



Zodiac  
Maritime

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*Published by Zodiac Maritime*



15th Anniversary Edition

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# Health, Safety and Environmental Report 2024





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# View from the Chief Executive Officer

Welcome to Zodiac Maritime’s 15th externally verified Health, Safety, and Environment (HSE) report.

This is an important milestone for us. Our inaugural report was published in 2011; at the time, we were one of the first—if not the first—privately held maritime companies to be awarded a Quality Assurance Statement for our report, and since then we have emphasized the importance of an external verification process to ensure accuracy and transparency. This publication shares our HSE performance with our customers and interested stakeholders. It celebrates our achievements while openly addressing our challenges and areas for improvement. Continual improvement is ingrained in our DNA and is central to our seven-decade heritage.

2024 was marked by significant global volatility. In response we remain vigilant; actively monitoring, planning for, and responding to developments to ensure our continued operation of first-class tonnage while prioritising the safety of our seafarers. Our flexible and agile response has enabled us to provide the highest quality ship management services to our clients, navigating these complexities with resilience and professionalism.

As ever, the well-being and safety of our crews remain our top priority, and we continue to enhance our safety culture and performance across the fleet. I am particularly pleased that our safety strategy delivered positive results in 2024, continuing the momentum of previous years. Our incrementally improving safety performance is

a testament to our dedication and effort towards safety excellence. This achievement is something the entire Zodiac Maritime team - both at sea and ashore - take pride in.

Decarbonisation remains a critical global priority. In the shipping sector, managing fleet emissions is an ongoing challenge. The time for action must be now and the industry cannot shy away from the challenges it faces. At Zodiac Maritime, we are taking responsible actions towards more efficient and cleaner operations today, and into the future.

We continue to roll-out a wide array of advanced technologies on board our vessels that drive-up efficiency and drive-down emissions. As part of our ongoing fleet expansion, we are pleased to be adding dual-fuel newbuild vessels capable of operating on alternative fuels like LNG and LPG, marking a significant step towards enhancing our overall environmental performance. 2024 was an exciting year as we welcomed two more LPG-powered gas carriers, as well as our first LNG-powered car carrier. We are looking forward to welcoming additional dual-fuel vessels to our fleet in 2025.

In this report you will find a number of metrics that we measure ourselves by. I’m pleased to highlight our Carbon Intensity Indicator (CII) score, which shows very positive results - with most of our vessels achieving a better rating than the target. There is still a lot more to do of course, however this gives us confidence that what we are doing is bearing results.

As we drive improvements and efficiencies across our operations, 2024 was a year that saw us further embed our digital transformation programme by transitioning to new technologies and familiarising our teams with exciting new operating platforms. We are already reaping the benefits at sea and ashore from developing new in-house digital solutions and this programme will continue into 2025.

This digital transformation also plays an important role within our organisational strategy – particularly in staying safe in an ever more digital world. As cyber threats continue to grow in complexity at an almost unprecedented rate, Zodiac Maritime is working hard to keep our systems and people secure. We continue to invest in cyber security safeguards which include a combination of hardware, software, robust detection and response procedures; all supported by rigorous testing and training.

Our people, on board and ashore, are skilfully navigating Zodiac Maritime through the current complex and demanding environment. And in doing so show their expertise, innovation and commitment - building on our 70-year legacy of stability and excellence. As a result, Zodiac Maritime is well positioned to continue to deliver operational excellence and grasp opportunities as they present themselves.

I hope you enjoy reading our 2024 HSE report.

**Daniel Ofer**  
Chief Executive Officer





# Materiality Assessment

The 2024 Health, Safety and Environmental (HSE) Report covers any issues arising during the reporting period both on board commercial vessels managed by Zodiac Maritime Limited (“Zodiac Maritime”) and those related to our business ashore.

The purpose of the report is to provide our customers and other stakeholders with information on our HSE performance over the calendar year 2024, using information collated from both internal and external sources. The scope of the report is to deal with those

issues which are considered material to our operations. If an issue has significant importance either to our activities or to those of our stakeholders, it is identified as material. Omission from this report does not imply that an issue is not considered important or given due consideration.

Zodiac Maritime maintains a quality management system incorporating both international and national mandatory requirements, as well as voluntary standards including ISO 9001, ISO 14001, ISO 45001, and ISO 50001. As such,

we regularly assess the wider context of the industry in which we operate, with reference to developing risks and opportunities that we need to address.

In recognition of the need for transparency, all information provided here has been externally verified by LRQA Group Limited (LRQA), as detailed in the Assurance Statement included in this report.

**For further information please contact us. Our details are available on the final page of the report.**



# About Zodiac Maritime

Zodiac Maritime is an international ship operating company, managing a diverse portfolio of cargo-carrying vessels operating worldwide.

Zodiac Maritime provides a comprehensive range of management services including commercial, technical, operations, crewing, sale and purchase, insurance and legal services, as well as health, safety, quality, and environmental management.

At the end of 2024, the Zodiac Maritime fleet<sup>1</sup> included a total of 124 vessels.

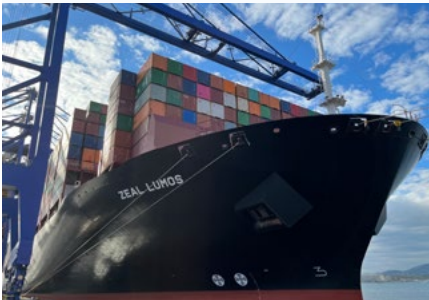
## Other key figures for 2024:

2,900+	Seafarers on board at any time
287	Shore based employees globally <sup>2</sup>
4,600+	Port calls
9.5m+	Nautical miles of distance covered
1	Spill at sea (5 litres)
4,301	Thousand tonnes CO <sub>2</sub> e
0.38	Lost Time Injury Frequency (LTIF)

<sup>1</sup> As listed under Zodiac Maritime’s Documents of Compliance (DOC), as issued by either the United Kingdom or Liberia.  
<sup>2</sup> The number includes employees at the London head office and the Zodiac Maritime manning offices.

## Fleet under Zodiac Maritime’s management on 31 December 2024:<sup>1</sup>

### Container vessels



NUMBER:  
31

CAPACITY:  
Over 330,000 TEU

VESSEL TYPES:  
1,700 to 15,500 TEU

### Bulk carriers



NUMBER:  
35

CAPACITY:  
Over 5.0 million tonnes deadweight

VESSEL TYPES:  
Handysize, Ultramax, Panamax and Capesize bulk carriers, and Very Large Ore Carriers (VLOC)

### Tankers



NUMBER:  
43

CAPACITY:  
Over 4.0 million tonnes deadweight

VESSEL TYPES:  
Chemical, crude oil and product tankers, and LPG carriers

### Car carriers (PCTC)



NUMBER:  
15

CAPACITY:  
Over 99,000 units

VESSEL TYPES:  
5,900 to 7,400 Vehicle Carriers



GHG emissions, energy efficiency and Zodiac Maritime’s strategy

As the maritime industry transitions towards a sustainable future, it will be required to align with the International Maritime Organization’s (IMO) targets to reduce greenhouse gas (GHG) emissions from international shipping by 2050. Given the sector’s traditional reliance on internal combustion engines and fossil fuels, decarbonisation has become a key priority. The environmental impact extends beyond carbon dioxide (CO<sub>2</sub>) to include nitrogen oxides (NOx), sulphur oxides (SOx), and particulate matter.

At Zodiac Maritime, we recognise that sustainability extends beyond regulatory compliance. While we continue to adhere to the requirements outlined in MARPOL Annex VI, our efforts go beyond this. We are continually exploring solutions that push current standards, enabling us to make significant changes towards cleaner operations.

Zodiac Maritime is reducing emissions by applying advanced technologies on board its vessels and enhancing the monitoring and analysis of data to boost its fleet

performance efficiency. By implementing these technologies, we aim to meet the 2023 IMO goals for reducing Greenhouse Gas (GHG) emissions—targeting a 20% reduction, striving for 30%, by 2030, and aiming for 70%, striving for 80%, by 2040, relative to 2008 levels. Our retrofit projects (more details on page xx), and the installation of Alternative Marine Power (AMP) systems for shore power, are key to improving fuel efficiency and reducing emissions.

To support these efforts, we are enhancing our fleet’s precise data collection systems with mass flowmeters and shaft meters, which enable real-time tracking of vessel efficiency, carbon intensity and emissions. In addition, our expert in-house energy efficiency team monitors vessel performance through an advanced digital system, ensuring ongoing optimisation and progress toward our environmental objectives across the fleet.

We are exploring carbon offset programs through our third-party vendors in the interest of supporting different environmental initiatives, as part of our ongoing dedication to sustainable operations. In 2024, we conducted a pilot in offsetting some of the carbon emissions

generated by crew travel and we will initiate offsetting in 2025.

Reducing SOx and NOx emissions

Zodiac Maritime is committed to reducing both sulphur oxide (SOx) and nitrogen oxide (NOx) emissions across our fleet through a combination of operational measures and technological advancements. To reduce SOx emissions, we have implemented strategies in line with global regulatory standards, including the use of low-sulphur fuels and the installation of exhaust gas cleaning systems (scrubbers) on select vessels. In parallel, Zodiac Maritime is actively tracking and monitoring NOx emissions of vessels in the fleet to meet the requirements set forth by Regulation 13 of MARPOL Annex VI.

The incorporation of dual-fuel vessels capable of running on LNG and LPG has further contributed to lowering NOx and SOx emissions, helping to minimize the environmental impact of these vessels. In 2024, two additional LPG dual-fuel tankers were introduced in the fleet. In the same year, we also welcomed our first LNG dual-fuel car carrier, with more similar vessels expected to arrive in the following years.

Emissions metrics

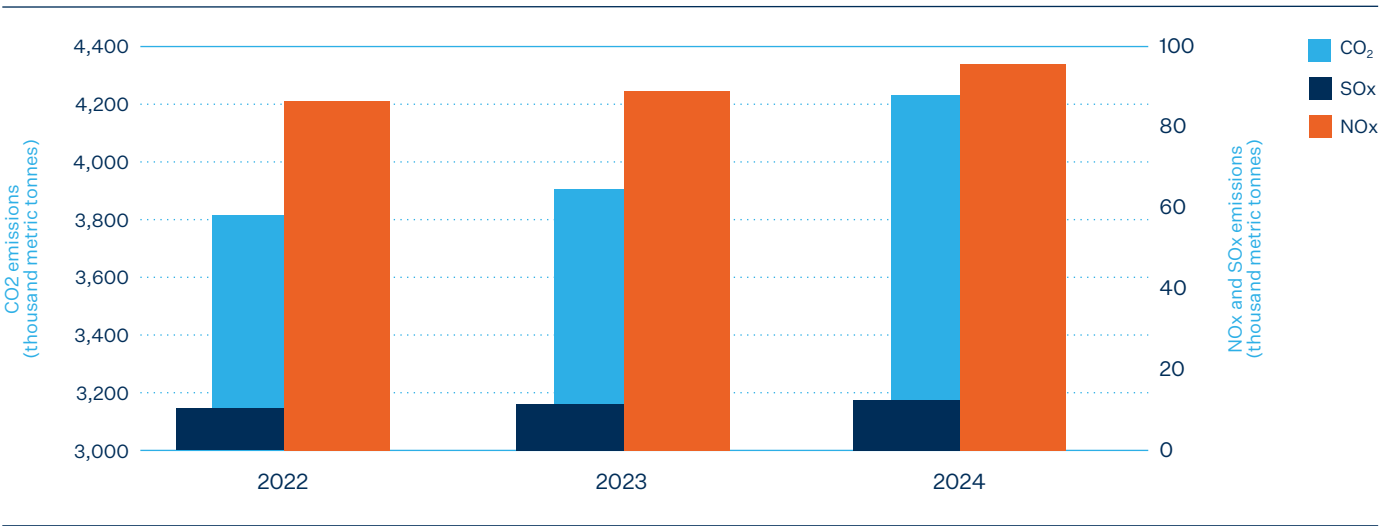
		Units	2022	2023	2024
Fuel consumption	Total fuel consumption (1)	Thousand metric tonnes (MT)	1,227	1,245	1,357
Emissions	CO <sub>2</sub> emissions (2)	Thousand metric tonnes (MT)	3,832	3,889	4,235
	CO <sub>2</sub> e emissions (6)	Thousand metric tonnes (MT)	--	--	4,302
	SOx emissions (3)	Thousand metric tonnes (MT)	10	11	13
	NOx emissions (4)	Thousand metric tonnes (MT)	86	89	95
	Refrigerant gas losses (5)	%	12.7	13.3	10.8

Activity metrics

Fleet data	Average fleet size (6)	Number of ships	127	124	125
	Deadweight (DWT) (7)	Thousand deadweight tonnes (MT)	13,305	12,923	12,938
	Total distance travelled by vessels (8)	Thousand nautical miles (nm)	8,740	8,879	9,615

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 12 of this report.

Fleet emissions



Refrigerant gases

The refrigeration and air-conditioning systems of a vessel use gases that can have significant impact on global warming and are regulated through MARPOL Annex VI. We regularly measure the refrigerant gas loss out of the total refrigeration system capacity on our managed fleet. In 2024, the losses were 10.8%, a decrease from 13.3% in 2023. The decrease was mainly driven by an increased focus to prevent leaks before they happen and take rapid corrective actions if they do.

Other air pollutants

Beginning January 1, 2026, the EU’s Emission Trading System (ETS) will expand to include methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions, measured on a CO<sub>2</sub> equivalent (CO<sub>2</sub>e) basis. In preparation for this update, Zodiac Maritime has implemented a procedure to monitor both methane and nitrous oxide emissions. These emissions, calculated as CO<sub>2</sub> equivalents, are being reported for the first time in this document.

In 2024, our CO<sub>2</sub> emissions increased by 8.9%, primarily due to a rise in fuel consumption. This increase in fuel use is mainly attributed to the higher level of vessel utilisation and the longer distances

covered by our fleet, with an 8% increase in distance travelled.

Energy conservation practices

Energy conservation is key to decarbonising vessels and reducing emissions. Achieving this requires ongoing investment in energy efficiency through both operational improvements and technical upgrades. Some of the most effective practices implemented fleet-wide through our Ship Energy Efficiency Management Plan (SEEMP I), include:

- Slow-steaming (where possible), speed optimisation, weather routing, and just-in-time arrivals.
- Regular inspections of the underwater hull area, propeller polishing, and hull cleaning to maintain performance.
- Ensuring the most efficient engine configurations and strict adherence to the planned maintenance system.

Individual performance targets are set for each vessel and reviewed annually. Our onboard performance monitoring system tracks efficiency trends, supporting decisions for continuous improvements. The SEEMP I is further supported by ship-specific operational carbon intensity plans (SEEMP III) to meet Carbon Intensity Index (CII) requirements.

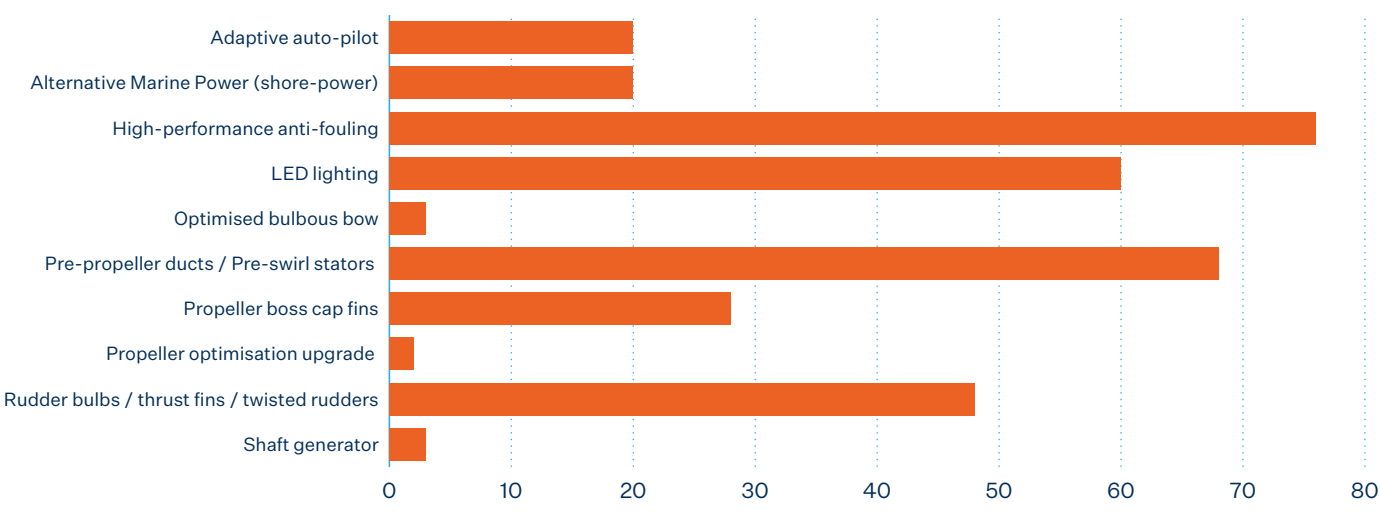
Efficiency improvement projects

Zodiac Maritime continues to prioritise energy efficiency across its fleet, focusing on enhancing propulsion, reducing hull resistance, and optimising auxiliary service consumption. Significant fuel-saving technologies have been installed across the fleet, including high-efficiency propellers, propeller boss cap fins, pre-swirl stators, rudder bulbs, thrust fins, pre-propeller ducts, optimised bulbous bows, advanced anti-fouling hull coatings, LED lighting, upgraded auto-pilots and variable-frequency drives.

Additionally, AMP allows vessels to connect to shore power while in port, helping to reduce fuel consumption and emissions. Currently, twenty of our vessels are equipped with this technology, and we are continuously increasing the number of container vessels outfitted with AMP to further advance our sustainability initiatives.

The two LPG dual-fuel tankers introduced to our fleet in 2024 are equipped with shaft generators powered by the main engine. This technology offers significant fuel savings and reduces emissions by providing more efficient onboard power generation.

Energy saving technologies



During 2024, Zodiac Maritime made significant progress in enhancing the energy efficiency of its managed fleet with vessels being fitted with a variety of energy-saving technologies.

By the end of 2024, 73% of our vessels are fitted with technologies that enhance propulsion performance, 59% have advanced anti-fouling coatings to reduce fuel consumption, and 47% are equipped with energy-efficient LED lighting. The table opposite lists the energy-saving technologies implemented across our fleet.

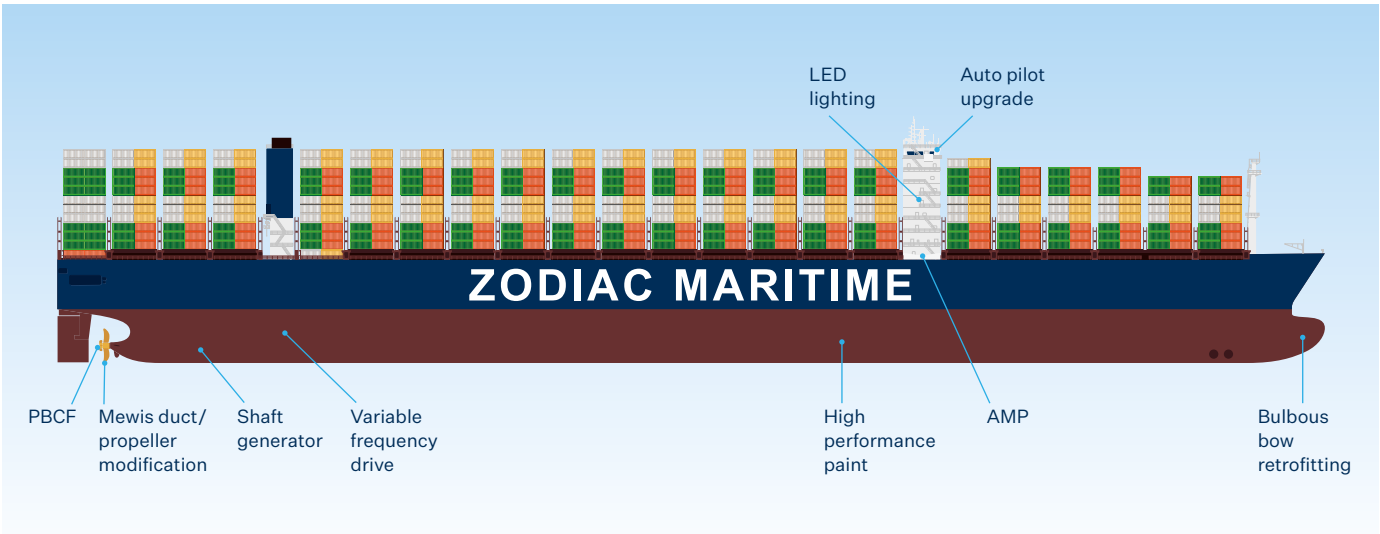
Upgrades are carefully selected based on detailed analysis, ensuring that the most suitable technology is applied to each vessel, ultimately improving the overall efficiency of our fleet.

Each of these upgrades have led to varying levels of fuel savings, with improvements ranging from 1% for the adaptive auto-pilot to up to 7% from the installation of propeller ducts. Additionally, the shift to LED lighting has resulted in significant reductions in energy consumption.

As part of our commitment to sustainability, Zodiac Maritime has been actively trialling biofuels. The trials demonstrated positive outcomes, and as a result, we are examining the introduction of biofuels on our vessels. This marks a significant milestone in our journey to reduce emissions and transition to more sustainable fuel options.

Furthermore, the company is conducting a feasibility study on wind propulsion technology for newbuild vessels. This research aims to explore innovative ways to enhance fuel efficiency and reduce

Retrofitted energy-saving technologies



emissions further, aligning with our long-term sustainability goals.

Fleet performance monitoring

Zodiac Maritime utilises an advanced performance-monitoring system that collects and analyses vessel energy consumption data. Key performance indicators are regularly shared with the shore-management team, enabling the early detection of issues with hull, engine, or propeller performance. This allows for timely decisions regarding hull cleaning, propeller polishing, and engine maintenance to maintain efficiency. The system also supports data collection and reporting for compliance with key regulations, including IMO DCS, EU MRV, EU ETS, and the new FuelEU Maritime regulations.

Performance metrics

Zodiac Maritime continues to enhance its operational efficiency by closely monitoring key performance metrics, including the Annual Efficiency Ratio (AER), the Energy Efficiency Operational Index (EEOI), and the Energy Efficiency Design Index (EEDI). In 2023, both AER and EEOI showed significant improvements on a fleet-wide basis.

In 2024, the overall fleet values for AER, EEOI and EEDI showed an increase

Efficiency metrics

		Units	2022	2023	2024
Efficiency Indicators	AER (9)	gCO <sub>2</sub> /DWT.nm	8.2	6.7	6.9
	EEOI (10)	gCO <sub>2</sub> /cargo ton.nm	19.5	16.4	17.3
	EEDI (11)	gCO <sub>2</sub> /DWT.nm	6.2	6.2	6.5

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 12 of this report.

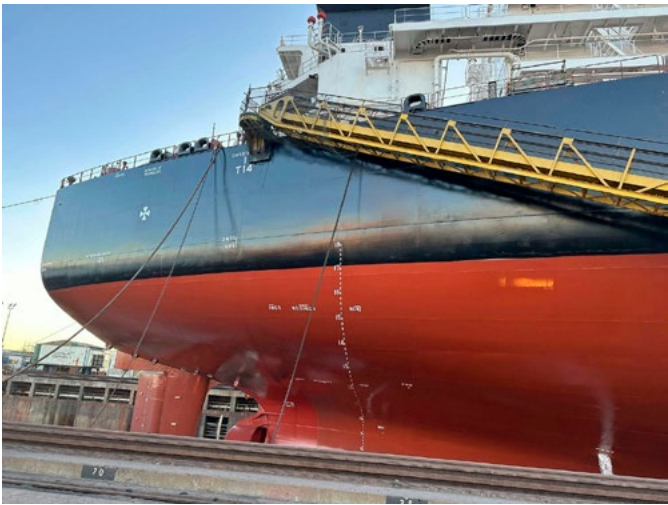
compared to the previous year. This was primarily due to the addition of new PCTC (car carrier) vessels, which naturally have higher index values due to their design and operational profile. However, when analysing performance of vessel types in our fleet, all vessel segment categories demonstrated improvement in these efficiency indicators compared to 2023. This reflects the ongoing implementation across the fleet of energy conservation measures, technology upgrades and operational measures for efficient voyage planning and execution.

We remain committed to meeting energy efficiency targets through continuous fleet optimisation and the incorporation of more energy-efficient vessels in the future.

Carbon Intensity Indicator (CII)

As part of our commitment to reducing emissions and improving environmental performance, Zodiac Maritime closely tracks the Carbon Intensity Indicator (CII), which measures the amount of CO<sub>2</sub> emissions per cargo-carrying capacity and nautical mile. CII is an important metric in line with the IMO's regulations and helps assess the carbon efficiency of our vessels.

For the second year of CII verification, the majority of our vessels achieved a better rating than the targeted "C." This was made possible through measures like speed optimisation, slow steaming, and technology upgrades. We aim to maintain or improve these ratings as we continue to enhance our fleet's carbon efficiency.



Silicone paint – M/T Pluto Moon



Pre-propeller duct – M/T Neptune Moon



Assumptions

1 Total fuel consumption

Total amount of fuel consumed by the company’s fleet during the calendar year. The number includes all fuel types consumed for main and auxiliary machinery for each vessel’s daily reported fuel consumption.

2 CO<sub>2</sub> emissions

Reported CO<sub>2</sub> emission is based on total fuel consumption of the fleet for the period derived from each vessel’s daily reported fuel consumption numbers with conversion factors provided by IMO for the various fuel types.

3 SO<sub>x</sub> emissions

Reported SO<sub>x</sub> emission is based on total fuel consumption for the fleet for the period derived from each vessel’s daily reported fuel consumption numbers. For each fuel type SO<sub>x</sub> emissions re calculated from the sulphur content indicated in the Bunker Delivery Note (BDN).

4 NO<sub>x</sub> emissions

Reported NO<sub>x</sub> emission is based on the energy output of each engine installed for the period derived from each vessel’s daily reports and the specific NO<sub>x</sub> emissions from the approved technical file.

5 Refrigerant gas losses

Total annual losses (kgs) divided by the total capacity of the refrigeration and air-conditioning systems on vessels (kgs), expressed as a percentage.

6 CO<sub>2</sub>e emissions

Reported CO<sub>2</sub> equivalent emission is based on the aggregation of total CO<sub>2</sub> emissions (2) and additional CH<sub>4</sub> and N<sub>2</sub>O emissions derived from vessel fuel consumption and calculated as CO<sub>2</sub> equivalent. GWP 28 (CH<sub>4</sub>) and 265 (N<sub>2</sub>O).

7 Average fleet size

Reported number of vessels is calculated based on the weighted number of company-managed vessels within the period.

8 Deadweight tons (DWT)

Reported DWT tons are the sum of the aggregate pondered DWT of the vessels within the period.

9 Total distance travelled by vessels

The total distance sailed by all managed vessels in the fleet, whether in service or not and derived from each vessel’s daily reported distance within the period.

10 Annual Efficiency Ratio (AER)

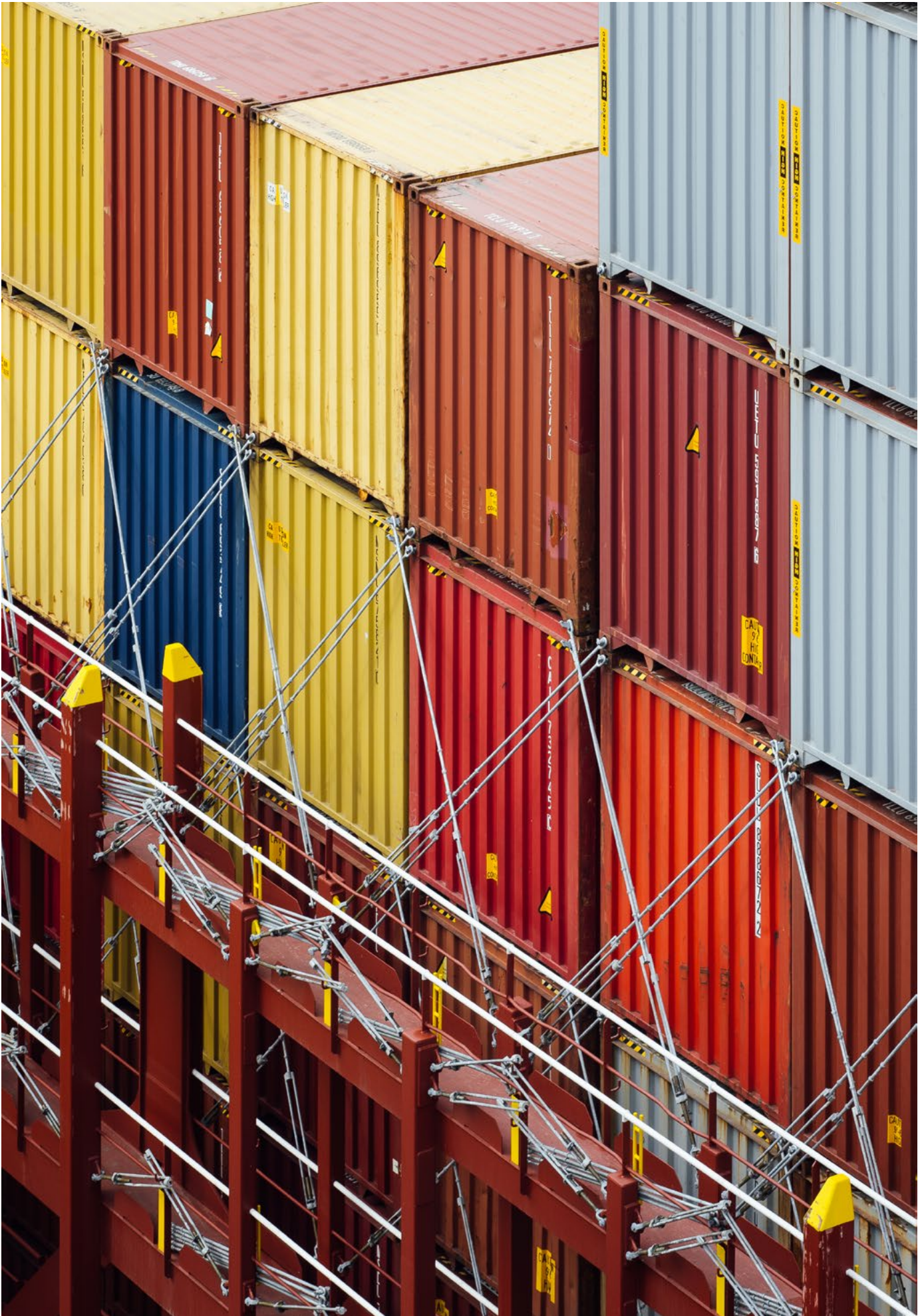
Grams of CO<sub>2</sub> emissions divided by total distance travelled, multiplied by the total carrying capacity of the ship. The year average AER number in this report is the average of the individual AER numbers for the applicable vessels.

11 Energy Efficiency Operational Index (EEOI)

Grams of CO<sub>2</sub> emission divided by ton-miles, calculating the number of tons transported over the distance travelled. The average EEOI number for 2022, 2023 and 2024 in this report is the average of the individual EEOI numbers for the applicable vessels.

12 Energy Efficiency Design Index (EEDI)

All vessels built from 2013 and onwards have EEDI assigned. Each ship’s EEDI value is the product of power installed, specific fuel consumption, and carbon conversion, divided by the product of available capacity and vessel speed at design load. The year average EEDI number in this report is the average of the individual EEDI numbers for the applicable vessels.





Prevention of marine pollution

One spill in 2024

We are fully aware of the impact that spilled hydrocarbons, or other chemical substances, can have on the marine environment and have multiple barriers in place to prevent such incidents. Unfortunately, one oil spill incident occurred on a managed vessel in 2024 when a cargo of lubricating oil overflowed from a pressure release valve and approximately 5 litres spilled into the water. The incident was thoroughly investigated and the important lessons learned were shared with the tanker fleet; with a subsequent training campaign launched for the crew on the appropriate vessels.

Waste management

The annual waste production in our fleet is closely monitored. The majority of the waste generated is disposed of either at port reception facilities or through onboard incineration of certain types of waste. This is permitted by MARPOL when the ship is an adequate distance from shore and sensitive sea areas. In compliance with international and local regulations, we discharged permitted waste including food waste and swept cargo residues (including cleaning agents) into wash water that were not harmful to the marine environment. This equated to approximately 16% of total garbage produced on board.

At Zodiac Maritime, we, instruct our vessels to only incinerate waste in international waters even when MARPOL and local regulations permit this to be done within a country’s territorial waters. With this measure we aim to better protect coastal communities. Moreover, we continue to look for ways to minimise the generation of waste, such as consolidating the dispatch of supplies to ships, with the aim of reducing excessive packaging, as well as reducing the carbon footprint of these deliveries.

In 2025, we will launch a new initiative to reduce the use of single-use plastics in the Zodiac fleet. Our priority will be to supply high-quality drinking water to seafarers by installing onboard water treatment units, simultaneously addressing the challenge of reducing single-use plastic waste – primarily plastic water bottles.

Container loss at sea: impact to the environment

In 2024, and for the sixth year in a row, not a single container was lost overboard in the fleet. Containers can be lost overboard due to adverse weather conditions, navigation incidents, or improper stowage and securing arrangements on board. Lost containers can pose a navigation hazard and can cause contamination of the marine environment, especially if their contents include harmful or toxic materials.

Environmental incidents

Zodiac Maritime takes environmental compliance very seriously and standards are strictly enforced across our fleet. In 2024, a breach of MARPOL's Prevention of Pollution by Garbage regulations was reported. During the incident, a single plastic bag was accidentally discharged at sea along with food waste; disposal of plastics at sea is strictly prohibited by MARPOL. Extensive training was provided on board the affected vessel, while the entire fleet was reminded of the regulatory requirements on waste management. In another instance, our ballast water recording practices were found to require enhancement in order to comply with specific local regulations and these were updated accordingly.

Protection of marine biodiversity

Ballast water management

Taking on ballast water is essential for ships to maintain stability and navigational safety in light cargo conditions. However, the transfer and introduction of microorganisms to foreign ecosystems can present a significant environmental risk.

The IMO’s Ballast Water Management Convention prescribes that all relevant vessels must treat their ballast using a Ballast Water Management System (BWMS), ensuring the removal of



potentially harmful organisms and pathogens before discharge. In 2024, 100% of the Zodiac-managed vessels had a BWMS in place ahead of the Convention’s deadline date of September 2024.

Biofouling management

In addition to the carriage of invasive aquatic species in ballast water, ships can potentially accumulate and transfer such organisms on their hull. Biofouling also increases the ship’s drag in the water and reduces its hydrodynamic performance, therefore increasing fuel consumption and the ship’s GHG emissions.

At Zodiac, we have adopted the IMO Biofouling Guidelines into mandatory fleet policies and procedures to mitigate the impact from ship biofouling, since 2019.

Further environmental initiatives

A Particularly Sensitive Sea Area (PSSA) has been identified by the IMO as a marine environment that is particularly sensitive on account of recognised ecological, socio-economic, or scientific attributes, where such attributes may be vulnerable to damage by international shipping activities. Ship routeing and reporting measures for vessels transiting these areas are mandated by the IMO. We further instruct our vessels to not

discharge waste and effluents when sailing in PSSAs, even where discharge is permitted, so as to ensure maximum protection of the local ecosystem.

We prohibit the discharge of treated bilge water from vessels travelling within any state’s territorial waters, which goes beyond MARPOL requirements where it is permitted unless the vessel is in a designated sensitive area.

Responsible Ship Recycling

As part of its management services, Zodiac Maritime is able to provide assistance to ship owners looking to sell a vessel for recycling. As a responsible ship operator and manager, Zodiac Maritime has always ensured that such sales are conducted in a strictly lawful manner.

The Hong Kong Convention will come into effect on 26 June 2025, after a prolonged period of waiting. Compliance with it has been part of Zodiac Maritime’s policy requirements for a number of years and Zodiac Maritime welcomes the widespread adoption in the shipping industry of this benchmark for recycling ships in a responsible and sustainable way to the benefit of all stakeholders.

All vessels calling at European ports are required to carry and maintain an

Inventory of Hazardous Materials (IHM) under the European Union Ship Recycling Regulation. The same requirements apply under the Hong Kong Convention. The entirety of Zodiac Maritime’s fleet already carries an approved IHM, and procedures for its maintenance are followed by relevant teams on board and ashore. Although the Hong Kong Convention will enter into force in 2025, compliance with it has been part of Zodiac Maritime’s policy requirements for a number of years and Zodiac Maritime welcomes the widespread adoption in the shipping industry of this benchmark for recycling ships in a responsible and sustainable way to the benefit of all stakeholders.

All vessels calling at European ports are required to carry and maintain an Inventory of Hazardous Materials (IHM) under the European Union Ship Recycling Regulation. The same requirements apply under the Hong Kong Convention. The entirety of Zodiac Maritime’s fleet already carries an approved IHM.

Zodiac Maritime continues to invest significant time and resources in ensuring that its business has the least possible impact on health, safety, and the environment, and operates fully in compliance with all applicable laws and regulations.

Environmental performance metrics

Performance Indicator	Units	2022	2023	2024
Average fleet size	Number of ships (6)	127	124	125
Oil spills to water	Number of incidents (>1 barrel spilt)	0	0	0
	Number of incidents (<1 barrel spilt)	0	0	1
Garbage production	Cubic metres	10,600	11,000 <sup>3</sup>	11,000
Garbage disposal to sea	Percentage of total garbage production	18%	15% <sup>4</sup>	16%

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 12 of this report.

3 Corrected figure from the 2023 HSE Report due to an adjustment to the calculation methodology  
4 Corrected figure from the 2023 HSE Report due to an adjustment to the calculation methodology







# Health and Safety

## Safety performance

In 2024 we continued to improve our safety performance towards our goal of eliminating high severity incidents and injuries across the fleet. Lost Time Injury Frequency (LTIF) is the standard industry benchmark for safety performance, defined by the Oil Companies International Marine Forum (OCIMF) as the number of cases where a seafarer has been injured so that they cannot return to work on the same day (lost time injuries), and measured per million man-hours of exposure (time on board). Our LTIF performance in 2024 across all our fleets was well within set targets, and our overall LTIF performance improved on a year-on-year basis.

promote transparency, accountability and communication between ship and shore functions as well as within teams.

Safety culture is fundamental to performance. Our strategy features a multi-faceted approach intended to break down barriers to communication and encourage engagement and participation at all levels of the organisation, including working groups, forums and cross-departmental campaigns alongside the existing traditional lines of communication.

Procedural simplification has at its heart a focus on making life easier for our seafarers. The process starts with real-time observation and analysis of

across Zodiac Maritime and industry best practice. In this way, seafarers contribute to, and take ownership of, an improved set of instructions based on “Work as Done” thereby reducing disparity with “Work as Imagined”.

Over the course of 2024, we began our journey into leveraging the safety data we collect into continuous improvement of our systems, with the generation of live dashboards making key information instantly available to users, which is already having a material impact on the way we can analyse and share significant trends.

In 2024, we had two collisions involving our managed vessels. One occurred while our vessel was at anchor and the other while the vessel was leaving port in dense traffic. Additionally, one vessel touched bottom while leaving port in a narrow channel. Fortunately, none of these incidents involved any injuries or pollution, but the learnings are nevertheless critical to preventing repetition of similar situations and have been disseminated accordingly across the fleet.

## Occupational health & safety

The provision of a safe working environment for the seafarers on board our vessels continues to be a primary focus for Zodiac Maritime. Working at sea presents crew with a range of diverse hazards to health, some immediately apparent and others with a longer-term impact. Our safety management system, structured to optimise the guidance from the Code of Safe Working Practices for Merchant Seaman and the ISO 45001:2018 Standard for Occupational Health and Safety Management,

is regularly reviewed to ensure that all such hazards are identified and addressed in a systematic manner.

We continue to research and implement technologies or equipment which aid in mitigating Occupational Health and Safety hazards.

## Health and wellbeing at sea

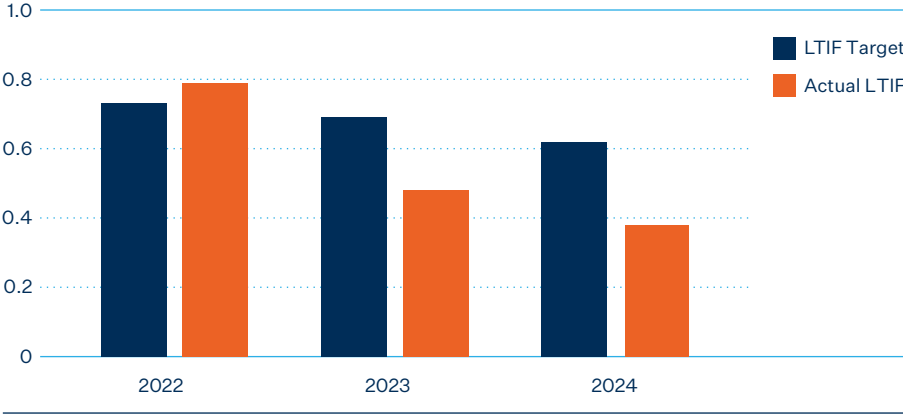
We constantly aim to minimise the risks to our seafarers’ health; however, illnesses do occur. During 2024,

65 seafarers were repatriated on medical grounds due to illness.

In 2024, we focused on improving the wellbeing of our seafarers onboard by running a pilot with a service contractor concentrating on crew health and wellbeing and catering management. As part of this pilot, 124 of our Cooks received Zodiac-tailored training conducted by a team of shore based culinary and hospitality professionals. Emphasis was placed in improving the

Cooks’ culinary skills, planning healthy and well-balanced menus, along with enhancing their knowledge on provisions management, hygiene protocols and food wastage minimisation. In addition, 40 of our vessels enjoyed enhanced provision management services, with the aim of improving nutrition and variety of menus, standards of hygiene through galley inspections and food wastage.

## Lost Time Injury Frequency – All fleets



Our five-year safety strategy (for the years 2024-2028) defines three main objectives, namely the enhancement of safety culture, improvement of the end-user experience of our procedures, and the implementation of systems to support safe working practices. Actions identified for each of these objectives

safety-critical tasks as they are carried out, followed by an assessment of the major hazards in consultation with the crew. We then draw up the step-by-step process and analyse the risks and mitigations with reference to the wealth of seagoing experience represented





# Inspection Performance

## Port State Control inspection

Port State Control (PSC) is a key element in ensuring that commercial vessels trading globally comply with applicable international and national regulations relating to vessel safety, environmental protection, and crew welfare.

Regional PSC organisations that operate under Memoranda of Understanding (MOUs) are established to coordinate PSC activities in that specific area. Zodiac Maritime’s performance is reported within the largest regional MOU organisations: Paris MOU (covering Europe and eastern Canada), Tokyo MOU (covering large parts of Asia, China and Australasia), Viña del Mar MOU (covering South America) and the US Coast Guard (USCG).

During 2024, throughout the thousands of port calls made, our vessels were

inspected by PSC over 270 times, out of which 176 were ‘clean’ inspections with no deficiencies recorded.

The United States Coast Guard implement the Qualship 21 initiative to identify high-quality foreign-flagged ships. Rigorous acceptance criteria apply to provide incentives for high standards of performance for both the ship and the operating company. We are pleased to report that a further 21 of our vessels qualified for the US Coast Guard’s prestigious Qualship 21 initiative in 2024, increasing the total number of qualified vessels to 55.

Our company performance currently continues to rank as ‘medium’ for the Tokyo and Paris MOUs. We will continue to closely monitor our PSC performance and strive to further improve our vessels’ inspection results.

## PSC Concentrated Inspection Campaigns (CIC)

CICs are carried out for a period of three months and focus on a specific topic. From September to November 2024 Paris and Tokyo MOUs held a CIC focused on crew wages and seafarer employment agreement to confirm compliance with the Maritime Labour Convention (MLC) requirements. Ships in the Zodiac Maritime fleet were inspected 26 times under the detailed requirements of the CICs, resulting in three findings.

## 2024 PSC inspection performance summary

Authority <sup>5</sup>	Total number of inspections	Number of inspections with zero observations	Average number of observations per inspection	Detentions
Paris MOU	60	38	1.53	1
Tokyo MOU	136	69	1.80	3
USCG	43	33	0.35	0
Viña del Mar MOU	35	28	0.31	0

5 In some locations, PSC inspections carried out are recorded in multiple PSC MOU databases. These inspections are shown here under each individual MOU against which they are counted, therefore some inspections will be double-counted.

## Tanker vetting

Vessels in our Tanker fleet (i.e. vessels carrying crude oil, oil products, gas, and chemicals) are routinely inspected by representatives of the OCIMF (SIRE) and the Chemical Distribution Institute (CDI) to verify compliance with applicable legal and regulatory requirements and industry standards.

Tankers in the Zodiac fleet continued to perform well in inspections in 2024, exceeding company targets, which are more stringent than the industry average.

Thanks to the collective dedication and professionalism of our teams on board and ashore, we successfully implemented SIRE 2.0 and CDI 10 in 2024, further

strengthening our commitment to safety, compliance, and operational excellence.

We are pleased to report that Zodiac-operated tankers continue to be chartered to carry cargo for most Oil Majors as well as many other significant companies in the market.

## Vetting performance summary 2022-2024

Programme	Average number of items raised per inspection			Management review of performance
	2022	2023	2024	
Ship Inspection Report (SIRE) <sup>6</sup> VIQ7	1.75	1.67	1.87	Achieved target performance
SIRE 2.0	N/A	N/A	4.12	Achieved target performance
CDI	2.59	2.53	3.43	Achieved target performance

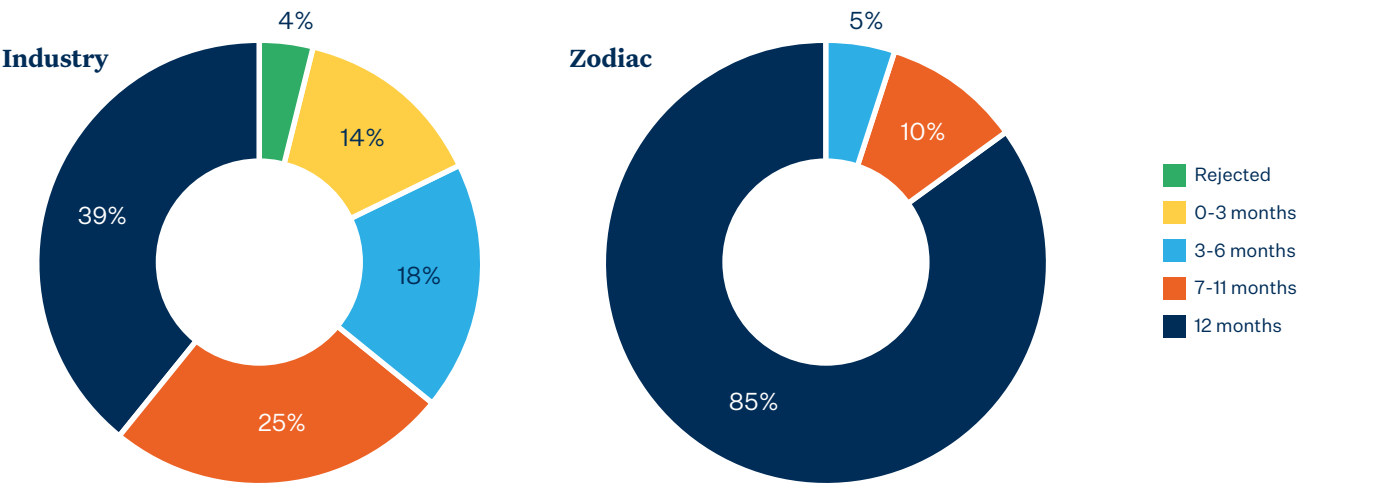
## Dry bulk vetting

Vessels in our Dry Bulk fleet undergo regular inspections by RightShip. These inspections verify compliance with the RightShip Inspections Ship Questionnaire (RISQ), which is formulated to reflect applicable legal and regulatory requirements and industry best practices.

The performance of vessels in RightShip inspections is a crucial metric for our commercial counterparts when they evaluate vessels for prospective chartering business. We are pleased to report that the performance of Zodiac vessels in these inspections in 2024 compares very favourably when benchmarked against the industry

average. With 85% of our vessels securing 12 months of inspection validity, we continue to exceed industry benchmarks, achieving an average of 15 observations per inspection—well below the industry standard of 23.1 observations per inspection.

## RightShip acceptance validity rates 2024



Note: Data available on Rightship

6 INTERTANKO shares the results of members’ SIRE inspections.



# Our People



Zodiac Maritime Officers seminar in Antalya, Turkey on 25-26 February 2025.

### Long-standing relationships

We are pleased to report yet again that there has been a high retention rate for both our teams on board and on shore this year. In 2024, our Head Office staff retention rate was 84.5% (excluding planned retirement), with an average length of service of 7.75 years. Onboard retention rates remain high at 72% for the whole crew and 89%<sup>7</sup> for the senior officers.

To recognise and honour our shore staff and seafarers’ dedication, loyalty, and contributions to the company, we run a long-service award scheme with milestones at 10 and 20 years of service. In 2024 we presented 138 awards.

### An inclusive working environment

Zodiac Maritime has a zero-tolerance policy for any form of discriminatory

practices or behaviour against its employees and seafarers and is committed to ensuring that all employees and seafarers are treated, and treat others, with dignity and respect. It is our policy to provide a healthy working environment free from harassment and bullying and free of discrimination on the basis of age, colour, nationality, race or ethnic origin, sex, sexual orientation, religion, belief, or any other personal characteristic.

Shipping is a global industry, and this is reflected in our multinational workforce on board our ships and in our offices ashore. We are proud to have 29 different nationalities on board and 30 different nationalities based ashore, all working side by side towards our common goals.

### Professional development

In 2024, Zodiac Maritime partnered with a specialist consultancy to develop

a bespoke leadership training program. Tailored to Zodiac’s specific needs, this program will be aligned with the roles and responsibilities of each individual, whether they are at sea or onshore. The leadership training program will be piloted in 2025.

As a market leader in cadet training, Zodiac Maritime continued its strong recruitment efforts in 2024, bringing 276 cadets onboard. Additionally, we strengthened our officer cadet program in the Philippines by establishing partnerships with two local schools, enhancing our training capabilities in the region.

In 2024, we significantly enhanced our advancement training for Ratings. A key initiative was the introduction of a new training program for Motormen in India. Motormen with positive performance evaluations were given the opportunity to participate in a six-week Structural Fitters’ course. Seventeen Motormen completed the course in 2024, and several have already advanced to Fitter positions. Additionally, twelve Ratings from the Zodiac Maritime fleet began the Rating to Officer scheme in 2024, further supporting career progression

Zodiac Maritime continued to run its global crew seminars throughout 2024. These seminars provided valuable face-to-face engagement with more than 350 Officers in India, Eastern Europe and China, as well as more than 460 Ratings in India and the Philippines.

### Investing in the next generation

Scholarships are available to support the ongoing education for the children of Zodiac Maritime seafarers and employees. We are proud that, over the last 16 years, 64 scholarships have been awarded, with a further 4 scholarships available for 2025.

7 Retention rate calculated based on an industry-standard formula developed by INTERTANKO. Available at [www.intertanko.com](http://www.intertanko.com).

# Anti-Corruption

Zodiac Maritime is part of the global supply chain, and bribery and corruption are considered a high risk for our business.

As a company incorporated in the UK, our operations are subject to the UK Bribery Act 2010. As part of our commitment to conduct business in a fair, ethical, and responsible manner in all of our business relationships and dealings,

Zodiac Maritime does not tolerate any form of bribery or corruption and will not, accept and pay bribes or offer improper inducements or anything that could be perceived as such, and expects the same from its customers, business partners, and third parties that perform services or deliver business on our behalf.

Zodiac Maritime takes a proactive approach to fighting bribery and corruption across all of our business activities and has procedures in place to protect our employees and prevent the giving or acceptance of payments, inducements, or bribes or any other such advantage intended to influence persons to carry out their roles or to perform a function improperly.

# Cyber Security

Zodiac Maritime remains committed to strengthening cyber security measures against emerging threats, while expanding industry collaborations to build long-term strategic partnerships. This assures that current platforms and new systems adhere to security

requirements and defend robustly against cyber-attacks.

Benefitting from both industry and internal expertise, we constantly seek opportunities for improvements in our controls to detect, assess and provide timely response to cyber events. In the

last 12 months, we have specifically focused on strengthening our security testing regime and improving through-life security support to IT projects. We strive for our organisation to remain resilient and ready to respond to threats in a changing world.







# LRQA Independent Assurance Statement

## Relating to Zodiac Maritime Ltd. 's Health, Safety and Environmental Report for the calendar year 2024

This Assurance Statement has been prepared for Zodiac Maritime Ltd in accordance with our contract but is intended for the readers of this Report.

### Terms of Engagement

LRQA was commissioned by Zodiac Maritime Ltd (Zodiac) to provide independent assurance of its Health, Safety and Environmental Report 2024 ("the report") against the assurance criteria below to a limited level of assurance and materiality of the professional judgement of the verifier using LRQA's verification procedure. LRQA's verification procedure is based on current best practice, is in accordance with ISAE 3000 and ISAE 3410 and uses the following principles of - inclusivity, materiality, responsiveness and reliability of performance data.

Our assurance engagement covered all of Zodiac's managed commercial fleet and evaluated the reliability of the health, safety and environmental data and information.

Our assurance engagement excluded vessels that are not listed under Zodiac's Documents of Compliance as issued by either the United Kingdom or Liberia, and excluded the data and information of Zodiac's suppliers, contractors and any third parties mentioned in the report.

LRQA's responsibility is only to Zodiac. LRQA disclaims any liability or responsibility to others as explained in the end footnote. Zodiac's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of Zodiac.

### LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that Zodiac has not, in all material respects:

- Met the requirements above;
- Disclosed accurate and reliable performance data and information; and
- Covered all the issues that are important to the stakeholders and readers of this report.

The opinion expressed is formed on the basis of a limited level of assurance<sup>1</sup> and at the materiality of the professional judgement of the verifier.

### LRQA's Approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing Zodiac's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. LRQA verified compliance with Zodiac's Stakeholder Engagement Management Policy.
- Reviewing Zodiac's process for identifying and determining material issues to confirm that the right issues were included in their Report. LRQA benchmarked reports written by Zodiac and its peers to ensure that sector specific issues were included for comparability. LRQA also tested the processes that Zodiac uses to determine the material issues in order to evaluate whether Zodiac makes informed business decisions that may create opportunities that contribute towards sustainable development.

<sup>1</sup> The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. LRQA did not verify the data back to its original sources, nor did it assess the accuracy and completeness of the data reported by individual vessels.



- Auditing Zodiac's data management systems to confirm that there were no significant errors, omissions or misstatements in the report. LRQA reviewed the effectiveness of data handling procedures, instructions and systems, including those for internal verification. LRQA also spoke with certain key people responsible for compiling the data and drafting the report.

### Comments

Further comments and findings, made during the assurance engagement, are:

- Stakeholder inclusivity: LRQA is not aware of any key stakeholder groups that have been excluded from Zodiac's stakeholder engagement process.
- Materiality: LRQA is not aware of any material issues concerning Zodiac's sustainability performance that have been excluded from the report.
- Responsiveness: LRQA is not aware of any weaknesses in the responsiveness of Zodiac to its stakeholders.
- Reliability: Data management systems are considered to be well defined.

### Points of information

- Zodiac has utilised the fuel carbon dioxide emission factors from the "IMO International Maritime Organization MEPC.1/Circ.684: Guidelines for Voluntary Use of the Ship Energy Efficiency Operational Indicator (EEOI) (17/8/09)".
- Sulphur dioxide emissions arising from fuel and diesel oil combustion have been estimated using a calculation based on consumption tonnage and molecular weight.

### LRQA's Standards, Competence and Independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is Zodiac's certification body for a range of management system standards. This does not compromise our independence or impartiality.

Paul Parker (Lead Verifier)  
For and on behalf of LRQA Group Limited  
1 Trinity Park, Bickenhill Lane,  
Birmingham, B37 7ES, United Kingdom.

Issued: May 15, 2025  
LRQA reference: LRQ00002924

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For more information on Zodiac Maritime Ltd.  
or its HSE activities, or to give us feedback  
on our report, please contact us at:

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