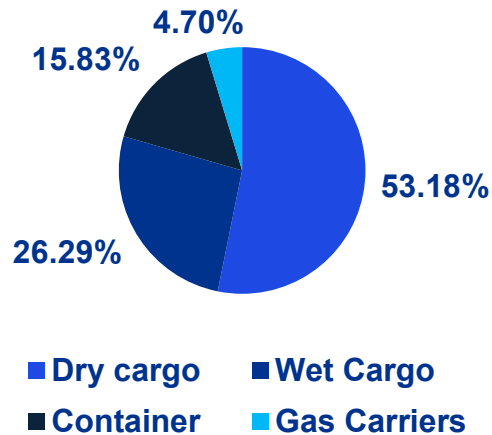
Shipping represents up to 87% of global trade in terms of capacity. Sector's historical growth is strongly related to the global economy as major political, economic and social events/ periods affected directly the demand for shipping services

16,243

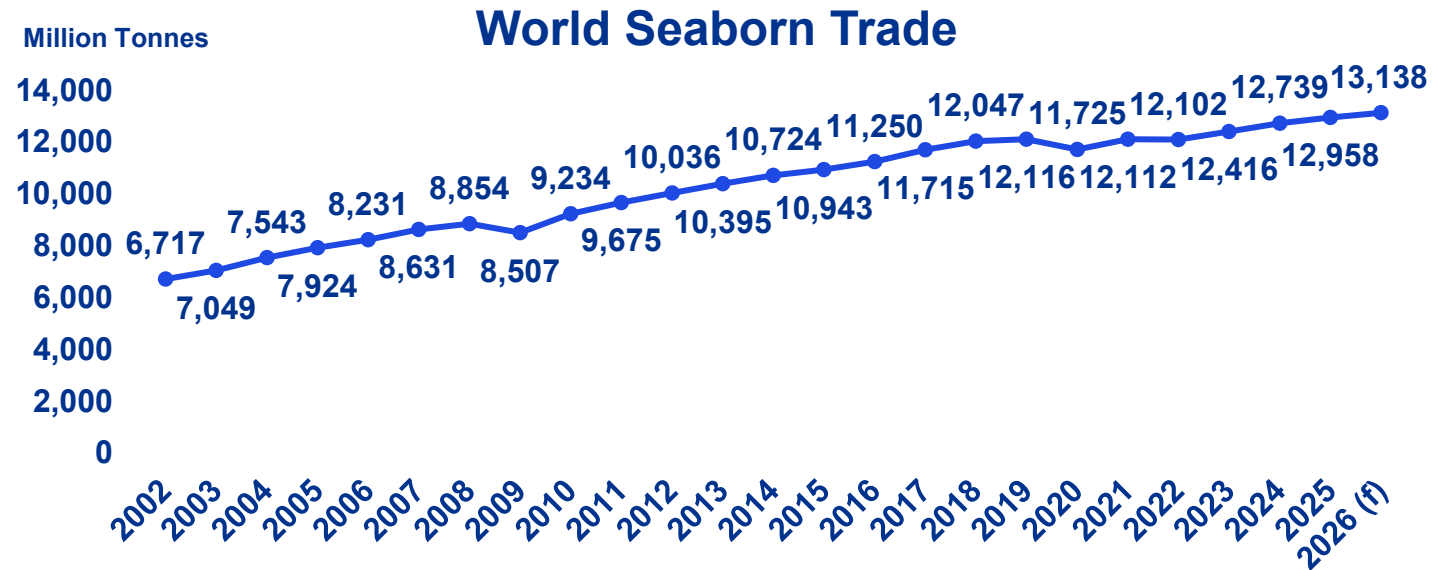
Million metric tons
loaded globally in ports
(Jan 2025 - Mar 2026)



type of cargo (%)



World seaborne trade closely tracks **global economic** and **geopolitical events**, with temporary declines during major disruptions such as the **financial crisis** and **COVID-19**, followed by strong recoveries. Recent tensions, including the **Russia-Ukraine war** and **Middle East disruptions**, have caused regional volatility and rerouting, but have not altered the overall growth trajectory, highlighting the sector's resilience.



Source: *Clarksons.net*, as of 31/3/2026

World Seaborn Trade Evolution over the Years

Below is presented the evolution of global seaborne trade by cargo category, highlighting overall growth trends, cyclical disruptions, and shifting segment contributions over time

~96%

Increase in **world seaborne trade** in the last 25 years

~106%

Increase in **dry cargo trade** in the last 25 years

~32%

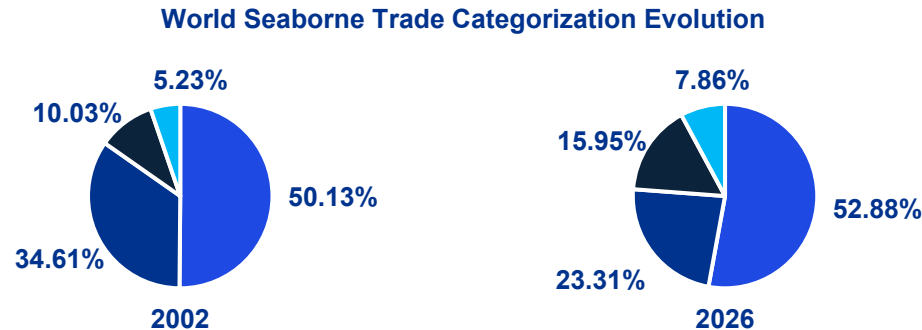
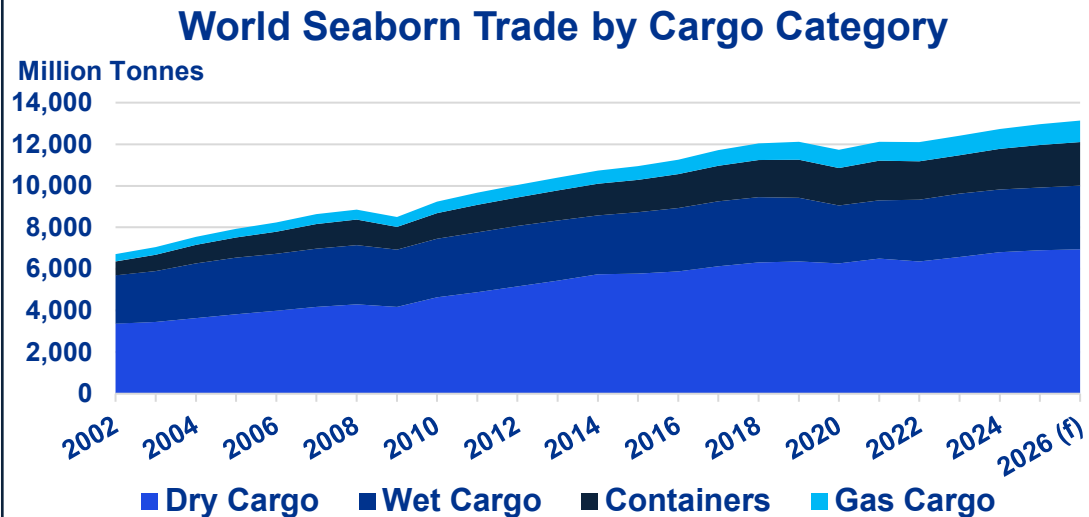
Increase in **wet cargo trade** in the last 25 years

~211%

Increase in **containers trade** in the last 25 years

~194%

Increase in **gas cargo trade** in the last 25 years



- **Sustained long-term growth:** Global seaborne trade has expanded steadily over time, with only temporary disruptions, indicating strong structural demand growth
- **Cyclical downturns:** Temporary declines in 2008-2009 and 2020 reflect major global disruptions (financial crisis and pandemic), with rapid recoveries highlighting underlying resilience in trade growth
- **Dry cargo dominance:** Remains the largest contributor throughout, driving most of the total growth and maintaining a stable share of overall trade
- **Wet cargo stability:** Shows steady but slower growth, with a relatively stable share
- **Containers:** Exhibit strong and consistent expansion, increasing their share over time
- **Gas carriers:** Though smaller in size, show the fastest relative growth, gradually increasing their contribution to total trade

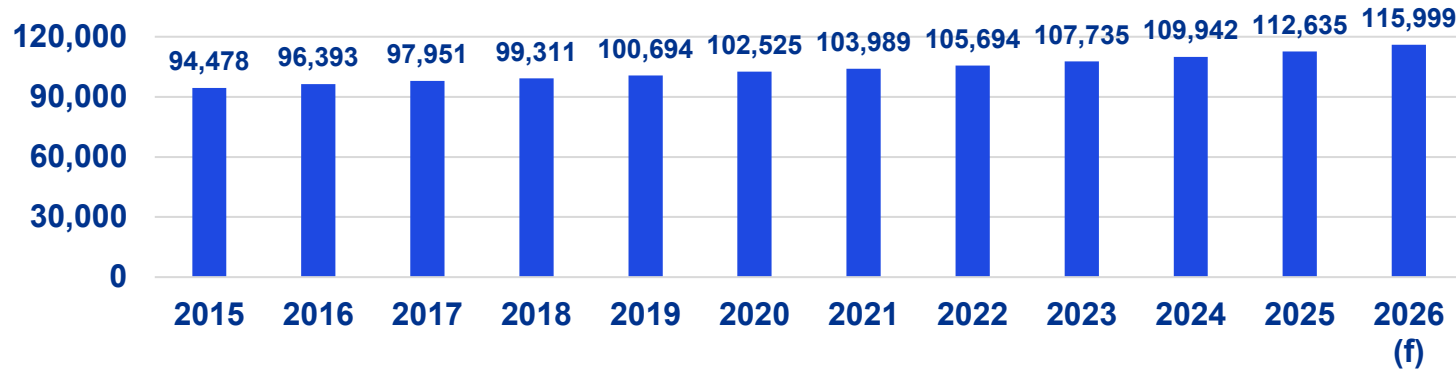
Source: *Clarksons.net*, as of 31/3/2026

Global Fleet & Capacity Overview in the Last 10 Years



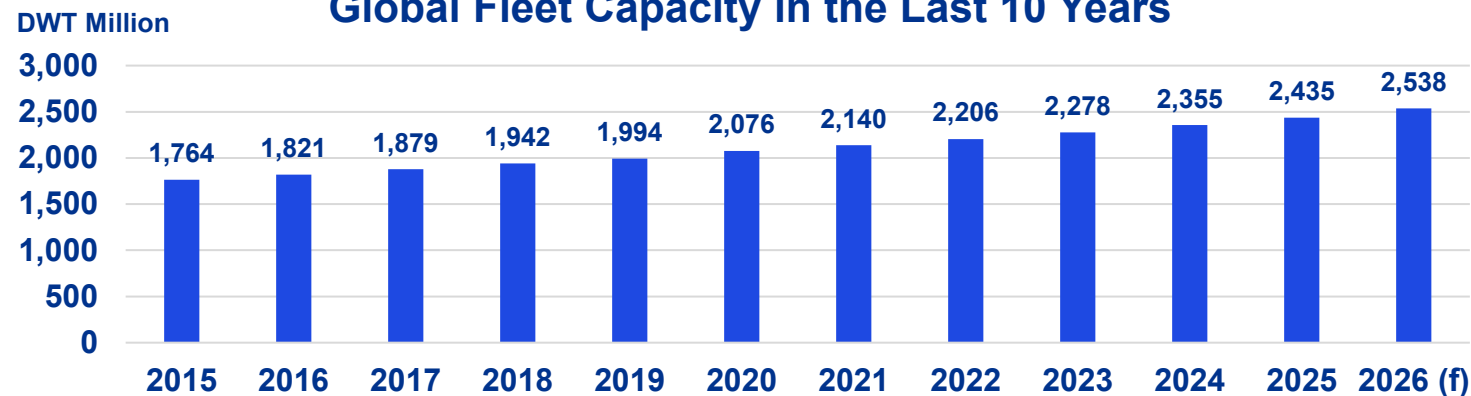
Below is presented the evolution of the global fleet and its total carrying capacity over time, highlighting steady expansion and the shift toward larger vessels

Global Fleet in the Last 10 Years



- **Steady fleet expansion:** Consistent, uninterrupted fleet expansion across the last 10 years
- **Strong growth rate:** Stable ~2-3% annual growth
- **Sustained momentum:** Growth remains stable through 2026 with no signs of slowdown

Global Fleet Capacity in the Last 10 Years



- **Sustained capacity expansion:** Total global fleet capacity has increased consistently over the period, reflecting ongoing industry growth and scaling
- **Stronger growth vs vessel count:** Capacity growth (~3-4%) continues to outpace fleet growth (~2-3%), reinforcing the structural shift toward larger vessels

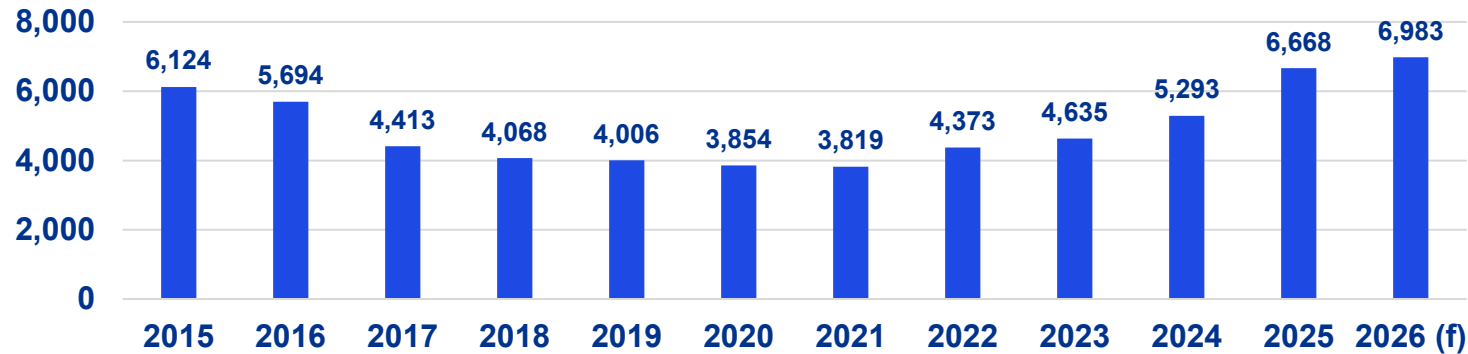
Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Global Orderbook & Capacity Overview in the Last 10 Years



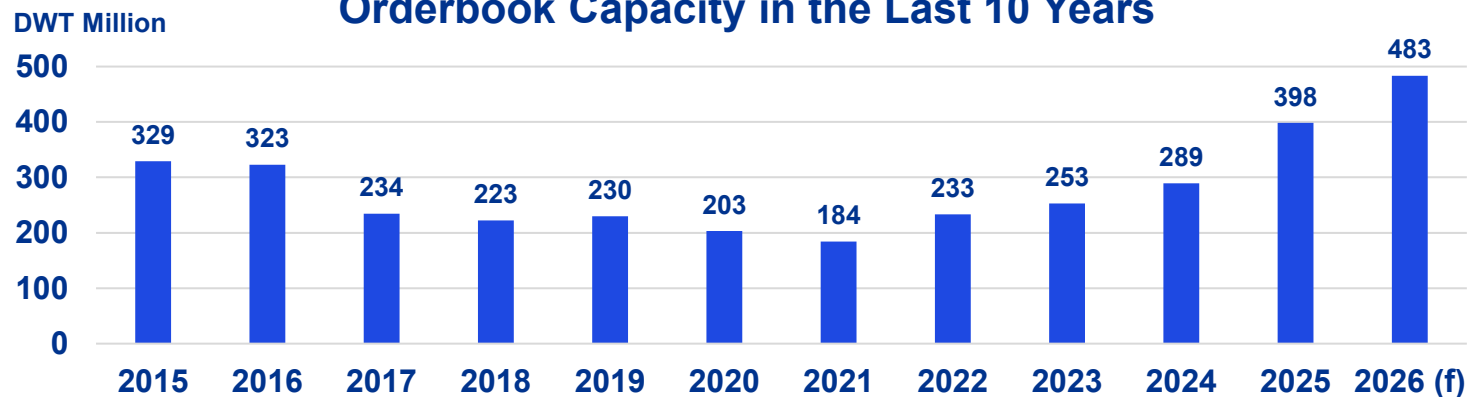
Below is presented the evolution of the global orderbook and its total capacity over time, highlighting cyclical dynamics, recovery trends, and the shift toward larger vessels

Orderbook in the Last 10 Years



- **Cyclical trend:** Orderbook declined through 2021 before entering a strong and sustained recovery phase
- **Growth profile:** Overall moderate long-term growth (~3%)
- **Recent uptick:** Strong acceleration in recent years, reaching peak levels by 2026

Orderbook Capacity in the Last 10 Years



- **Cyclical trend:** Orderbook capacity declined more sharply through 2021 before rebounding strongly, reaching record-high levels by 2026
- **Capacity-led growth:** Capacity growth (~4%+) outpaces vessel count (~3%), indicating a continued shift toward larger vessels

Source: *Clarksons.net*, as of 31/3/2026

Freight Market Evolution

Below is presented the evolution of the ClarkSea Index and vessel earnings over the past year, highlighting market trends, segment performance, and the impact of recent geopolitical disruptions on freight rates

~85%

Increase in **ClarkSea Index** over the last year

~312%

Increase in **Tanker earnings** over the last year

~24%

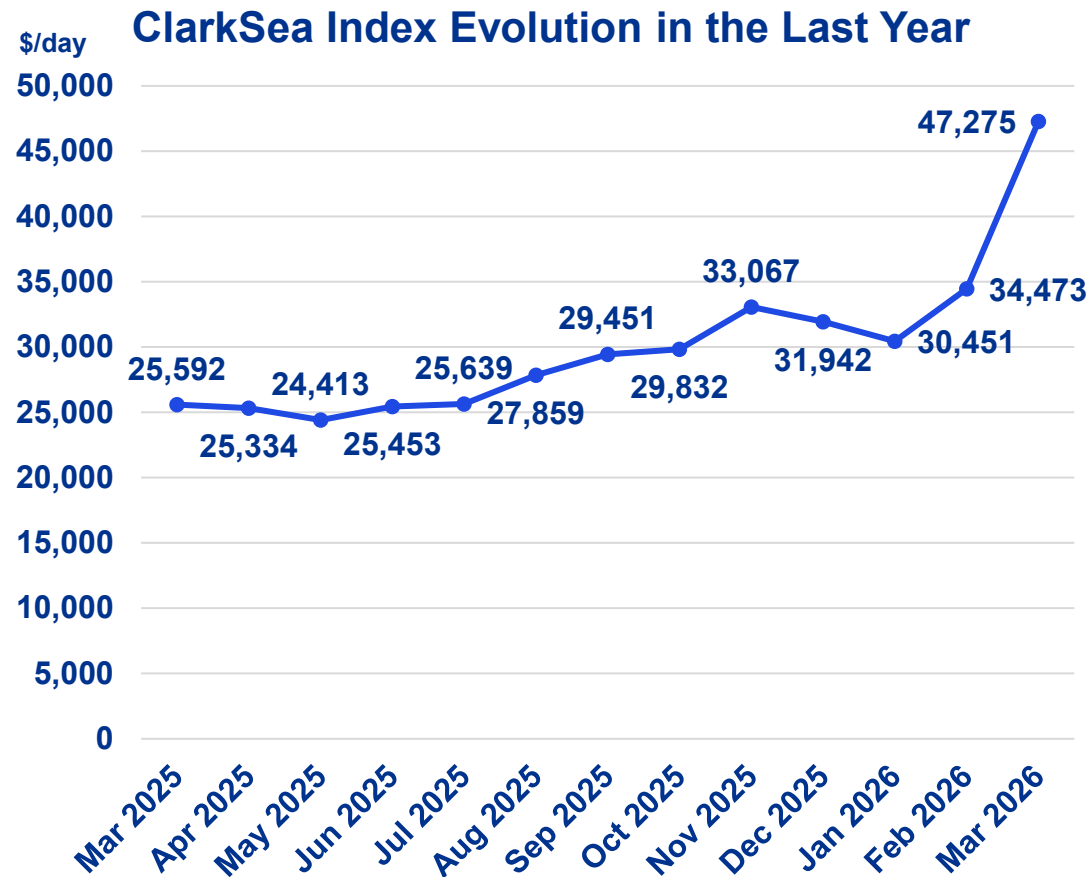
Increase in **Bulker earnings** over the last year

~51%

Increase in **LPG Carrier earnings** over the last year

~8%

Increase in **Containers earnings** over the last year



- **Stable base with gradual strengthening:** The ClarkSea Index remains relatively stable through mid-2025, followed by a steady upward trend toward year-end, indicating improving freight market fundamentals
- **Geopolitical-driven spike:** The sharp increase in early 2026—peaking significantly in March—aligns with heightened tensions in the Middle East and disruptions in the Strait of Hormuz, driving freight rates higher
- **Supply disruption premium:** Reduced vessel transits and rerouting around key chokepoints have tightened effective supply, leading to elevated earnings across vessel segments
- **Volatility with upward bias:** While short-term fluctuations persist, geopolitical risk has introduced a structural upside to freight rates, reflecting increased uncertainty and risk pricing in the market

Source: *Clarksons.net*, as of 31/3/2026

2.1

Dry Cargo

Dry Cargo Seaborn Trade Evolution over the Years

Below is presented the evolution of dry cargo seaborne trade by category, highlighting long-term growth trends and shifts in the composition between major bulk, minor bulk, and other dry cargo segments

~53%

Of world seaborne trade in 2026 is categorized as dry cargo

~106%

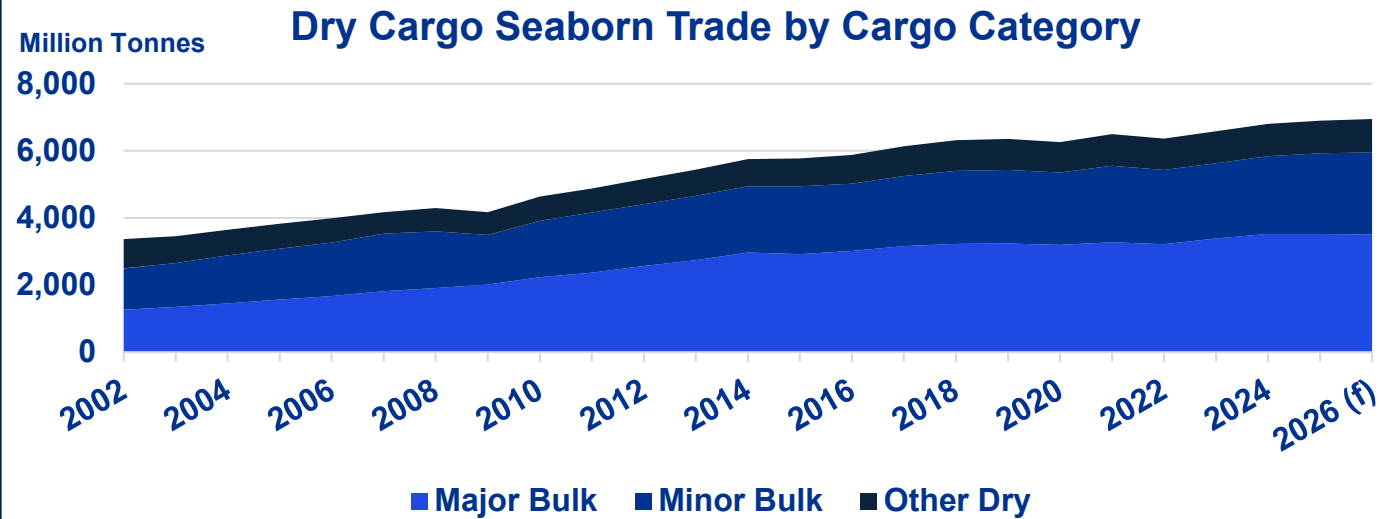
Increase in dry cargo seaborne trade in the last 25 years

~51%

Of dry cargo seaborne trade is categorized as major bulk

~177%

Increase in major bulk seaborne trade in the last 25 years



~35%

Of dry cargo seaborne trade is categorized as minor bulk

~99%

Increase in minor bulk seaborne trade in the last 25 years

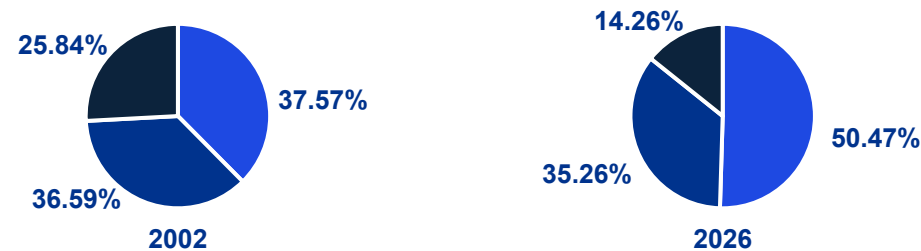
~14%

Of dry cargo seaborne trade is categorized as other dry cargo

~14%

Increase in other dry cargo seaborne trade in the last 25 years

Dry Cargo Seaborne Trade Categorization Evolution



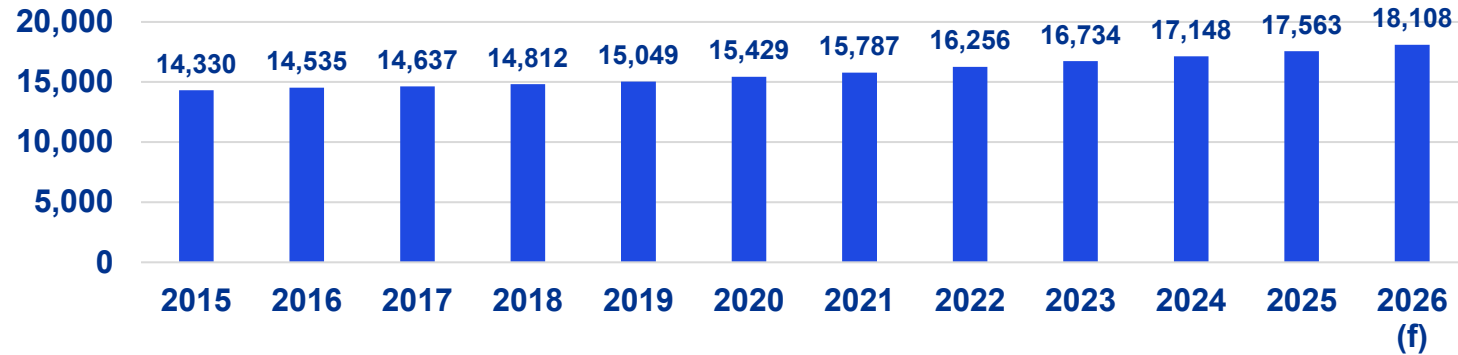
Source: *Clarksons.net*, as of 31/3/2026

Dry Cargo Fleet & Capacity Evolution in the Last 10 Years



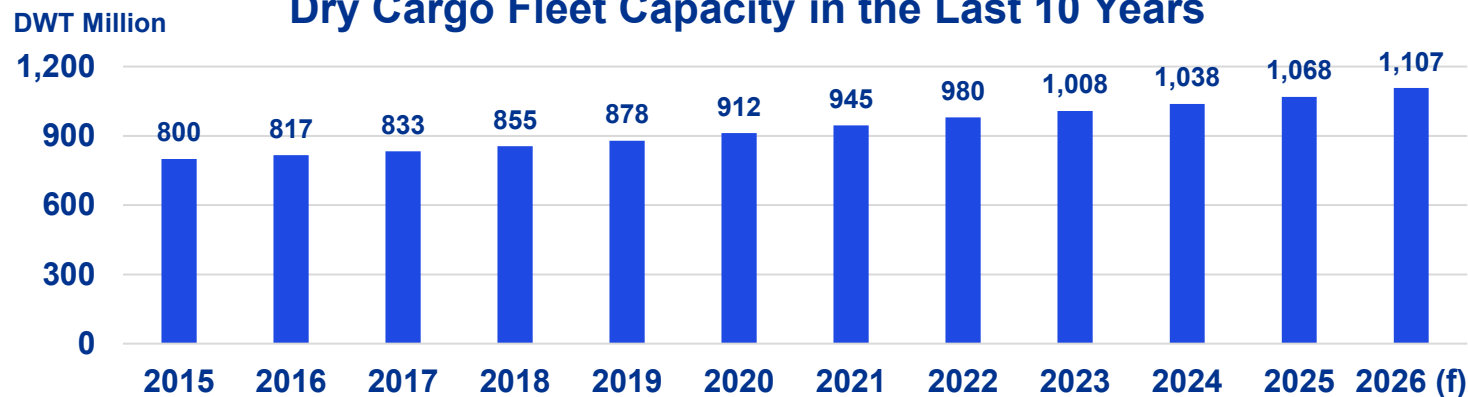
Sustained dry cargo fleet growth is increasingly driven by a structural shift toward larger vessels, supporting continuous expansion in total carrying capacity

Dry Cargo Fleet in the Last 10 Years



- **Steady expansion:** Continuous growth across the entire period with no declines
- **Moderate growth rate:** Consistent ~2-3% annual increase, indicating a mature market
- **Sustained momentum:** Growth remains stable through 2026 with no signs of slowdown

Dry Cargo Fleet Capacity in the Last 10 Years



- **Continuous capacity growth:** Total capacity increases steadily year-on-year
- **Capacity-led expansion:** Growth in DWT outpaces fleet growth, indicating larger vessels
- **Structural upscaling:** Ongoing shift toward higher-capacity ships driving efficiency gains

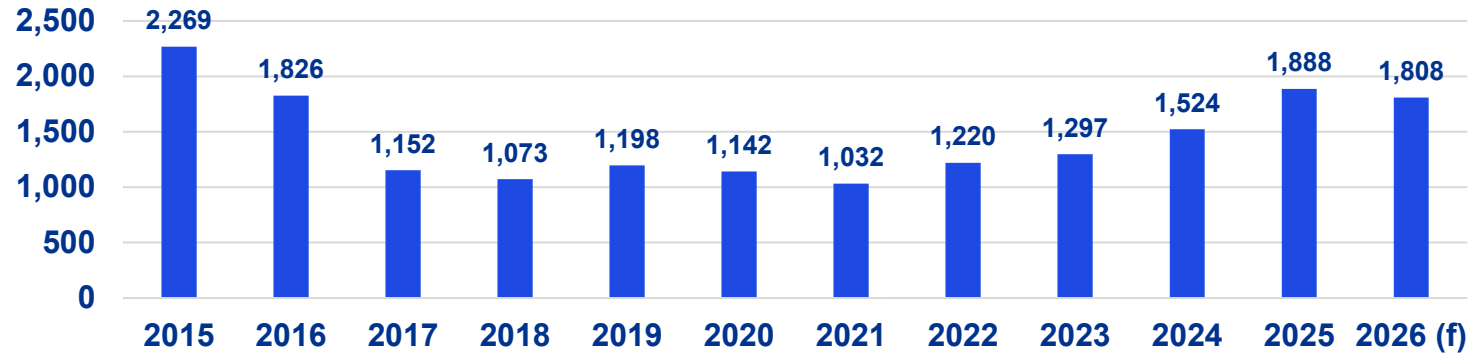
Source: *Clarksons.net*, as of 31/3/2026

Dry Cargo Orderbook & Capacity Evolution in the Last 10 Years



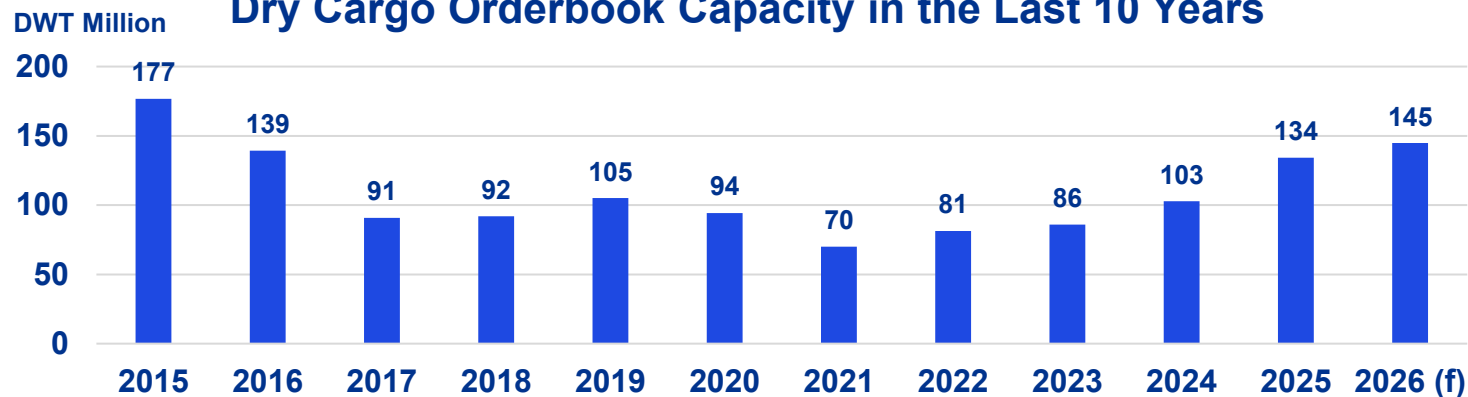
Following a cyclical downturn, dry cargo ordering has rebounded strongly, with a renewed focus on higher-capacity vessels driving the recovery

Dry Cargo Orderbook in the Last 10 Years



- **Cyclical pattern:** Sharp decline through 2021 followed by a strong recovery phase
- **Renewed ordering activity:** Consistent growth from 2022 onward, nearing historical highs
- **Recent moderation:** Slight pullback in 2026 after peak levels in 2025

Dry Cargo Orderbook Capacity in the Last 10 Years



- **Deep contraction then rebound:** Significant drop to 2021 followed by strong recovery
- **Capacity-focused recovery:** Growth accelerates post-2023, indicating larger vessel orders
- **Near-peak levels:** Capacity ordering approaches historical highs by 2026

Source: *Clarksons.net*, as of 31/3/2026

2.2

Wet Cargo

Wet Cargo Seaborn Trade Evolution over the Years

Below is presented the evolution of wet cargo seaborne trade by category, highlighting growth trends and the changing composition between oil and chemical cargoes over time

~23%

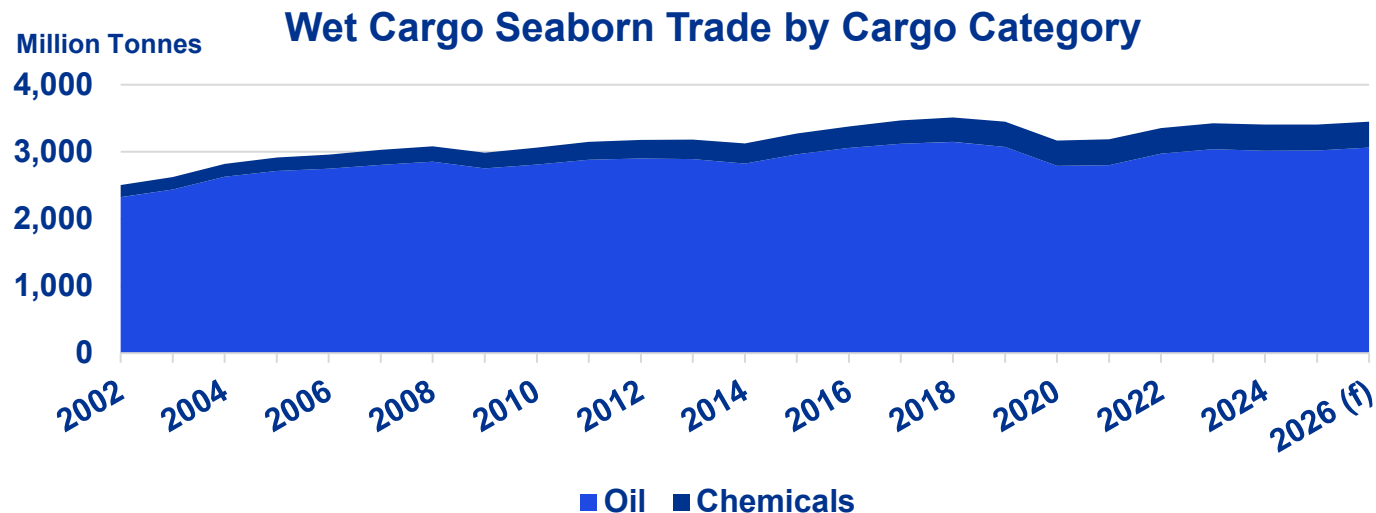
Of world seaborne trade in 2026 is categorized as wet cargo

~89%

Of wet cargo seaborne trade is categorized as oil

~11%

Of wet cargo seaborne trade is categorized as chemicals



~32%

Increase in wet cargo seaborne trade in the last 25 years

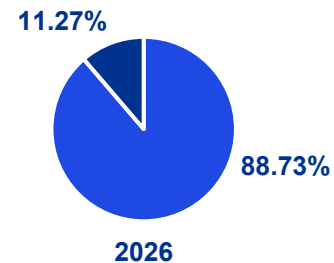
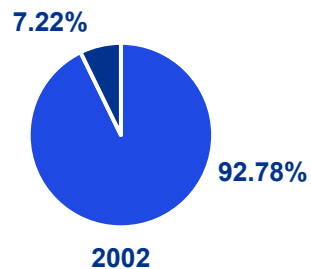
~32%

Increase in oil seaborne trade in the last 25 years

~115%

Increase in chemicals seaborne trade in the last 25 years

Wet Cargo Seaborne Trade Categorization Evolution



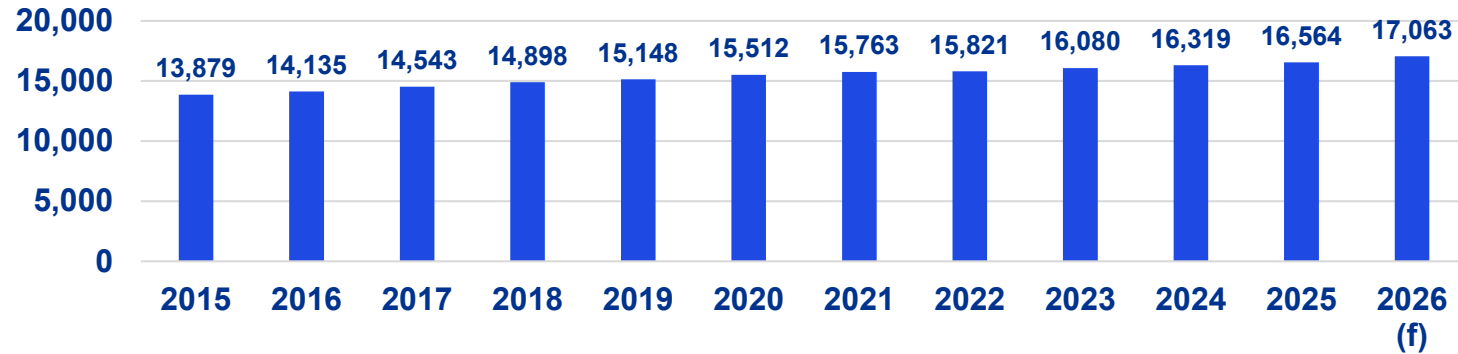
Source: *Clarksons.net*, as of 31/3/2026

Wet Cargo Fleet & Capacity Evolution in the Last 10 Years



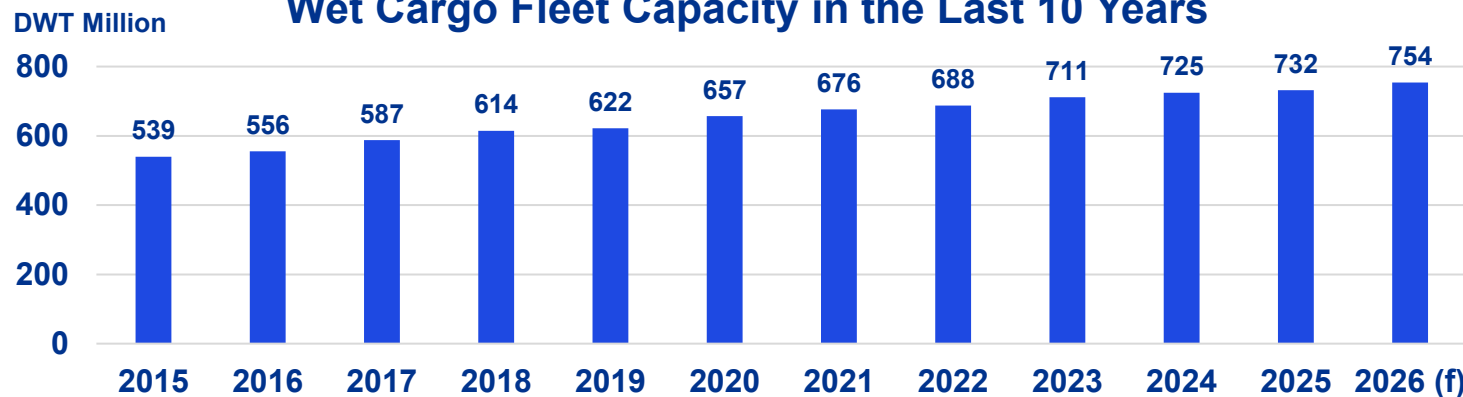
Below is presented the evolution of the wet cargo fleet and its total carrying capacity over time, highlighting steady growth and gradual scaling toward larger vessels

Wet Cargo Fleet in the Last 10 Years



- **Steady upward trend:** Continuous fleet growth across the entire period with no declines
- **Stable growth profile:** Moderate and consistent expansion (~2% annually)
- **Sustained momentum:** Growth remains steady through 2026 with no major acceleration

Wet Cargo Fleet Capacity in the Last 10 Years



- **Consistent capacity expansion:** Total capacity increases steadily year-on-year
- **Gradual upscaling:** Capacity growth slightly outpaces fleet growth, indicating larger vessels
- **Gradual scaling trend:** Incremental increases reflect stable and predictable market development

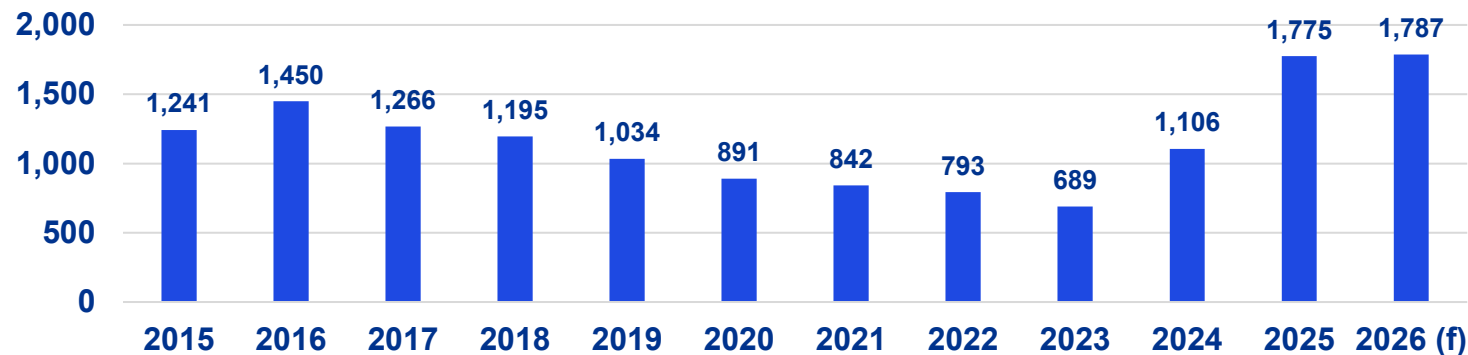
Source: *Clarksons.net*, as of 31/3/2026

Wet Cargo Orderbook & Capacity Evolution in the Last 10 Years



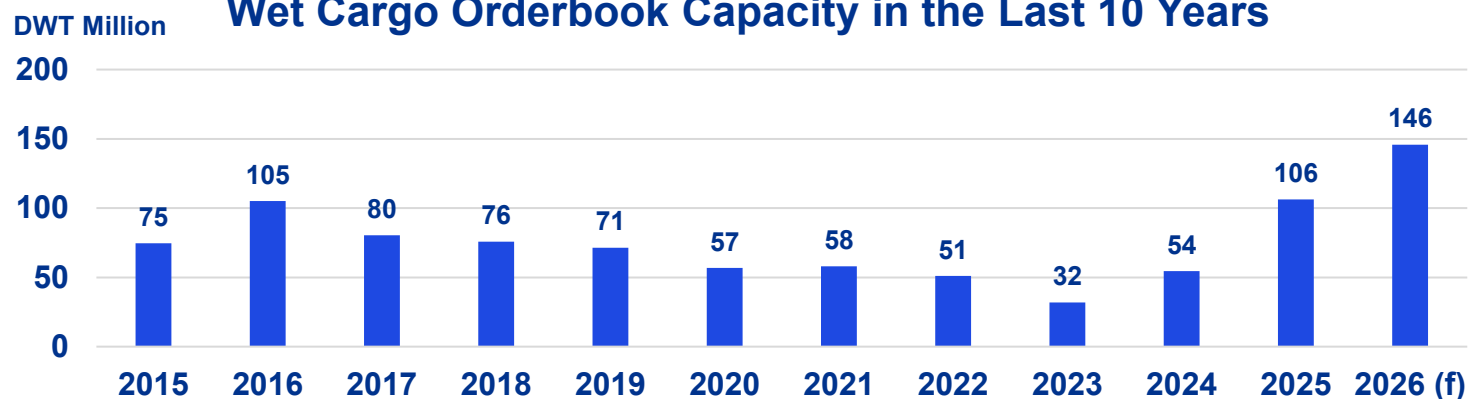
Below is presented the evolution of the wet cargo orderbook and its total capacity over time, highlighting cyclical declines and the recent strong recovery in ordering activity

Wet Cargo Orderbook in the Last 10 Years



- **Cyclical decline:** Orderbook decreases steadily from 2016 to 2023
- **Strong rebound:** Sharp recovery from 2024 onward, reaching peak levels by 2026
- **Strong recent momentum:** Significant surge in 2024–2026, reaching near-peak levels in ordering activity

Wet Cargo Orderbook Capacity in the Last 10 Years



- **Deep contraction:** Capacity orders decline significantly to a low point in 2023
- **Sharp recovery:** Strong rebound post-2023 with rapid growth in capacity ordering
- **Capacity surge:** Record high-capacity ordering reached by 2026

Source: *Clarksons.net*, as of 31/3/2026

2.3

Gas Carriers

Gas Cargo Seaborn Trade Evolution over the Years

Below is presented the evolution of gas seaborne trade by category, highlighting strong growth trends and the changing composition between LNG and LPG over time

~8%

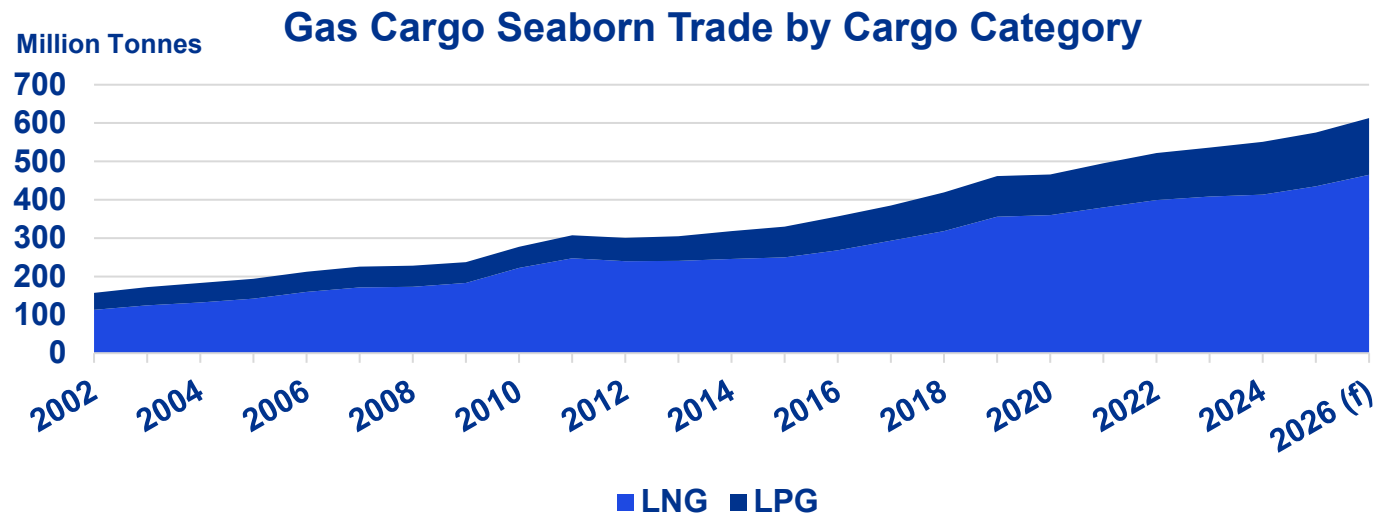
Of world seaborne trade in 2026 is categorized as gas cargo

~76%

Of wet cargo seaborne trade is categorized as LNG

~24%

Of wet cargo seaborne trade is categorized as LPG



~194%

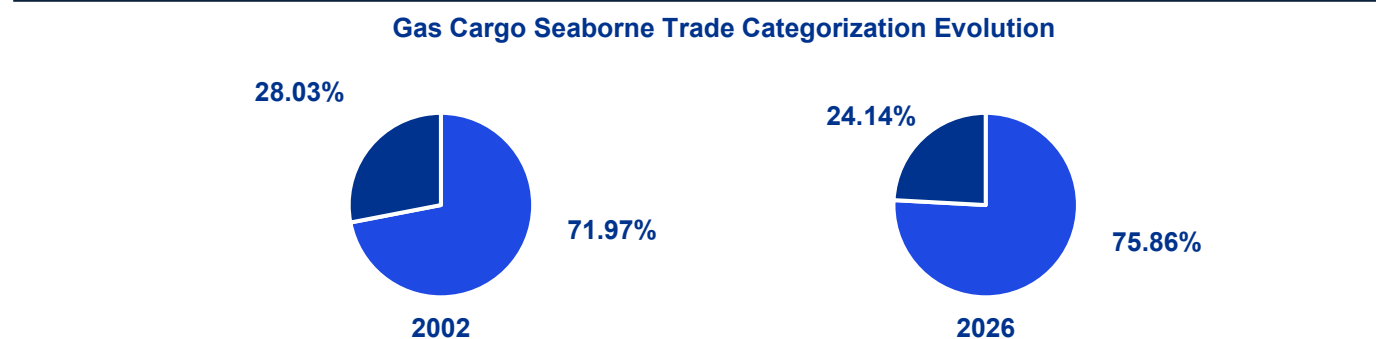
Increase in wet cargo seaborne trade in the last 25 years

~312%

Increase in LNG seaborne trade in the last 25 years

~236%

Increase in LPG seaborne trade in the last 25 years



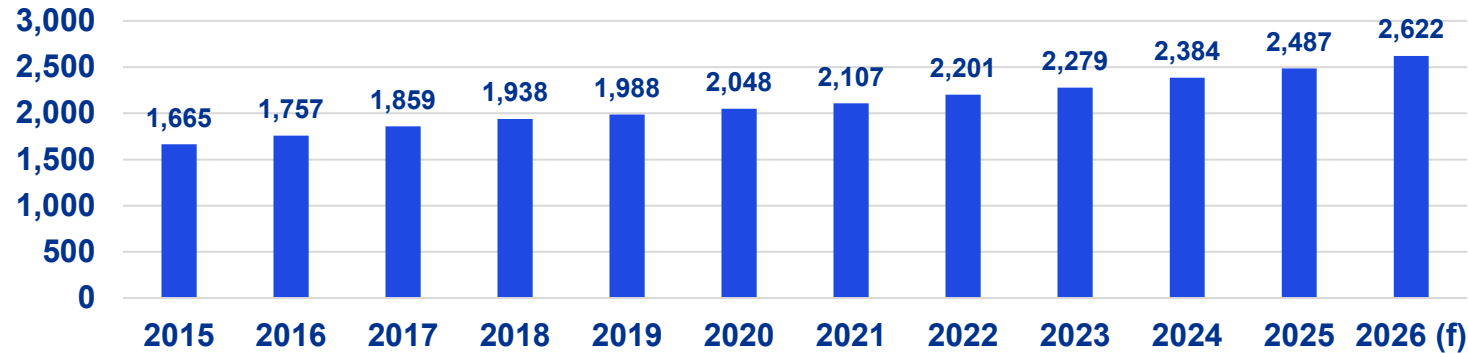
Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Gas Carriers Fleet & Capacity Evolution in the Last 10 Years



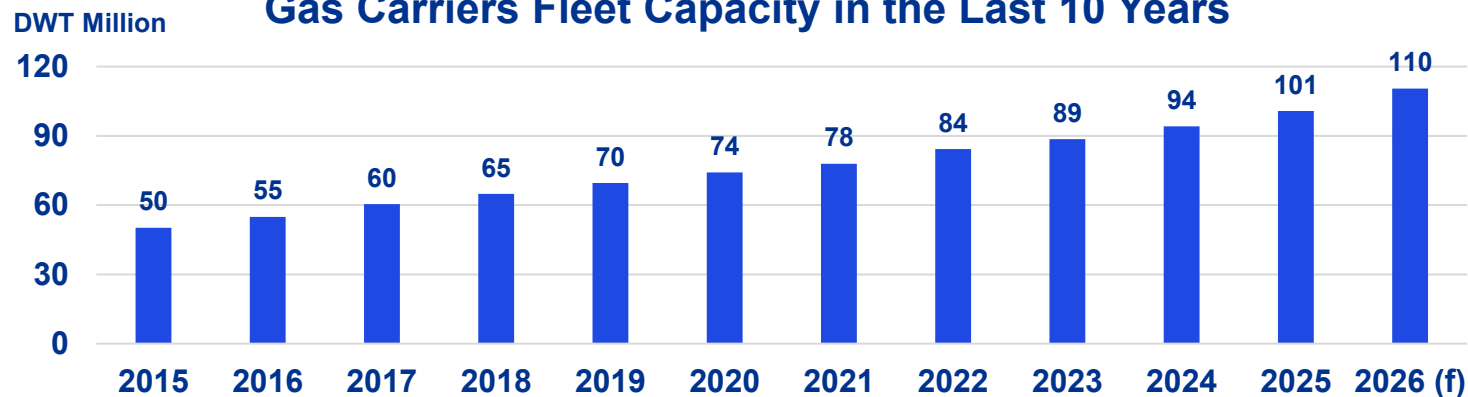
Gas carriers represent a high-growth segment, with rapid fleet expansion and a strong shift toward larger vessels driving significant capacity growth

Gas Carriers Fleet in the Last 10 Years



- **Strong upward trajectory:** Continuous and accelerating fleet growth across the period
- **Higher growth profile:** Faster expansion compared to other segments, indicating a growth market
- **Sustained momentum:** Growth remains strong through 2026 with no signs of slowdown

Gas Carriers Fleet Capacity in the Last 10 Years



- **Rapid capacity expansion:** DWT more than doubles over the period, indicating strong scaling
- **Capacity-led growth:** Capacity growth outpaces fleet growth, highlighting larger vessel sizes
- **Structural growth story:** Consistent acceleration reflects increasing demand for gas transport

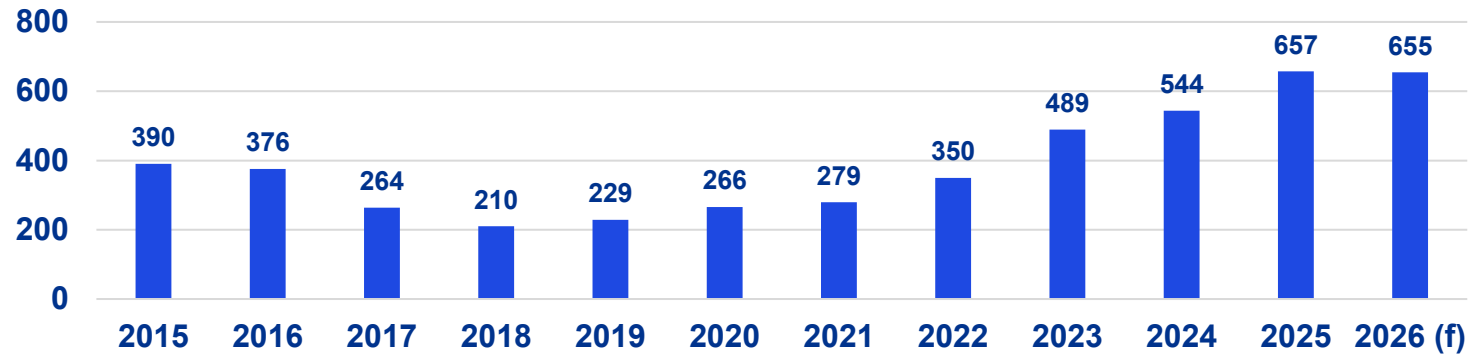
Source: *Clarksons.net*, as of 31/3/2026

Gas Cargo Orderbook & Capacity Evolution in the Last 10 Years



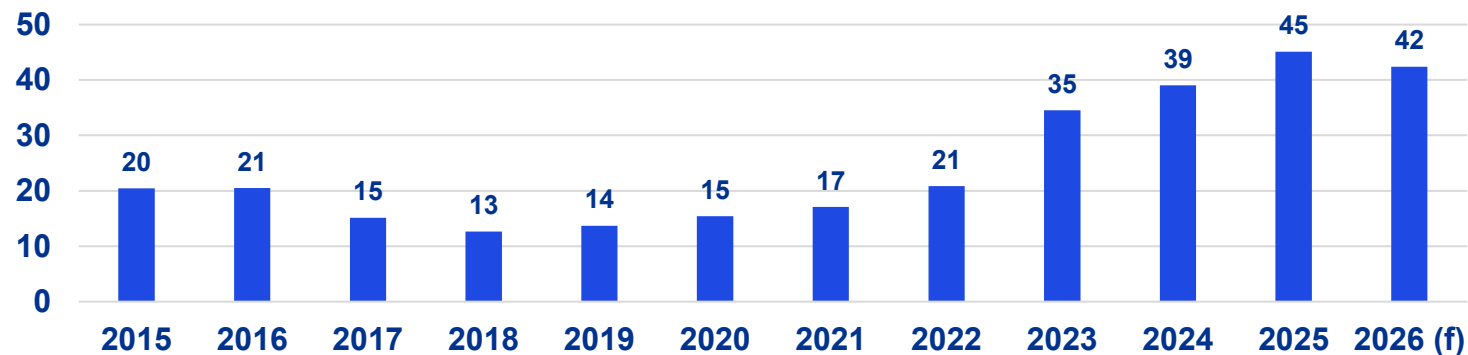
Gas carriers ordering has rebounded strongly from prior lows, with accelerating momentum and a clear shift toward larger, higher-capacity vessels driving growth

Gas Carriers Orderbook in the Last 10 Years



- **Cyclical decline then strong rebound:** Orders fall to 2018 before entering a sustained growth phase
- **Clear acceleration post-2021:** Rapid increase in ordering activity through 2025
- **Near-peak levels:** Orderbook reaches historically high levels by 2026

Gas Carriers Orderbook Capacity in the Last 10 Years



- **Sharp recovery in capacity orders:** Strong rebound after 2018 with accelerating growth
- **Capacity-driven expansion:** Significant increase post-2022 indicates larger vessel orders
- **Peak momentum:** Capacity ordering reaches record levels in recent years

Source: *Clarksons.net*, as of 31/3/2026

2.4

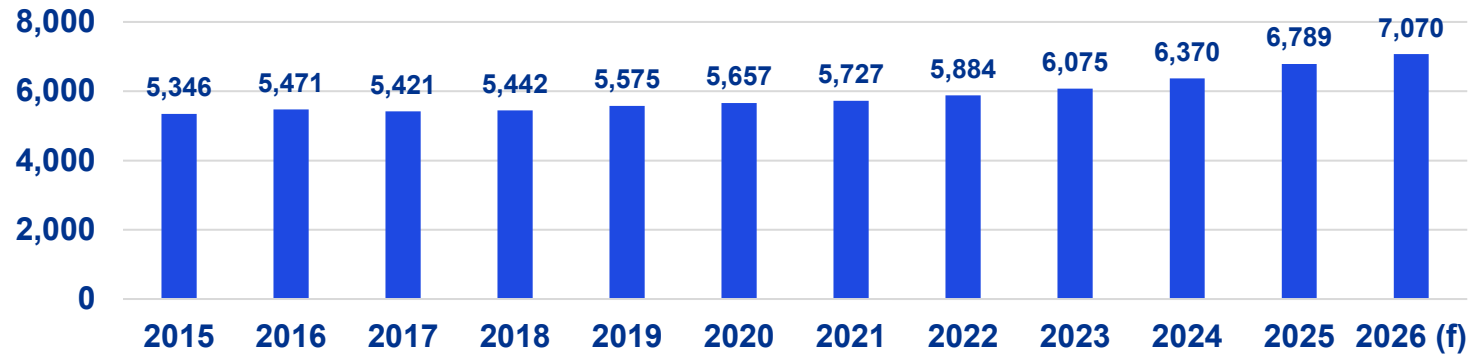
Containers

Containers Fleet & Capacity Evolution in the Last 10 Years



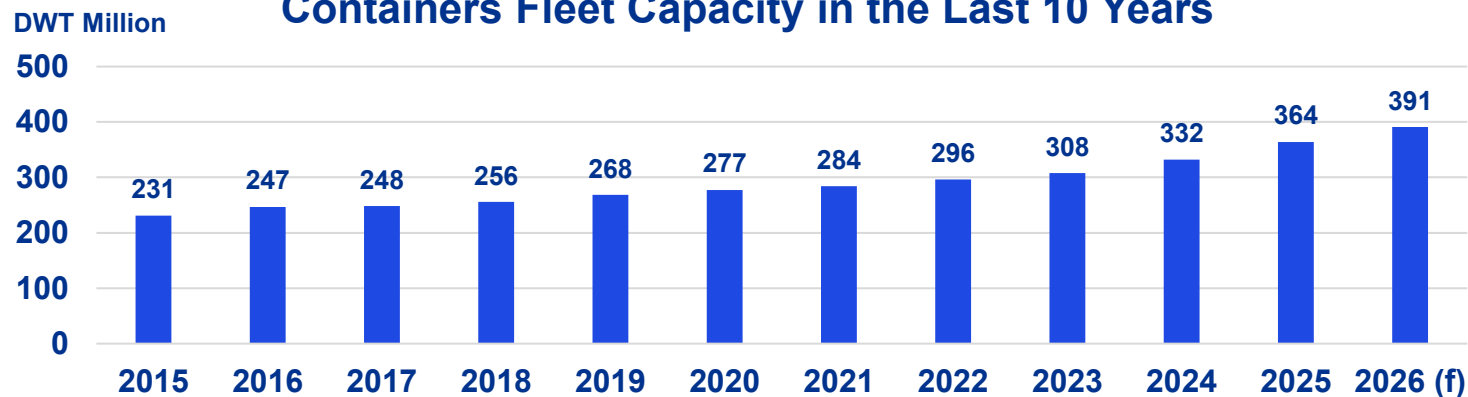
Container fleet growth remains steady, with recent acceleration driven by a shift toward larger vessels and increasing capacity deployment

Containers Fleet in the Last 10 Years



- **Stable upward trend:** Gradual and consistent fleet expansion across the period
- **Moderate growth profile:** Relatively slower growth compared to other segments
- **Recent acceleration:** Noticeable uptick in fleet additions from 2023 onward

Containers Fleet Capacity in the Last 10 Years



- **Strong capacity growth:** Continuous increase in total capacity year-on-year
- **Capacity-led expansion:** Faster growth in DWT than fleet size, indicating larger vessels
- **Scaling momentum:** Acceleration in recent years reflects increasing capacity deployment

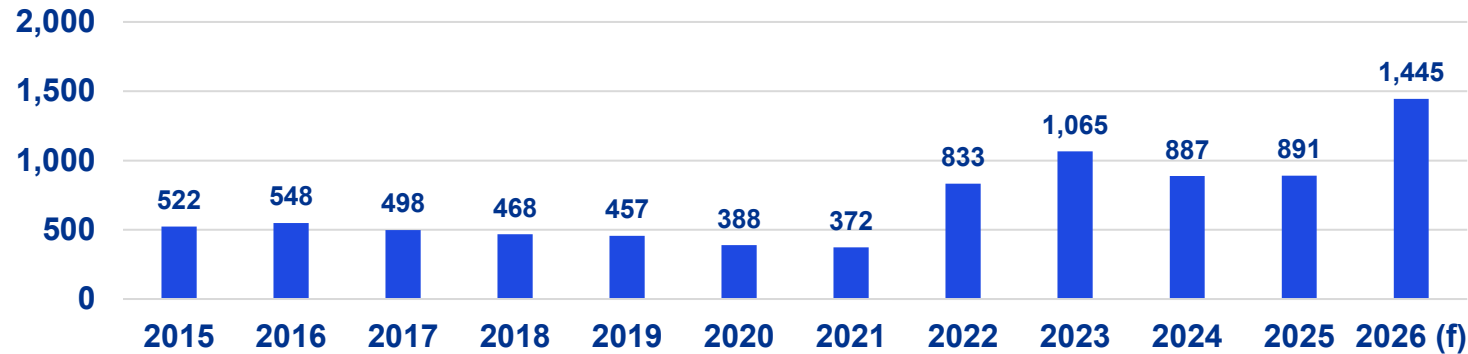
Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Containers Orderbook & Capacity Evolution in the Last 10 Years



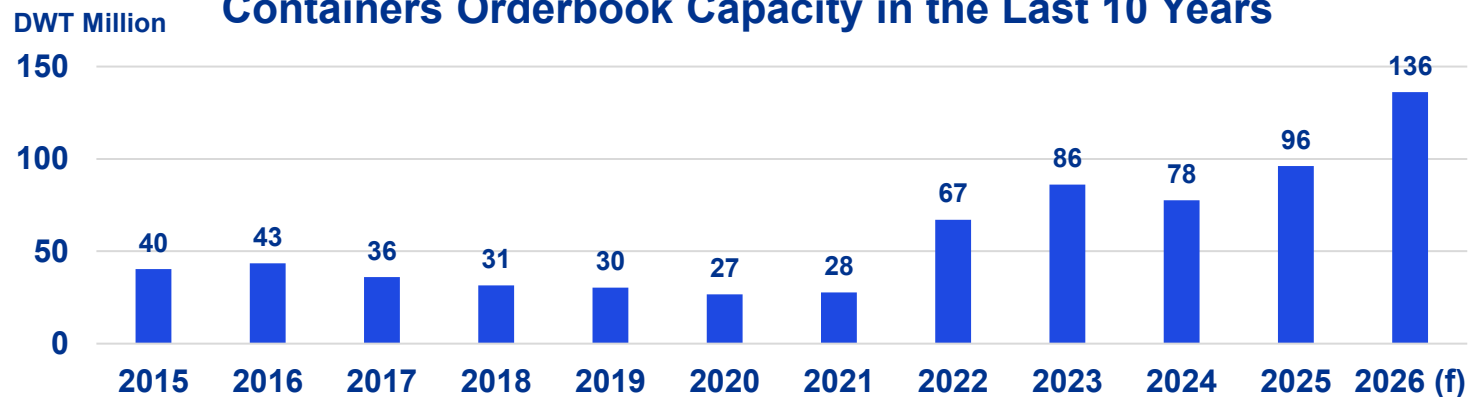
Container ordering has rebounded strongly from prior lows, with recent momentum driven by increased demand and a clear shift toward higher-capacity vessels

Containers Orderbook for the Last 10 Years



- **Cyclical decline then rebound:** Orders decrease steadily to 2021 before recovering strongly
- **Sharp post-2021 recovery:** Significant increase in ordering activity through 2023
- **Renewed momentum:** Strong uptick again by 2026, reaching peak levels

Containers Orderbook Capacity in the Last 10 Years



- **Deep contraction followed by surge:** Capacity orders drop to 2021 then accelerate sharply
- **Capacity-led recovery:** Stronger growth post-2022 indicates shift to larger vessels
- **Record-high levels:** Capacity ordering peaks by 2026

Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

2.5

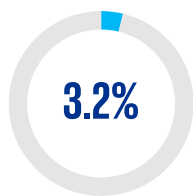
Green Technology Uptake

Alternative Fuel Uptake of World Fleet

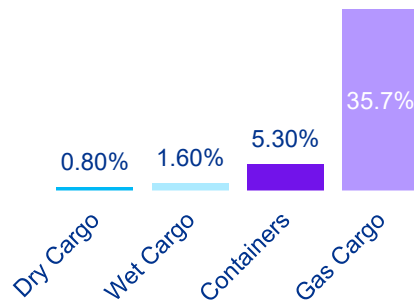
Below is presented the current and projected adoption of alternative fuels across the global fleet and orderbook, highlighting differences by cargo segment and capacity share

2.5%

Of global fleet uses alternative fuels



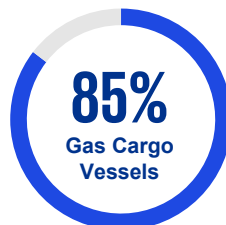
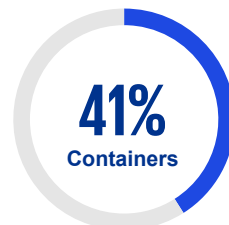
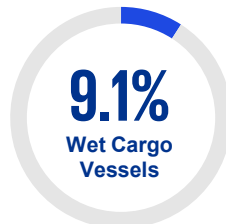
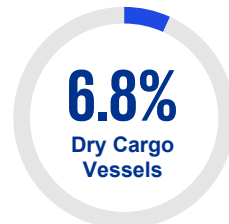
3.2% of world cargo fleet uses alternative fuels



25.2%

Of global orderbook will be operating using alternative fuels

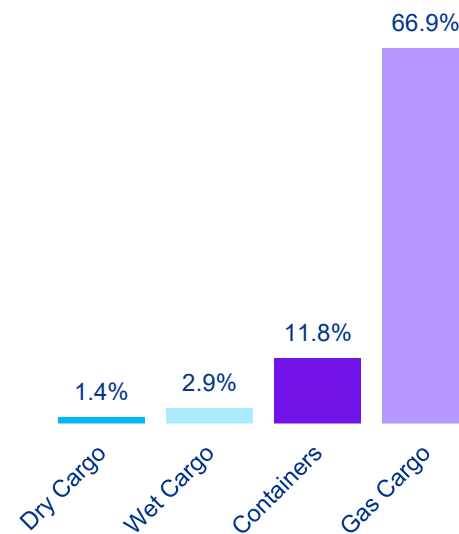
25.7% of cargo orderbook will be using alternative fuels



9.8%

Of global fleet in terms of capacity is using alternative fuels

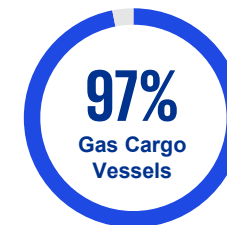
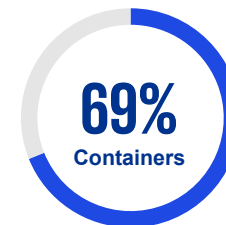
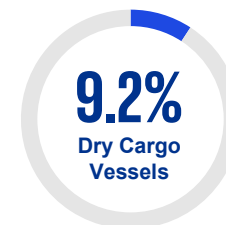
9.7% of global cargo fleet in terms of capacity is using alternative fuels



44.5%

Of global orderbook in terms of capacity will be using alternative fuels

43.1% of cargo orderbook in terms of capacity will be using alternative fuels



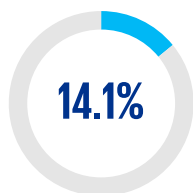
Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

SOx Scrubber Uptake of World Fleet

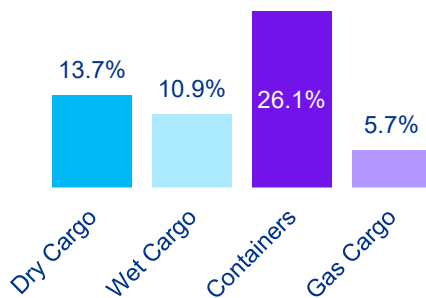
Below is presented the current and projected adoption of scrubber technology across the global fleet and orderbook, highlighting differences by cargo segment and capacity share

6.2%

Of global fleet is scrubber fitted



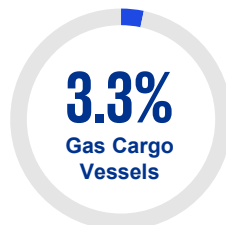
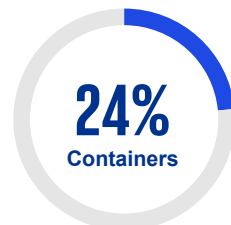
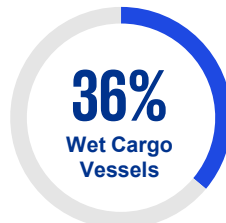
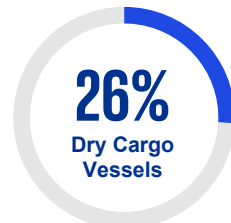
14.1% of world cargo fleet is scrubber fitted



18%

Of global orderbook will be scrubber fitted

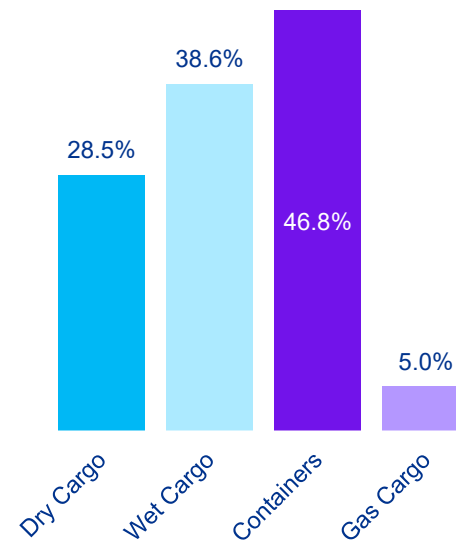
25.7% of cargo orderbook will be scrubber fitted



31.3%

Of global fleet in terms of capacity is scrubber fitted

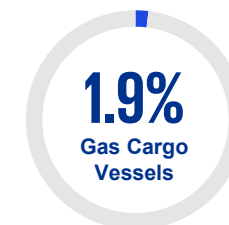
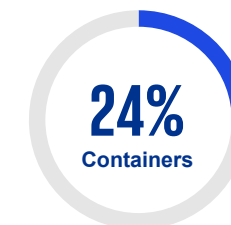
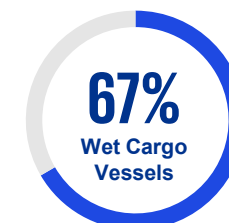
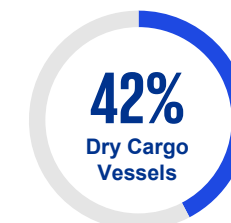
33.5% of global cargo fleet in terms of capacity is scrubber fitted



33.6%

Of global orderbook in terms of capacity will be scrubber fitted

36.2% of cargo orderbook in terms of capacity will be scrubber fitted



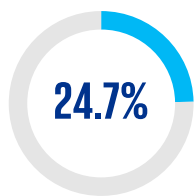
Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Electronic Engine Uptake of World Fleet

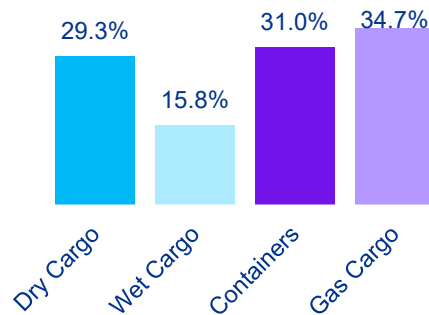
Below is presented the current and projected adoption of eco-modern vessels across the global fleet and orderbook, highlighting differences by cargo segment and capacity share

10.1%

Of global fleet is eco modern



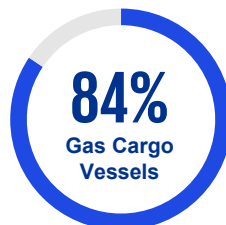
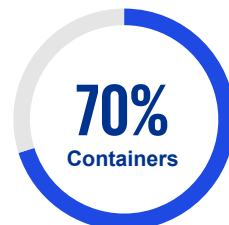
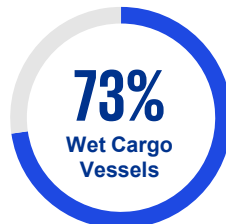
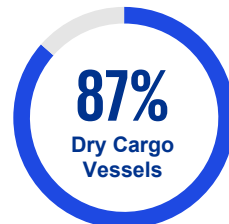
24.7% of world cargo fleet is eco modern



54.8%

Of global orderbook will be eco modern

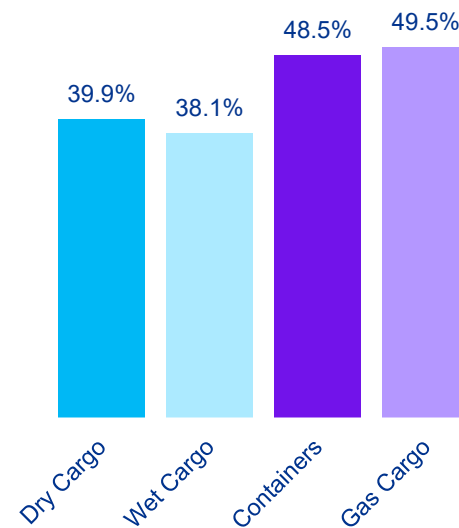
77.8% of cargo orderbook will be eco modern



37.8%

Of global fleet in terms of capacity is eco modern

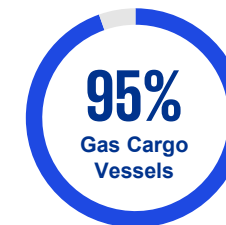
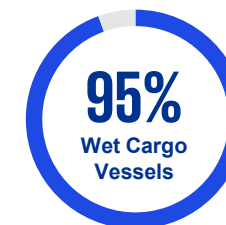
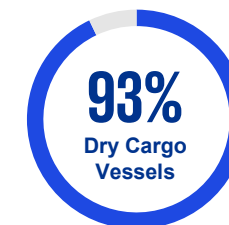
42.2% of global cargo fleet in terms of capacity is eco modern



84.2%

Of global orderbook in terms of capacity will be eco modern

90% of cargo orderbook in terms of capacity will be eco modern



Source: Clarksons.net, as of 31/3/2026



3. Greece: A Powerhouse of Global Shipping

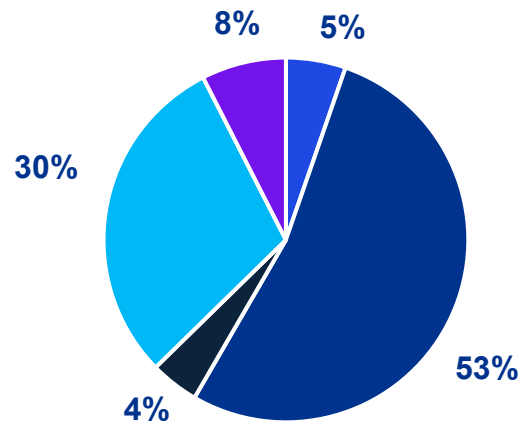
Overview of Greek Shipping

Below is presented a breakdown of the Greek fleet based on cargo type, as well as the Greek ownership shares compared to the global and European fleets.

Greek fleet breakdown by type (based on DWT)



Type of Cargo as a (%) of Greek Fleet



■ Container ■ Dry Cargo ■ Gas Carriers ■ Wet Cargo ■ Other

Greek Shipping stands as a major player in the worldwide goods and products transportation, representing (in DWT):

- 53% of Dry Cargo
- 30% of Wet Cargo
- 5% of Container
- 4% of Gas Carriers
- 8% of Other Vessels

Greek shipping highlights based on GT:

- Greece accounts for approximately half of Europe's total fleet capacity
- The Greek owned fleet is **larger** than the entire **EU fleet combined**
- **Greek fleet exceeds the capacity of Italy, Germany, Spain, Luxemburg and Croatia combined**

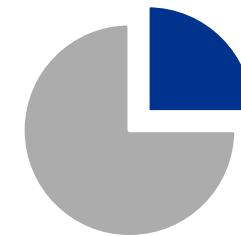
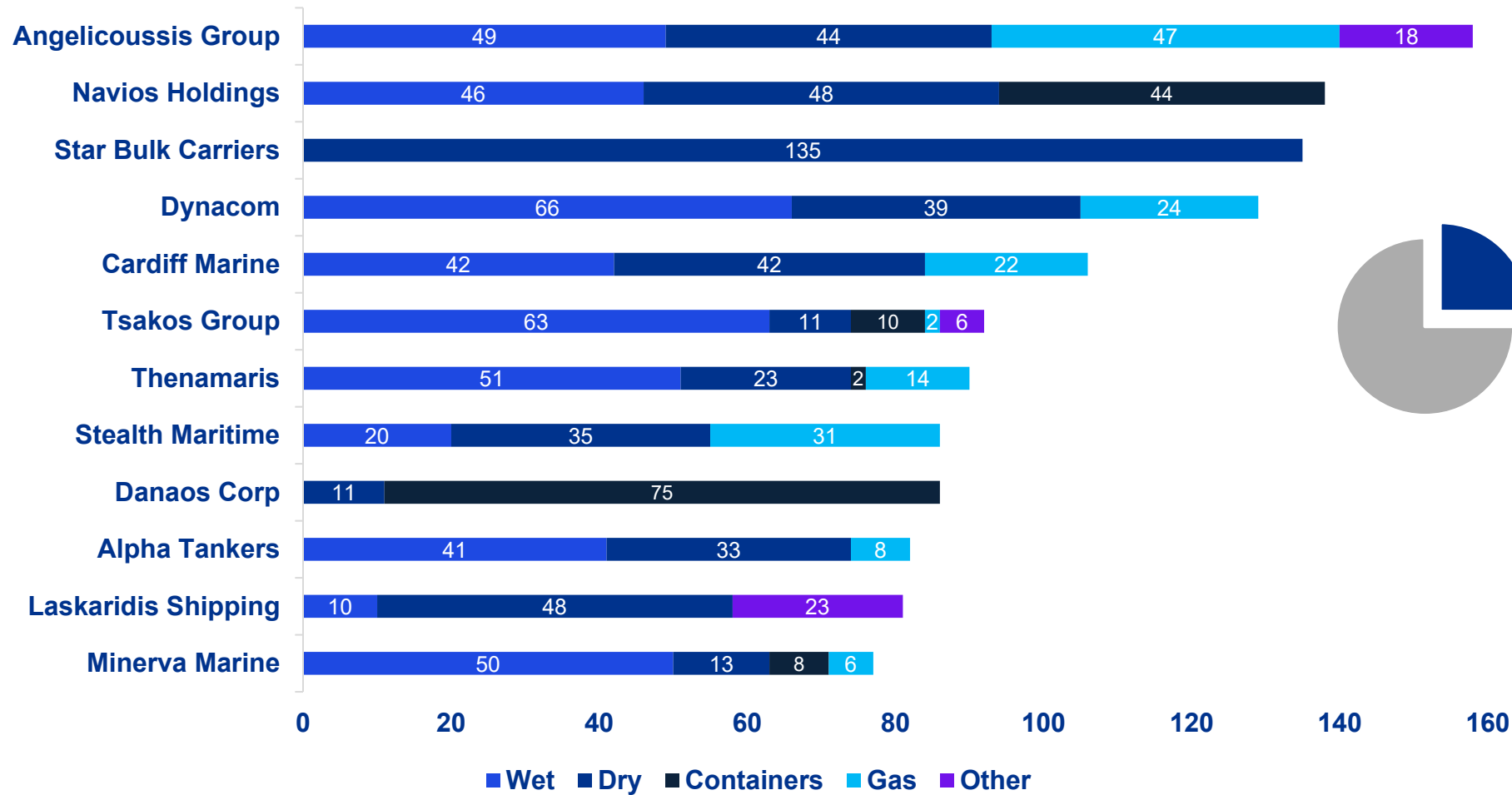
The Greek fleet has an average age of **16.8 years**, compared to a global average of **22.5 years**, indicating a significantly younger and more technologically advanced fleet

Approximately **20% of Greek-owned vessels are fitted with scrubbers**, versus around **10% globally**, reflecting stronger adoption of emissions-reduction technologies

Source: *Clarksons.net*, as of 31/3/2026

Key players in Greece (fleet size) (1/2)

Below is presented a breakdown of the top companies in Greece by fleet size

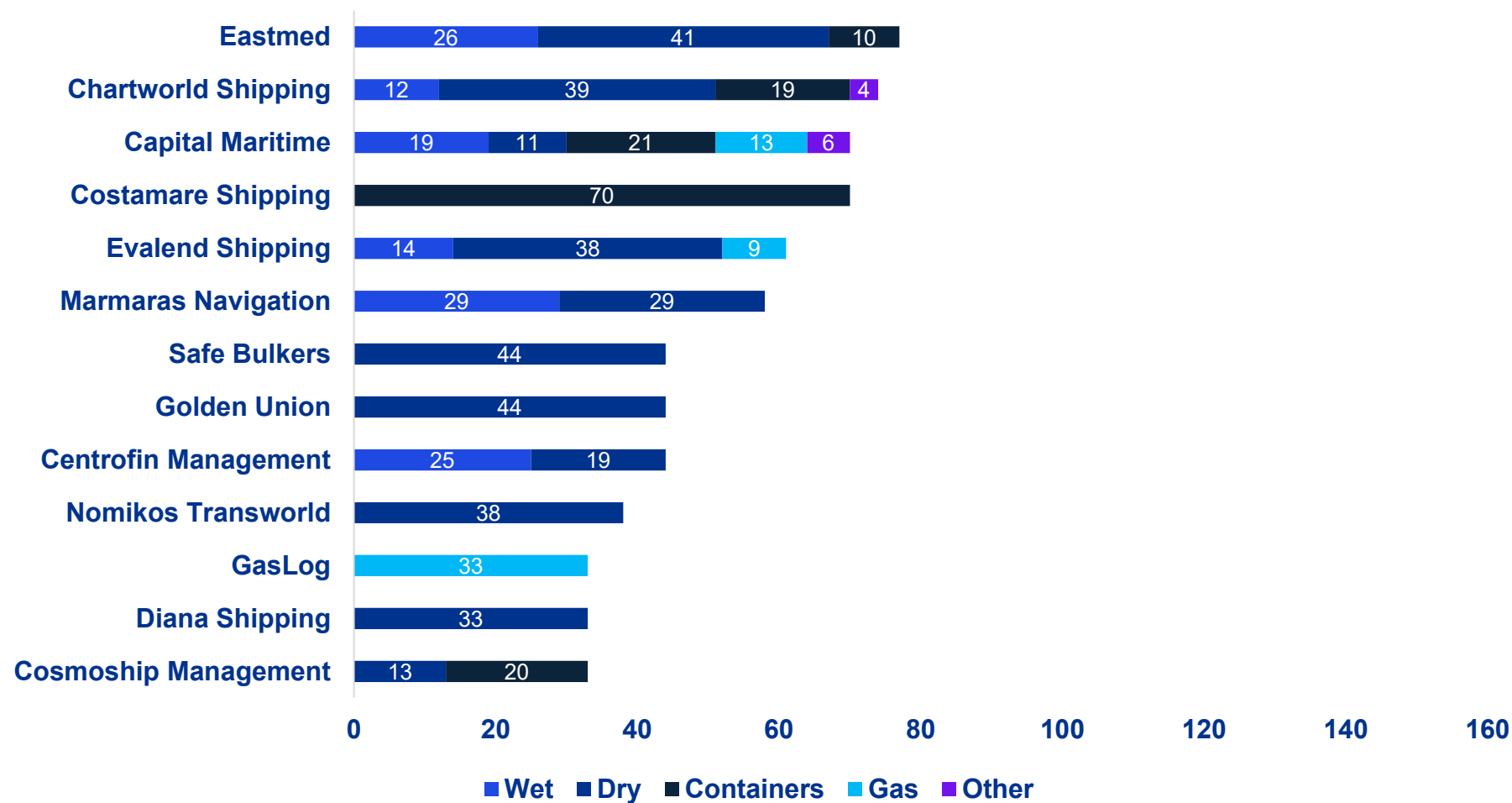


Top 16 companies control **25%** of the Greek fleet based on vessel count

Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Key players in Greece (fleet size) (2/2)

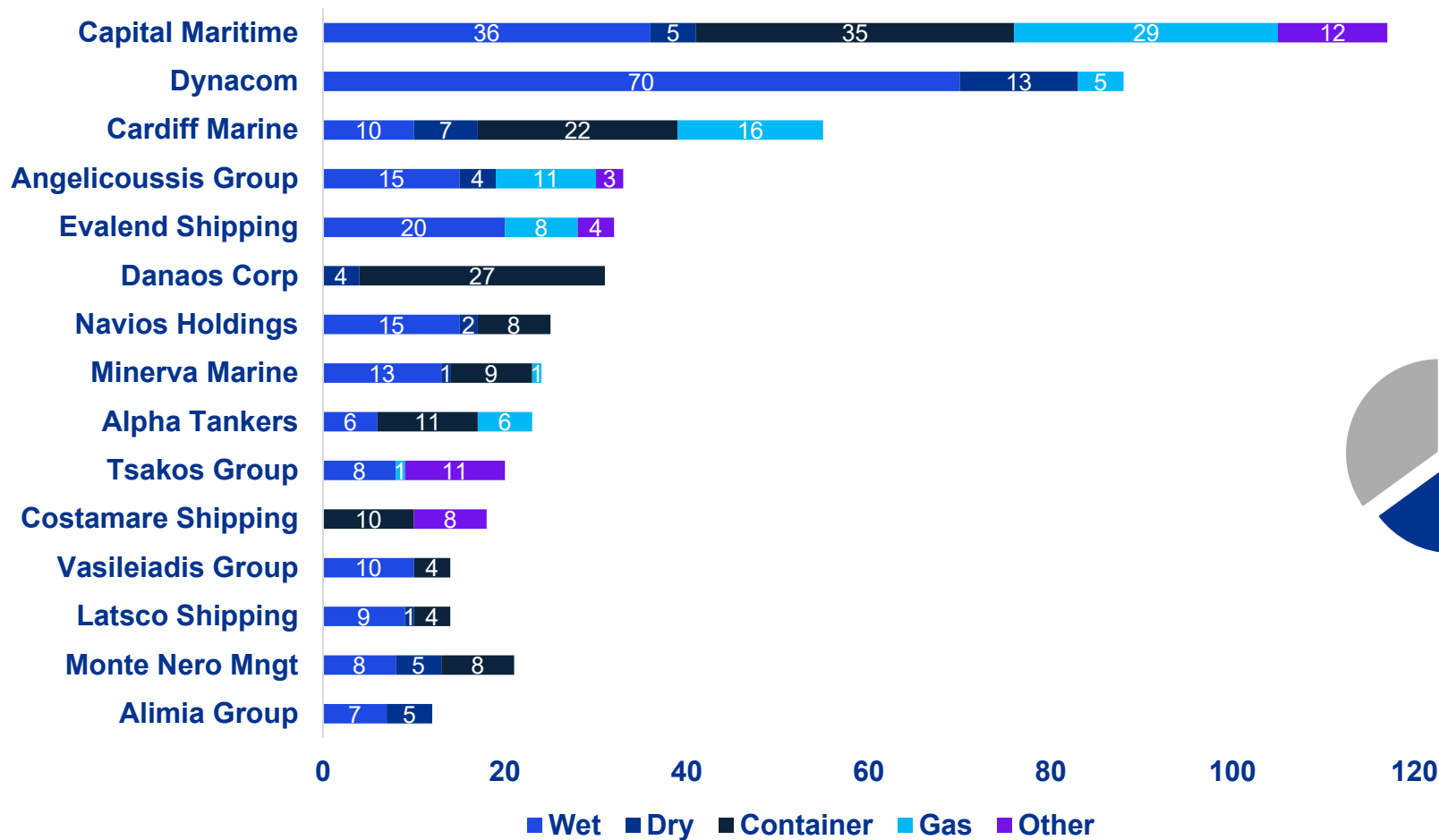
Below is presented a breakdown of the top companies in Greece by fleet size



Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

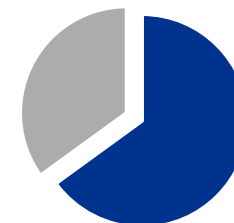
Key players in Greece (orderbook size per Category)

Below is presented a breakdown of the top companies in Greece by orderbook size per category



Greece's
Orderbook
856 Vessels

Mar 31, 2026

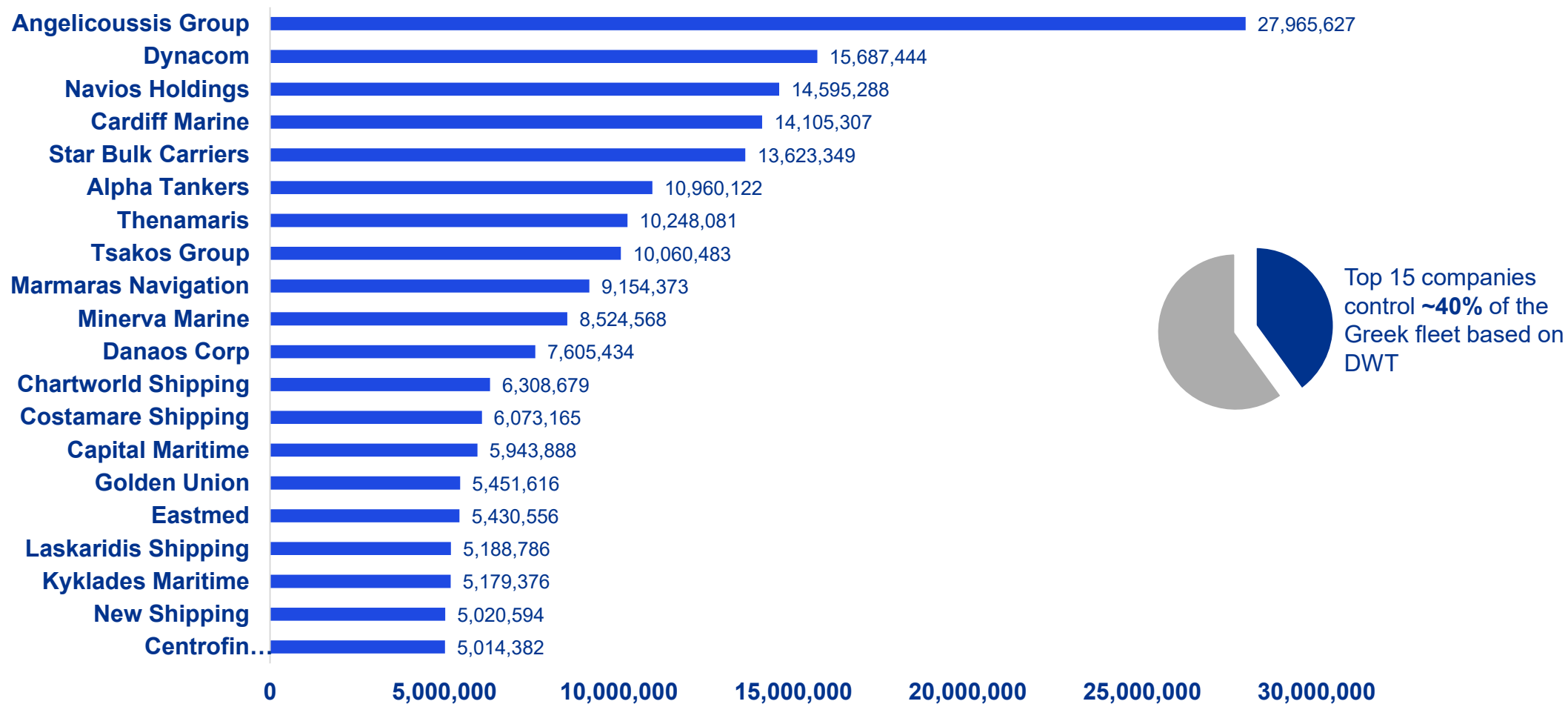


The vessel orders of 15 companies account for ~60% of the current Greek orderbook (519 out of 856).

Source: Clarksons.net, as of 31/3/2026

Key players in Greece (fleet capacity)

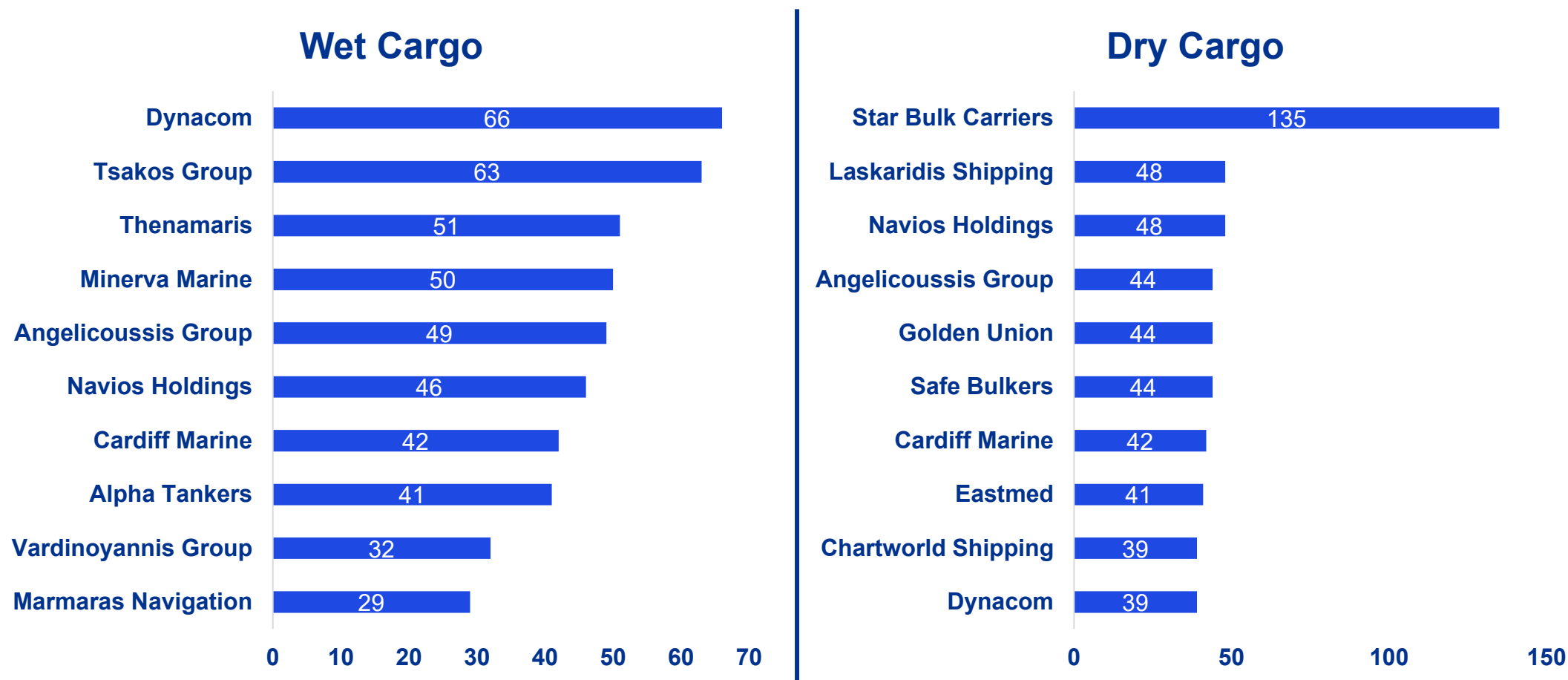
Below is presented a breakdown of the top companies in Greece by fleet capacity DWT



Source: *Clarksons.net*, as of 31/3/2026

Key players per type (Wet – Dry Cargo)

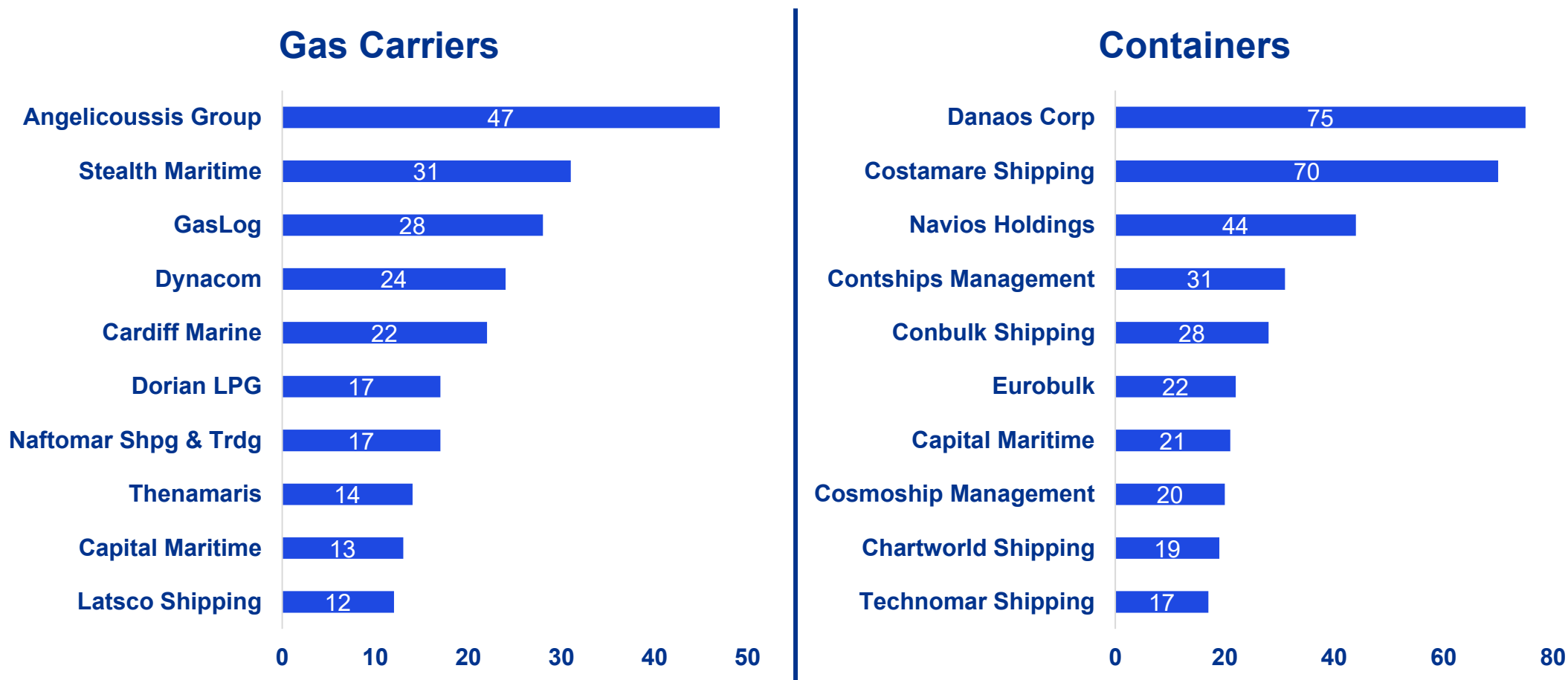
Below is presented a breakdown of the top companies in Greece by dry and wet cargo vessels



Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Key players per type (Gas Carriers– Containers)

Below is presented a breakdown of the top companies in Greece by containers and gas carriers



Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026



4. Greece in Global Shipping: Strengths & Challenges

Greece's Shipping Advantages

Below are presented the advantages of Greece in regard to the shipping sector



**Global Leadership
& Expertise**



**Strategic
Geographic
Location**



**Flexibility &
Commercial Agility**



**Entrepreneurial &
Opportunistic
Mindset**

**Greece's
Shipping
Advantages**

Greece's Shipping Advantages

Below are presented the advantages of Greece in regard to the shipping sector



Global Leadership & Expertise

Greece has long been a **global leader** in maritime transport, controlling **one of the largest merchant fleets worldwide**. This leadership is supported by **deep-rooted industry expertise**, and **strong entrepreneurial culture** within Greek ship owning families. Over decades, Greek operators have developed a reputation for **efficient fleet management, risk-taking, and market timing**, allowing them to remain competitive across shipping cycles.

Greece's Shipping Advantages

Strategic Geographic Location



Greece benefits from a **highly strategic location** at the **crossroads of Europe, Asia, and Africa**, placing it close to **major global trade routes**. Its proximity to **critical maritime corridors**, including the Suez Canal, enhances its importance as a **logistics and shipping hub**. This positioning facilitates **efficient access to key markets** and strengthens Greece's role in international trade flows.

Greece's Shipping Advantages

Below are presented the advantages of Greece in regard to the shipping sector



Flexibility & Commercial Agility

Greek shipowners are widely recognized for their **commercial flexibility** and **ability to adapt quickly to market conditions**. They **actively engage in counter-cyclical investments**, **acquiring vessels during downturns and capitalizing on market upswings**. This agility enables them to **optimize fleet composition** and **profitability**, maintaining a **competitive edge** in a highly volatile industry.

Entrepreneurial & Opportunistic Mindset



Beyond operational flexibility, Greek shipping is characterized by a **strong entrepreneurial mindset**, with owners continuously seeking **new opportunities across markets and vessel types**. This approach allows for **rapid decision-making, diversification, and strategic risk-taking**, which has been a key driver of **long-term success** and **resilience** in global shipping markets.

Greece's Shipping Advantages

Greece's Shipping Key Challenges

Below are presented the key challenges of Greece in regard to the shipping sector



Small Country & Economic Scale Limitations



Limited Shipbuilding Capacity



Labor & Crewing Challenges



Limited Port Infrastructure

Greece's Shipping Key Challenges

Greece's Shipping Key Challenges

Below are presented the key challenges of Greece in regard to the shipping sector



Small Country & Economic Scale Limitations

Despite its global shipping influence, Greece remains a **relatively small economy**, which **limits its ability to support the sector through large-scale industrial or financial infrastructure**. Compared to major economies like China or the U.S., Greece has **less domestic capital, industrial backing, and geopolitical leverage**, making the shipping sector **more dependent on international markets and external financing**.

Limited Shipbuilding Capacity



Greece has **minimal domestic shipbuilding capabilities**, with **most vessel construction taking place in Asian shipyards** such as China, South Korea, and Japan. This reliance **reduces control over supply chains, costs, and technological development**, and **limits Greece's ability to capture value across the full maritime value chain**.

Greece's Shipping Key Challenges

Greece's Shipping Key Challenges

Below are presented the key challenges of Greece in regard to the shipping sector



Limited Port Infrastructure

Although Greece has important ports, it has **fewer large-scale, globally competitive ports** compared to leading maritime nations. This **limits its role as a major transshipment and logistics hub**. While some ports have seen development, the country still **lacks the scale and capacity to compete with major global port networks in Asia or Northern Europe**.



Labor & Crewing Challenges

The Greek shipping industry faces a **declining domestic maritime workforce**, with fewer Greek nationals entering seafaring professions. As a result, shipowners **increasingly rely on foreign crews**, which can create **challenges in maintaining national maritime expertise and consistency**. Additionally, competition for skilled labor and evolving workforce expectations add **further pressure to crewing strategies**.

Greece's Shipping Key Challenges



5. Strategic Forces: Infrastructure, Energy & Geopolitics

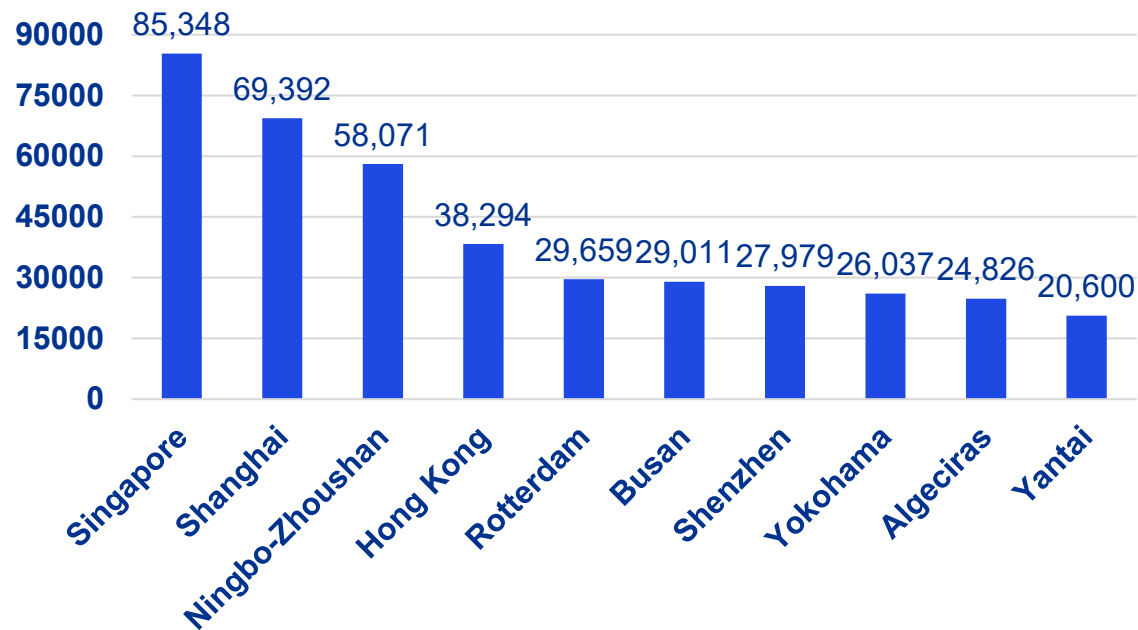
Global Port Activity

Below is presented the top Global and European ports by Calls in 2025

Global Trends

- Global container port congestion stood at 31.4% in February 2026, showing a slight improvement compared to the peaks of previous years (which reached as high as 37-39% in 2022)

Top 10 Ports Globally by Calls 2025



Port of Piraeus

- Total Port Calls (2025): **18,859**
- Total Tonnage (2025): **264 million GT.**
- As of February 2026, Piraeus Piraeus recorded a **-33%** trend in vessel GT over the last three months

TOP 5 Ports In Europe by Calls

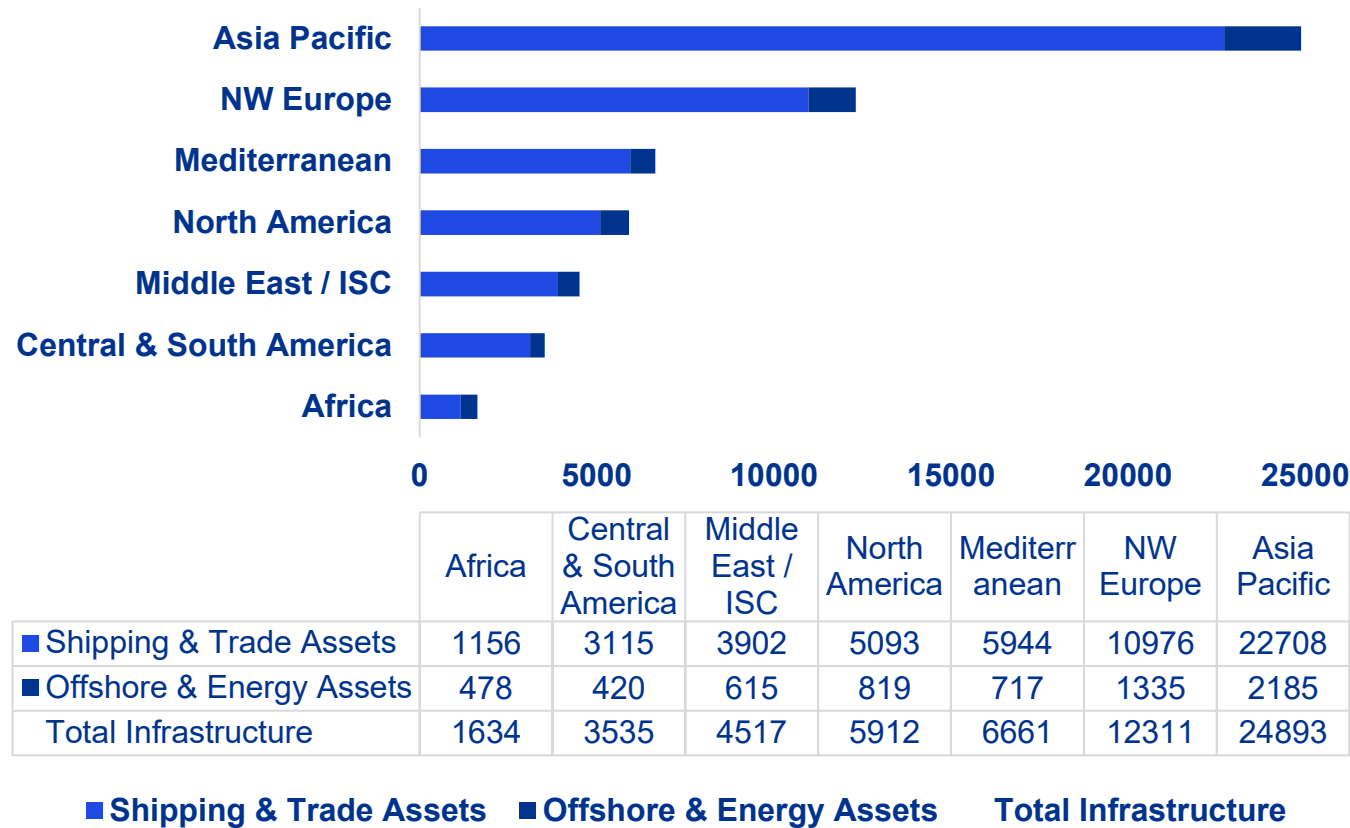
1. Rotterdam → 29,659
2. Algeciras → 24,826
3. Antwerp-Bruges → 19,597
4. **Piraeus → 18,859**
5. Tanger Med → 16,436

Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

Global Infrastructure

Below is presented the top Regions by Infrastructure type & Assets

Infrastructure Type by Region



Energy Transition

- **Asia-Pacific Dominance:** The region holds a commanding 42% share of global shipping infrastructure, including 56% of the world's shipyards and 47% of active terminals.
- **Port Development Pipeline:** There are currently 806 active port development projects worldwide, with Africa emerging as a strategic hotspot, accounting for 16% of new construction starts.
- **The "Green Gap":** While North West Europe leads in sustainability with **46%** of the world's shore-power-ready berths, the Mediterranean (including Greece) is rapidly scaling up to meet new regulatory demands

Eco Facilities

- 299 ports now provide onshore power and **223** ports offer LNG bunkering, with these "Eco-facilities" now capturing **4.1%** of all global port calls.

Source: [Clarksons.net](https://www.clarksons.net), as of 31/3/2026

The "Greek Model" of Vertical Integration

Below is presented a model of Greek vertical integration across energy and shipping

Synergies

Vertical Integration in Energy

- **Case Study: Vardinoyannis Group (Motor Oil Hellas):** * **The Asset: Owns one of the most complex refineries in Europe (Agioi Theodoroi).**
 - Operates a private anchorage capable of accommodating **ULCCs (Ultra Large Crude Carriers)**, directly linking massive maritime tonnage to industrial distillation.
 - While global refining faced 2025 volatility, Greek-integrated groups maintained stability; Greek owners currently hold the **#1 global position in tanker orders** (covering >25% of the total 2025 orderbook) to support these energy flows.

Vertical Integration in Energy & Metals

- **Case Study: Mytilinaios (Metlen) Group:**
 - Combines the **lowest-cost aluminum production** in Europe with a massive **2.3 GW thermal power capacity** and 10.5 GW in global RES projects.
 - By controlling the energy input and the metal output, the shipping requirement becomes a captive, high-margin internal service rather than a market variable.
 - Metlen' 2025-2027 investment plan exceeds **€2.5 billion**, focusing on 2.6GW of new solar and battery storage—creating the "Green Energy" that will power the next generation of **eco-ships**.

Asset Synergy

Greek shipowners are increasingly controlling both the Infrastructure (Refineries/Metals) and the Logistics (Vessels) to capture the full value chain.

Energy Resilience:

Integrated groups like Motor Oil Hellas combine refining capacity with transport, insulating operations from Middle East volatility where regional conflict has recently offline 95% of Hormuz transits.

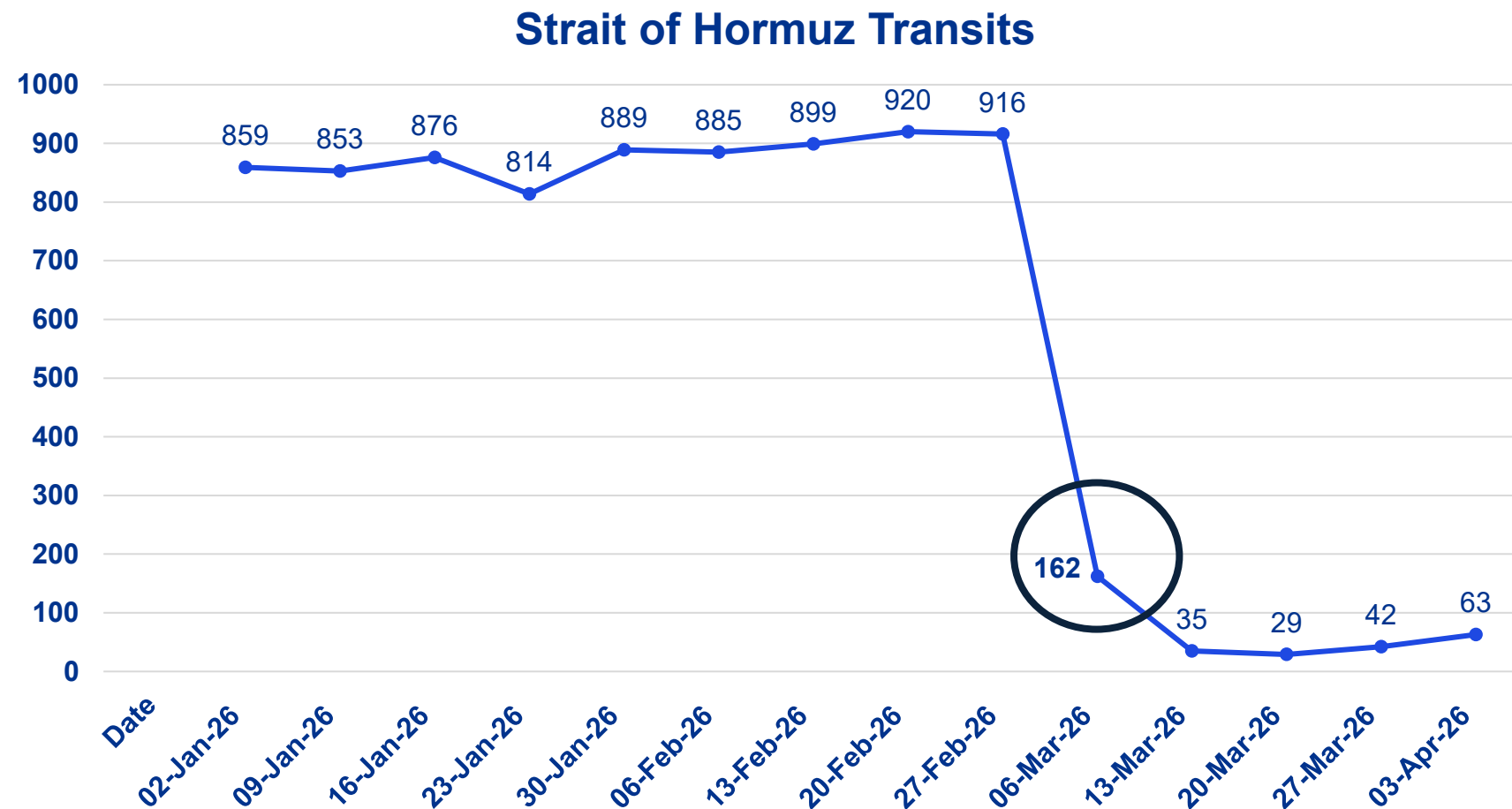
Industrial Connectivity

The Mytilineos (Energy & Metals) model exemplifies the "Complementary Loop"—owning energy production and industrial output (metals) reduces third-party reliance and freight rate exposure.

Source: Clarksons.net, as of 31/3/2026

Hormuz Disruption Caused a ~90% Collapse in Vessel Transits

The traffic of The Strait of Hormuz before and during the war in the Middle East



Key Takeaways

- Transits dropped from ~900 → ~30 vessels
- Represents >90% decline in traffic
- Indicates severe disruption of global energy flows

Market Impact

- Tanker freight rates surged (WS spike)
- Oil & LNG prices increased
- Rerouting → longer voyages → higher costs

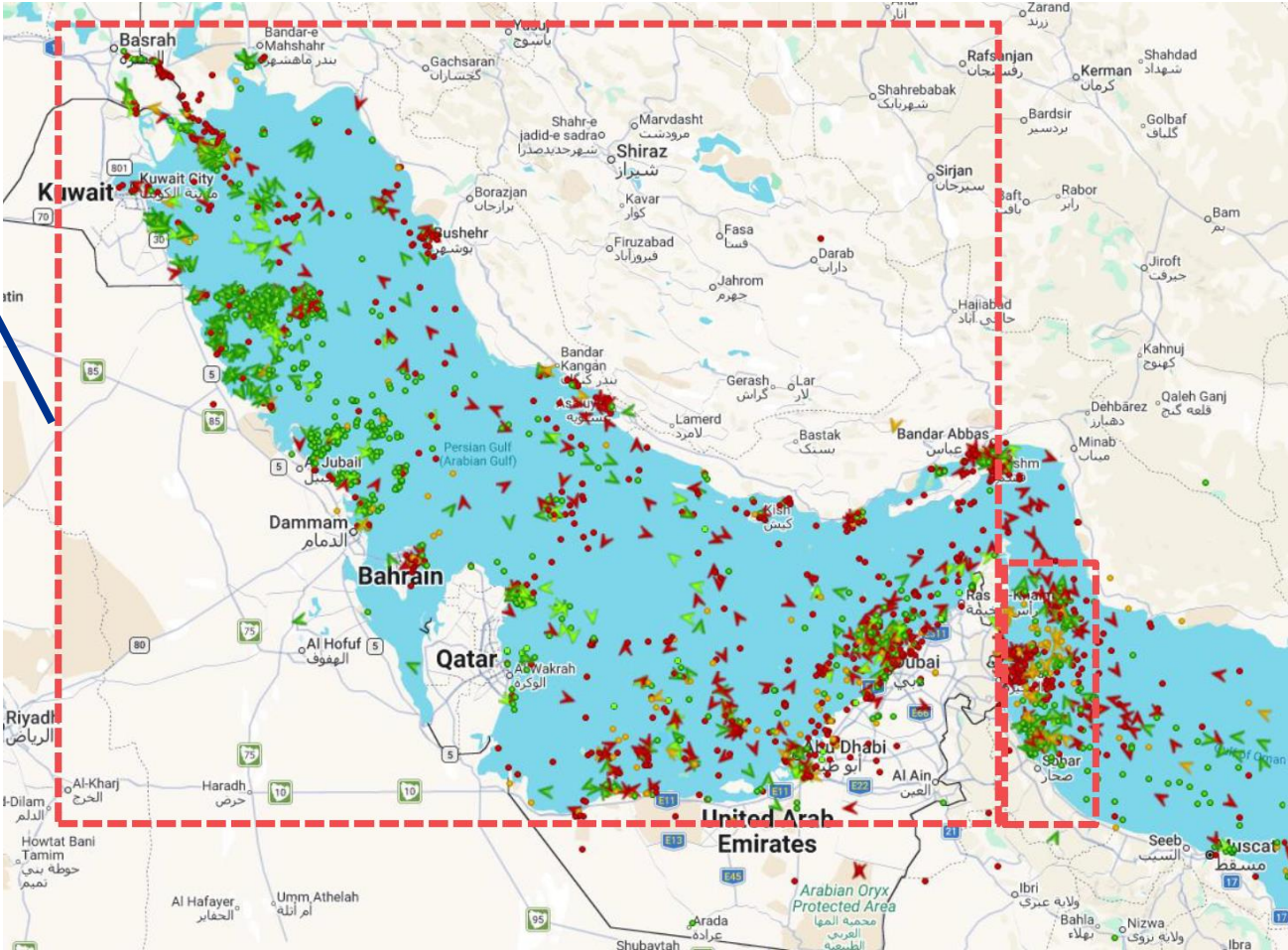
Source: *Clarksons.net*, as of 31/3/2026

2% of Global Fleet by dWT inside Persian Gulf

Below is presented the traffic inside the Strait of Hormuz, with vessels stuck inside

Vessels inside the Persian Gulf

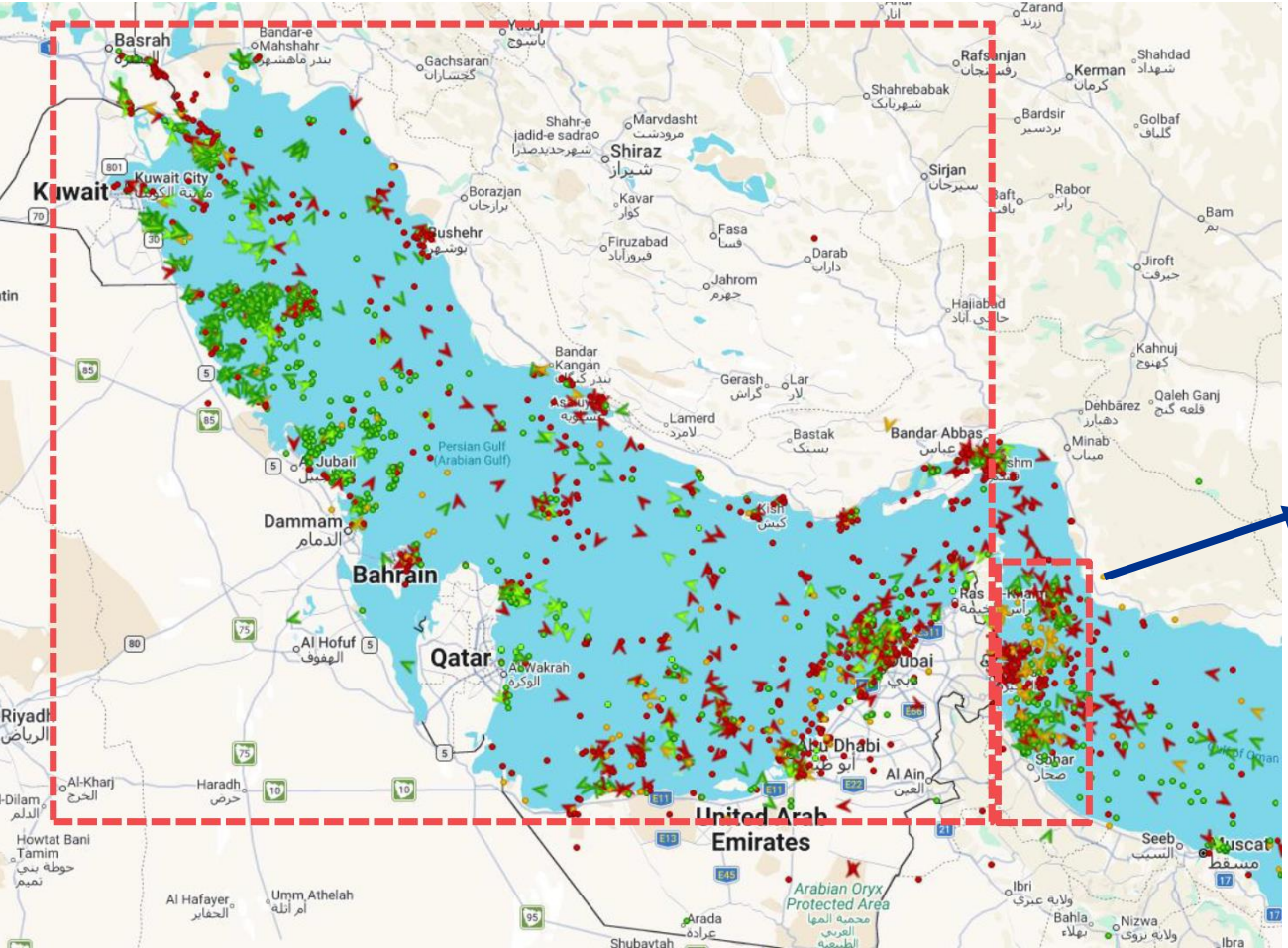
Vessel Type	Number of Vessels	Est. Value in \$Bn	% of global tonnage
Wet Cargo	308	12	9%
Dry Cargo	221	3.5	1%
Gas Carrier	60	3.3	5%
Container	118	3.8	1%
Other	1284	15	21%
Total Traffic	1991	37.6	37.00%



Source: Clarksons.net, as of 31/3/2026

2% of Global Fleet by dWT inside Persian Gulf

Below is presented the traffic outside the Strait of Hormuz



Vessels waiting outside the Persian Gulf

Vessel Type	Number of Vessels	Est. Value in \$Bn	% of global tonnage
Wet Cargo	138	2.1	2.00%
Dry Cargo	57	0.5	
Gas Carrier	24	0.4	2.00%
Container	10	0.5	
Other	39	0.1	
Total Traffic	268.00	3.6	4.00%

Source: Clarksons.net, as of 31/3/2026



6. The Future of Shipping: Strategic Outlook to 2035

6.1

Technology

Technology Trends and Feasible “Next-Day” Actions for Vessel Operations

Below are presented the technology trends and feasible next-day actions for overseas shipping operations

1. Regulation is creating operational pressure for ocean-going vessels

Overseas vessels are increasingly affected by regional and global carbon rules, especially when they call at EU ports.

The EU ETS now applies to large ships trading to, from and within the EU, creating a direct cost for carbon emissions. FuelEU Maritime has also applied from 1 January 2025 and requires vessels above 5,000 GT calling at European ports to progressively reduce the greenhouse gas intensity of the energy they use.

At global level, the IMO Net-Zero Framework remains politically uncertain. The framework was approved in principle in April 2025, but formal adoption was postponed in October 2025, with discussions expected to resume in 2026. DNV noted that because of the delay, possible entry into force would be no earlier than March 2028, and the framework could still change.

For overseas shipping, this uncertainty creates a difficult investment environment. Owners must prepare for carbon costs and fuel-intensity rules, but they cannot yet rely on one single global regulatory mechanism. This makes data quality, contractual flexibility and operational efficiency essential.

2. The overseas fleet will not decarbonise through one fuel

The market is moving toward a multi-fuel transition. LNG, methanol, ammonia, biofuels, synthetic fuels and onboard carbon capture are all being considered, but each has trade-offs.

DNV’s 2025 maritime outlook highlights a clear shift: LNG and methanol are gaining traction, while ammonia, hydrogen and onboard carbon capture are still moving through early trials. Alternative-fuel orders continued in 2025, but LNG remained dominant, particularly in the container segment. DNV reported that 275 alternative-fuel vessel orders were placed in 2025, with container ships representing a major share of alternative-fuel gross tonnage.

The future is unlikely to be a single “winner-takes-all” fuel scenario.

Segment	Near future actions	Longer future actions
Container ships	LNG dual-fuel, methanol dual-fuel, digital network optimisation	Green methanol, e-methane, ammonia on selected routes
Bulk carriers	Efficiency, wind assistance, biofuel blends, fuel-ready newbuilds	Ammonia, onboard carbon capture, green corridors
Tankers	Voyage optimisation, energy efficiency, LNG/methanol-ready designs	Ammonia, methanol, carbon capture depending on trade
Car carriers	LNG dual-fuel, shore-power readiness, efficiency upgrades	Bio/e-LNG, methanol, synthetic fuels
LNG carriers	Methane slip reduction, boil-off gas optimisation	Bio/e-methane, carbon capture, engine upgrades
General cargo / multipurpose	Biofuels, operational efficiency, modular retrofits	Segment-specific fuel transition

Technology Trends and Feasible “Next-Day” Actions for Vessel Operations

Below are presented the technology trends and feasible next-day actions for overseas shipping operations

3. The most important technology trend: fleet performance intelligence

For overseas fleets, the first major trend is the shift from vessel-by-vessel management to fleet performance intelligence.

A ship manager or owner should not only know where the vessel is. They should know:

- How the vessel is consuming fuel against benchmark.
- How hull and propeller condition are affecting performance.
- How weather and currents are affecting speed and consumption.
- Whether the vessel is likely to miss its ETA.
- What the carbon cost of the voyage is.
- Whether the vessel is over-consuming compared with sister ships.
- Whether charter-party performance claims are likely.
- Whether emissions data is reliable enough for EU ETS, FuelEU and customer reporting.

This is becoming especially important for ocean-going ships because small percentage improvements have large financial value.

The **feasible “next-day” action** is to **create a fleet performance cockpit** covering fuel, speed, weather, hull performance, port waiting, emissions and voyage profitability.

4. Voyage optimisation is the fastest practical lever

For overseas shipping, voyage optimisation is one of the most practical technologies available today.

It includes:

- Weather routing
- Speed optimisation
- Just-in-time arrival
- Trim optimisation
- Port congestion monitoring
- Canal and route alternatives
- Fuel and emissions forecasting
- ETA reliability management
- Charter-party speed/consumption analysis

This is particularly important because ocean-going ships often waste fuel through poor synchronisation with ports. A vessel may sail faster than necessary, only to wait outside the destination port. That creates unnecessary fuel consumption, unnecessary emissions and unnecessary carbon cost.

The next-day operating principle should be:

Plan the voyage around the most economical arrival window, not simply the earliest possible arrival.

This requires better coordination between the ship, operator, charterer, port agent, terminal and commercial team.

Technology Trends and Feasible “Next-Day” Actions for Vessel Operations

Below are presented the technology trends and feasible next-day actions for overseas shipping operations

5. Carbon management is becoming a core operating function

Carbon is now becoming part of voyage economics. For vessels trading with Europe, EU ETS and FuelEU Maritime mean that fuel consumption data must be converted into financial exposure.

This creates the need for a carbon operations layer. It should connect:

- Fuel consumption & Fuel type
- Voyage legs & Cargo activity
- EU/non-EU exposure
- ETS allowance requirements
- FuelEU compliance balance
- Charterer allocation
- Customer reporting
- Audit trail

This is not only an environmental issue. It is a commercial control issue.

For overseas operators, the **feasible next step is to establish a reliable emissions-data chain**:

Vessel data → shore validation → regulatory calculation → cost allocation → customer/charterer reporting

Companies that rely on manual spreadsheets and inconsistent noon reports will face increasing risk: wrong cost allocation, disputes with charterers, weak auditability and poor management visibility.

6. Predictive maintenance is critical for long-haul reliability

In overseas shipping, technical failure is expensive. A failure mid-voyage can cause deviation, off-hire, cargo delay, port disruption, emergency repair cost and reputational damage.

Predictive maintenance is therefore one of the most valuable operational technologies for deep-sea fleets.

Priority assets include:

- Main & Auxiliary engines
- Turbochargers & Shaft generators
- Propeller and shaftline
- Boilers & Pumps & Compressors
- Purifiers & Scrubbers
- Cargo systems
- Ballast water treatment systems
- Steering gear
- Navigation and communication systems

The trend is to move from calendar-based maintenance to **condition-based and risk-based maintenance**. This uses sensor data, running hours, alarms, lubricant analysis, vibration monitoring, temperature trends and failure history.

The practical starting point does not need to be complicated. For each vessel, the operator can identify the top 10 critical systems and create a structured reliability dashboard.

Technology Trends and Feasible “Next-Day” Actions for Vessel Operations

Below are presented the technology trends and feasible next-day actions for overseas shipping operations

7. Digital twins: useful when focused on operations, not hype

Digital twins are becoming more common in maritime discussions, but the value depends on how they are used.

For overseas shipping, a practical digital twin can support:

- Hull and propeller performance modelling
- Engine performance monitoring
- Fuel consumption prediction
- Trim optimisation
- Maintenance planning
- Retrofit evaluation
- Future-fuel conversion scenarios
- Carbon-intensity forecasting

The most useful digital twin is not a beautiful 3D model. It is a decision-support tool that helps answer operational and investment questions.

The **next-day action** is to begin with a **performance model**, not a full digital twin. Build the baseline first; add sophistication later.

8. Energy-saving technologies are highly relevant for deep-sea ships

For overseas shipping, energy-saving technologies may be more feasible in the short term than full fuel replacement.

Important technologies include:

- Advanced hull coatings
- Propeller boss cap fins
- Pre-swirl ducts
- Air lubrication
- Waste heat recovery
- Shaft generators
- Variable frequency drives
- Engine tuning
- Autopilot optimisation
- Wind-assisted propulsion
- Solar support for auxiliary loads
- Battery hybridization for peak shaving or port operations

Wind-assisted propulsion is gaining attention for tankers, bulkers and general cargo vessels. It will not eliminate fuel consumption, but it can reduce it, especially on suitable routes and vessel types. DNV reported that wind-assisted propulsion is moving from demonstration to early commercial adoption, with dozens of ships already equipped and more in the orderbook.

The priority should be to evaluate these technologies through route-specific and vessel-specific business cases. A retrofit that works for one vessel may not work for another.

Technology Trends and Feasible “Next-Day” Actions for Vessel Operations

Below are presented the technology trends and feasible next-day actions for overseas shipping operations

11. AI and automation: Where they truly add value

For overseas shipping, AI should be used for practical operational decisions, not as a buzzword.

Strong use cases include:

- Fuel consumption prediction
- ETA prediction
- Port-delay prediction
- Weather-routing recommendation
- Anomaly detection in machinery data
- Hull fouling detection
- Spare-parts forecasting
- Claims and charter-party analytics
- Document automation
- Safety observation analysis
- Regulatory compliance checks

AI can also compare sister vessels and identify hidden performance gaps. For example, two similar bulk carriers on similar routes may show different fuel curves due to hull fouling, engine tuning, operational practice or weather exposure.

However, AI depends on reliable data. Poor noon reports, inconsistent sensor data and fragmented maintenance logs will produce weak analytics. **Data governance is therefore a prerequisite.**

10. The operating model of the future: Fleet control tower

A major future trend for ocean-going fleets is the creation of a **fleet control tower**.

This is not necessarily remote control of ships. It is an integrated shore-side operating center that monitors and supports:

- Voyage execution & Weather routing
- Fuel consumption & Carbon exposure
- Port disruption
- Technical condition
- Safety alerts & Maintenance planning
- Charter-party performance
- Customer reporting

For large ship managers, this can become a competitive advantage. The control tower connects technical management, operations, commercial management, compliance and finance.

In the future, the best-performing overseas fleets will not simply have better ships. **They will have better operational intelligence.**

The next day of Shipping is digital, efficient and fuel-ready

Below are presented the key conclusions on the technology trends in the shipping industry

Overseas operators should focus immediately on:

The strongest near-term business cases are:

- AI-assisted navigation and collision-risk detection
- Voyage optimisation and speed/routing recommendations
- Fuel-consumption and vessel-performance modelling
- Predictive maintenance for engines and critical equipment
- Carbon, compliance and emissions-data automation
- Fleet control towers supported by AI decision support
- Engine and hull-performance optimisation
- Charter-party carbon allocation
- Energy-saving retrofits
- Future-fuel readiness

Conclusion

The most realistic AI applications today are **not fully autonomous ocean-going vessels**.

The “next day” opportunity for a shipowner is therefore not to replace the crew with AI. It is to use AI as a **decision-support layer** that helps the crew, technical manager, operator and chartering team make better decisions with less delay and more reliable data.

The zero-emission pathway for overseas shipping is complex. Vessels cannot rely on one simple solution LNG, methanol, ammonia, biofuels, synthetic fuels, wind assistance, carbon capture and operational efficiency will all play roles depending on vessel type and trade.

Alternative fuels will shape the long-term future of deep-sea shipping. But operational excellence will determine who remains competitive during the transition.

For ocean-going fleets, the winning strategy is not to wait for full regulatory certainty or perfect fuel availability. It is to build a smarter, more efficient, more transparent and more flexible operating platform today.

6.2

ESG

Who drives the ESG agenda in the shipping industry?

Below are presented the key drivers in the ESG agenda in terms of the shipping industry



Key trends in implementing ESG initiatives in shipping

Below are presented the emerging trends that outline the transformative potential of the shipping industry with respect to ESG implementation and performance enhancement



Making no-regret moves

Given uncertainty around future alternative fuels and technologies, companies are prioritizing “no-regret” measures—such as speed optimization, hull and propeller efficiency improvements, crew training, and digital voyage optimization.



From compliance to resilience

ESG initiatives in shipping are increasingly framed through the lens of resilience, risk mitigation, and long-term value protection. Companies recognize that delayed or poorly executed ESG action may expose them to regulatory penalties, and financing constraints.



Fuel flexibility

Shipping companies are increasingly adopting a fuel-flexibility and phased transition approach rather than committing prematurely to a single alternative fuel. Given ongoing uncertainty around the availability, scalability, cost, and regulatory acceptance of alternative fuels (such as LNG, methanol, ammonia, hydrogen, and biofuels), companies are prioritizing dual-fuel engines, fuel-ready vessel designs, and drop-in fuel solutions.



Linking ESG to strategy

ESG is increasingly embedded into enterprise risk management, capital allocation, and strategic planning, rather than treated as a standalone reporting or compliance exercise. Leading shipping companies are aligning ESG initiatives with strategy transformation, chartering decisions, safety management systems, etc.

The constantly emerging Regulatory Framework

Below is presented the emerging regulatory framework in terms of the shipping industry

The IMO has been at the forefront of the legislative framework with key regulations and an ambitious decarbonization target aiming at net-zero greenhouse gas (GHG) emissions from international shipping by 2050, with interim goals for 2030.

Central to this strategy are mandatory efficiency measures such as the Energy Efficiency Design Index (EEDI), and the Ship Energy Efficiency Management Plan (SEEMP), both of which became binding in 2013. Though, the regulatory framework intensified in 2023 with the introduction of the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII).

In addition to the IMO GHG strategy, FuelEU Maritime Regulation compels shipping companies operating in EU waters to progressively reduce the lifecycle GHG intensity of onboard energy use, fundamentally reshaping fuel strategies, operational planning, and compliance governance from 2025 onwards.



IMO GHG strategy

The IMO Revised GHG Strategy sets a global pathway for shipping to reach net-zero emissions by around 2050, requiring shipping companies to accelerate fuel transition, rethink fleet strategies, and prepare for binding fuel standards and carbon pricing at a global level.



FuelEU Maritime Directive

FuelEU Maritime (Regulation (EU) 2023/1805) is part of the EU's Fit for 55 package and aims to decarbonize maritime transport by reducing the greenhouse gas (GHG) intensity of energy used on board ships on a well-to-wake basis (covering CO₂, methane and nitrous oxide). The regulation applies from 1 January 2025 and imposes progressively stricter GHG-intensity limits through to 2050.

- 6% GHG intensity reduction target versus a 2020 baseline



Milestones & Current Developments

Below are presented the milestones and current developments in the shipping industry



Current considerations for advancing ESG in shipping

Below are presented the key considerations that companies are already adopting to manage this uncertainty-driven landscape and strengthen ESG performance

01

Applying operational measures to enhance decarbonization readiness

Operational measures have been the industry's first and fastest response to climate regulation. Most fleets today already apply:

- Speed optimization and slow steaming
- Voyage planning and weather routing
- CII score management through operational adjustments

These measures have delivered meaningful early gains at relatively low cost and risk.

02

Assessing fuel readiness to overcome constraints

FuelEU Maritime and the IMO strategy both push the market toward lower-emission fuels, but the transition depends on fuel availability, infrastructure, and lifecycle emissions performance. Key constraints include:

- High and volatile fuel and energy costs.
- Dependency on fossil fuels. ~99% of current fleet still relies on fossil fuels, whilst alternative fuels remain marginal in global energy use.
- Port and bunker infrastructure investment is high-risk and demand-dependent, slowing rollout.
- Commercial vessels typically last 20–30 years, locking emissions trajectories far into the future

As a result of this systemic dependency on fossil sources, that falls outside the direct control of shipping companies, alternative fuels are widely acknowledged as essential for decarbonization, but they remain unviable at scale today. What is more, the Global Maritime Forum warns shipping is off-track for 5% zero-emission fuel target by 2030.

Current considerations for advancing ESG in shipping

Below are presented the key considerations that companies are already adopting to manage this uncertainty-driven landscape and strengthen ESG performance

03

Advancing governance practices

As regulatory and carbon-cost exposure intensifies, compliance in shipping increasingly depends on integrated governance linking operations, fleet strategy, emissions data, and financial decision-making.

- UNCTAD and the World Economic Forum both highlight that investment hesitation caused by fuel and regulatory uncertainty increases the risk of future non-compliance and stranded assets.
- The need for clear data, audit trail, governance, accountability across functions and Board-level oversight of ESG reporting is increasing significantly, as fragmented ESG data systems and unclear ownership remain one of the biggest compliance risks in maritime organizations.

04

Prioritizing ESG disclosure and data reliability

Publishing ESG reports in the shipping industry is essential for providing investors and other interested parties with transparent, decision-useful information in a complex, capital-intensive, and highly regulated sector. High-quality ESG disclosures help investors understand a company's risk profile, long-term strategy, and resilience—particularly in relation to decarbonization, regulatory exposure, safety, and governance.

- ESG reporting enhances comparability, and strengthen investor trust
- ESG reporting serves as a strategic communication tool

Current Considerations for Advancing ESG in Shipping

Below are presented the key considerations that companies are already adopting to manage this uncertainty-driven landscape and strengthen ESG performance

05

Overcoming capital intensity and financing constraints

Decarbonization in shipping is fundamentally capital-intensive, requiring large, long-dated investments amid high uncertainty on technology, regulation, and returns. In that context, green financing has become an increasingly important instrument for the shipping industry as companies face rising capital needs to comply with decarbonization regulations, modernize fleets, and invest in alternative fuels and energy-efficient technologies. Given the sector's long asset lifecycles and high capital intensity, access to competitively priced financing is a critical enabler.

- Many shipping companies will initially benefit more from transition-aligned or sustainability-linked financing than from fully “green” instruments.
- Robust ESG performance leads to more favorable financing conditions over time, and enhanced investor and lender confidence.

06

Improving decision making through integration of ESG to business strategy

Many shipping companies still struggle to embed ESG into core risk management, capital allocation, and performance management. ESG is often treated as a compliance or reporting topic rather than a strategic driver, limiting its effectiveness and long-term value creation.

- Short-term compliance focus, prioritizing minimum regulatory adherence over strategic positioning, innovation, and competitive advantage.
- Limited integration into enterprise risk management (ERM), results in ESG risks (e.g. climate transition risk, regulatory tightening, supply chain disruptions) being assessed qualitatively or retrospectively rather than systematically and forward-looking

ESG as a Strategic Driver for Resilience and Value Creation

Below is presented the growing importance of ESG in the shipping industry, highlighting its impact on risk management, financing access, due diligence, and long-term competitiveness

ESG is already a key driver of resilience and competitiveness in the shipping industry, and its importance is expected to intensify going forward. Conversely, insufficient alignment with ESG expectations may expose companies to regulatory non-compliance risks, higher financing costs, restricted market access, and reputational impacts. As a result, ESG performance is no longer a compliance-driven exercise, but a strategic lever for long-term resilience and sustainable value creation in a highly volatile and capital-intensive industry.



ESG Risk assessment

Adopt a holistic approach to systematically identify and assess ESG-related risks and opportunities across short-, medium-, and long-term time horizons. This approach should consider strategic, operational, and value-chain impacts, enabling informed decision-making and supporting the integration of ESG considerations into enterprise risk management, capital allocation, and long-term strategy, with the overarching objective of strengthening organizational resilience.



ESG Due Diligence

Robust ESG due diligence can reduce uncertainty, mitigate post-transaction risks, and demonstrate the maturity of the target's governance and sustainability practices, ultimately contributing to stronger valuation outcomes, smoother transaction execution, and long-term value preservation, along with fostering investor confidence and well-informed decision-making.



ESG rating schemes

ESG ratings and assessments issued by recognized frameworks and rating agencies (such as EcoVadis, CDP, and S&P) increasingly influence market access and commercial competitiveness. Strong ESG performance and credible ratings can therefore be a decisive factor in maintaining preferred supplier status, securing participation in tenders, and strengthening long-term business relationships, while weaker ratings may limit access to key markets and opportunities.



Link of ESG to access of capital

The integration of sustainability performance into financial terms has become an increasingly important determinant of access to capital on favorable terms. Financial institutions and investors are progressively incorporating ESG criteria into credit assessments, sustainability-linked loans, and funding decisions to better manage risk and align capital allocation with long-term value creation.

6.3

Cyber

Top 10 Cyber Threats

Below are presented the top 10 cyber threats in the maritime industry

01

GPS & AIS Spoofing

Manipulation of navigation signals to misroute vessels

02

Ransomware Attacks

Targeting OT/IT systems

03

Phishing & BEC Fraud

Crew & shore staff targeted; invoice fraud commonplace

04

ECDIS Vulnerabilities

Chart display & navigation systems often run unpatched OS

05

Unsecured Satellite Comms

VSAT & Iridium links expose vessel networks to interception

06

Malware via USB / Media

Primary infection vector in air-gapped or low-connectivity ships

07

Port / Supply Chain Breach

Compromised terminal or port systems cascade to fleet ops

08

Insider Threats

Disgruntled crew or contractors with physical system access

09

OT / ICS Exploitation

SCADA, PLCs, engine management systems lacking segmentation

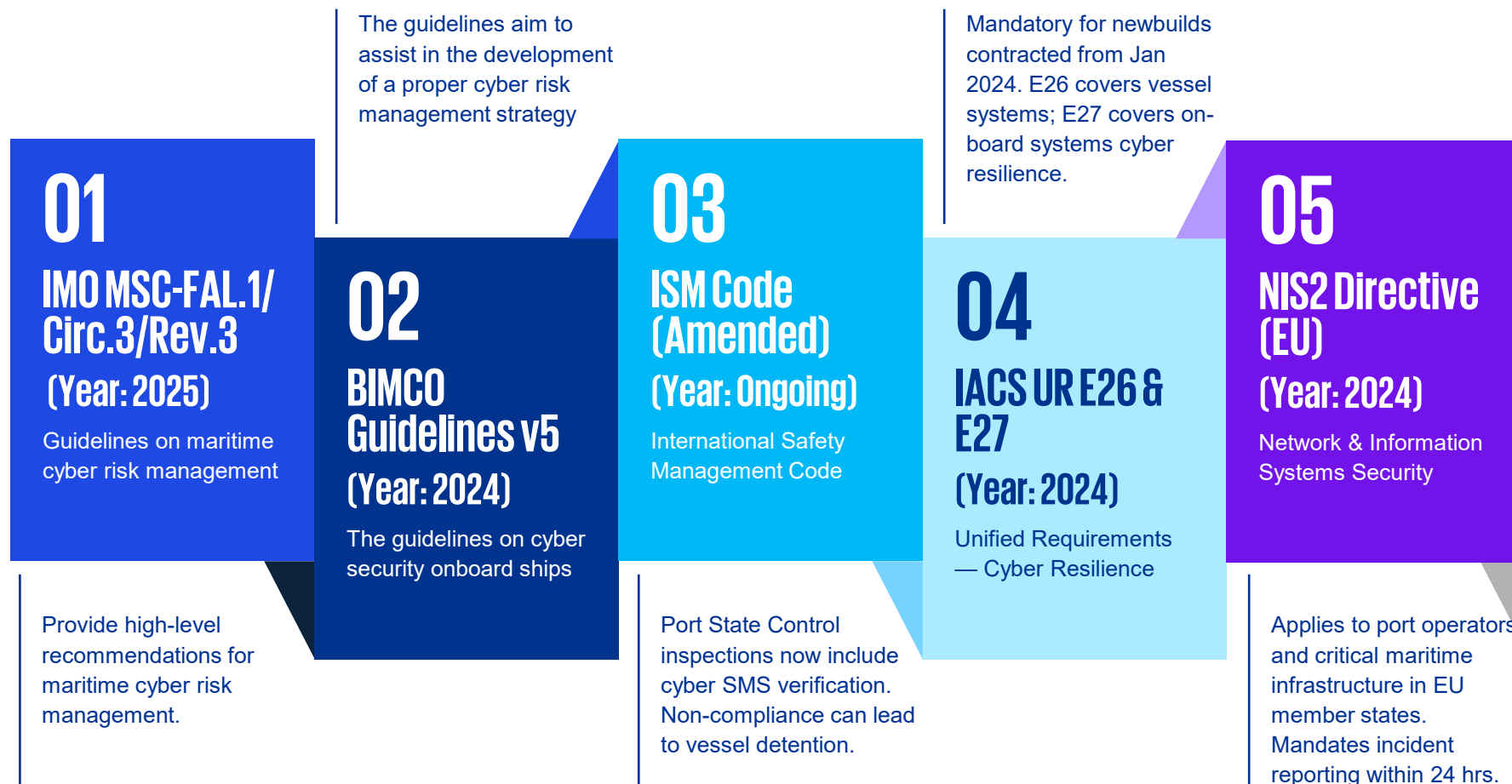
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DDoS on Shore Infrastructure

Disrupts scheduling, cargo ops, and vessel comms

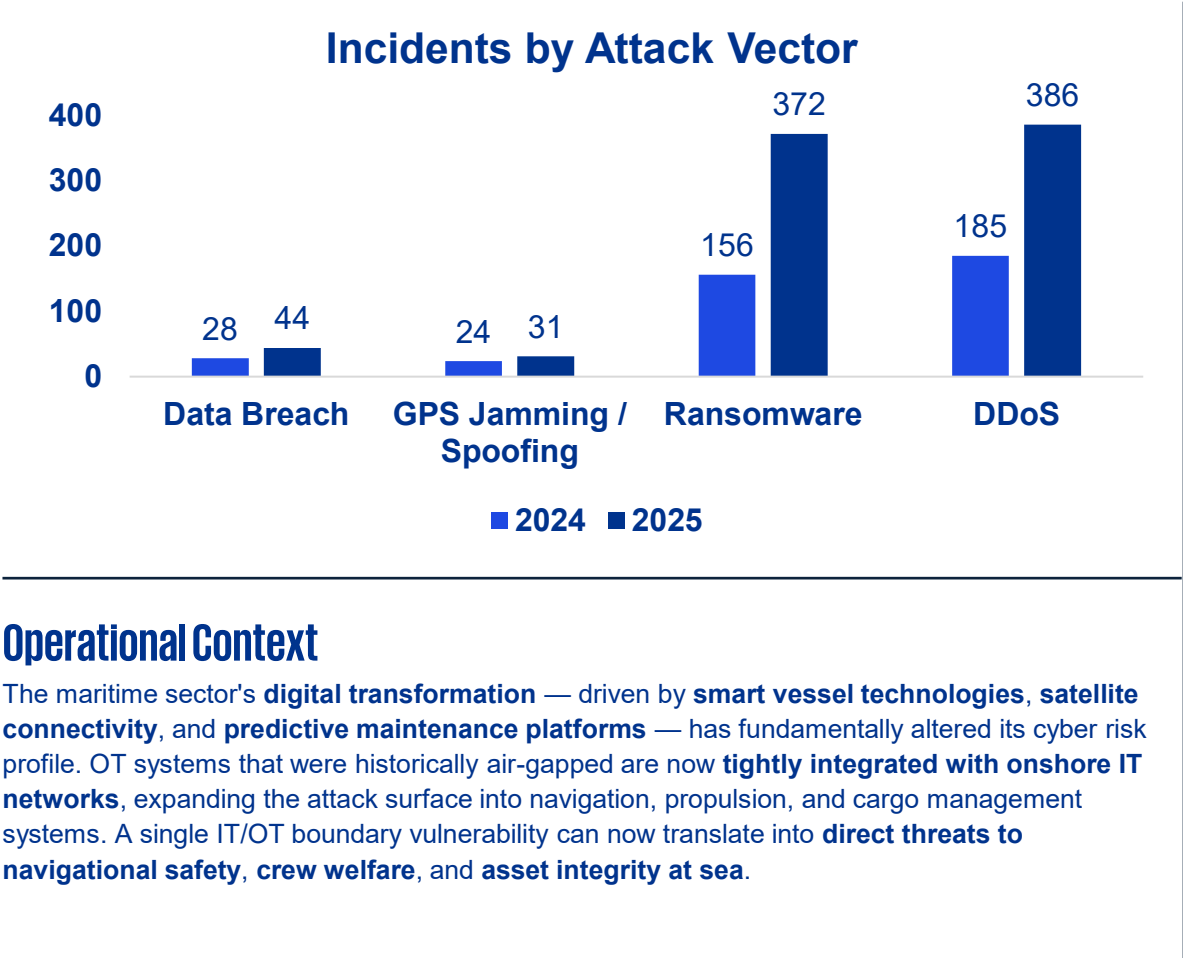
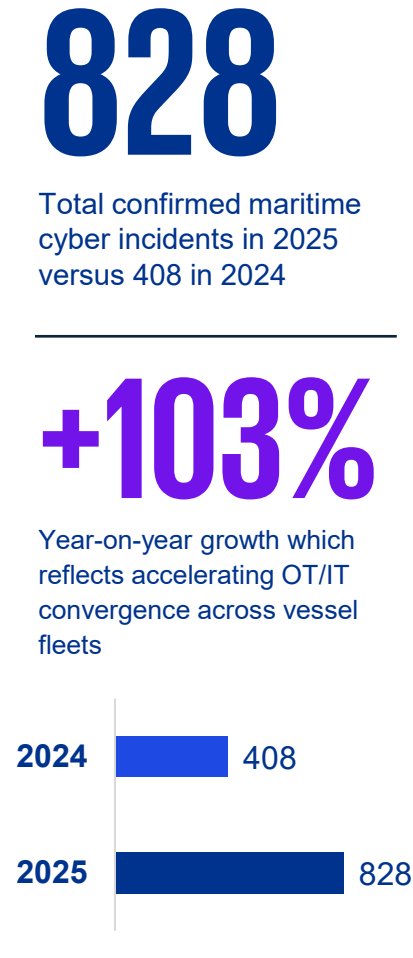
Regulations & Compliance

Below are presented the key frameworks every maritime operator must know



Maritime Cybersecurity — Threat Landscape 2024–2025

Below is presented an Annual Incident Analysis on Vessel, Port & Onshore Maritime Infrastructure





7. Our team

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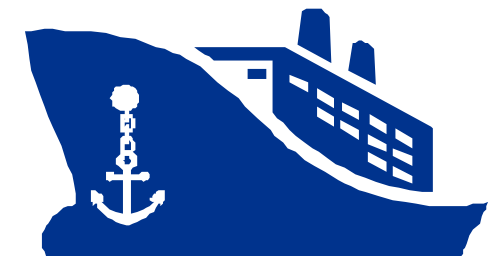


8. Glossary & Sources

Glossary



Term	Definition
Wet cargo	Bunkering Tanker, Tanker, Chem & Oil, Chemical Bulk, Chemical Parcel, Chemical Unknown, Methanol, Products, Products Tanker Barg
Dry cargo	Bulk, MPP, Open Hatch, Ore
Gas Carriers	Ammonia/LPG, Ethy/LPG, LCO2/LPG Carrier, LNG, LNG Regas, LPG
Containers	Container ships are designed to carry containers predominantly on liner routes.
Other	All other ship Categories not included in the other 4 categories
DWT	Deadweight ton(s) is a measure of a ship's carrying capacity in metric tons, including cargo, bunkers, water, crew and provisions
GT	Gross tonnage is a unit of measurement of the volume of all ship's enclosed spaces measured to the outside of the hull framing. One gross ton is equal to 100 cubic feet or 2.832 cubic meters
Calls	The number of times ships arrive at and depart from a port within a given period.
Cargo Fleet	Classified as vessels in Wet and Dry Cargo as well as Gas Carriers and Containers



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