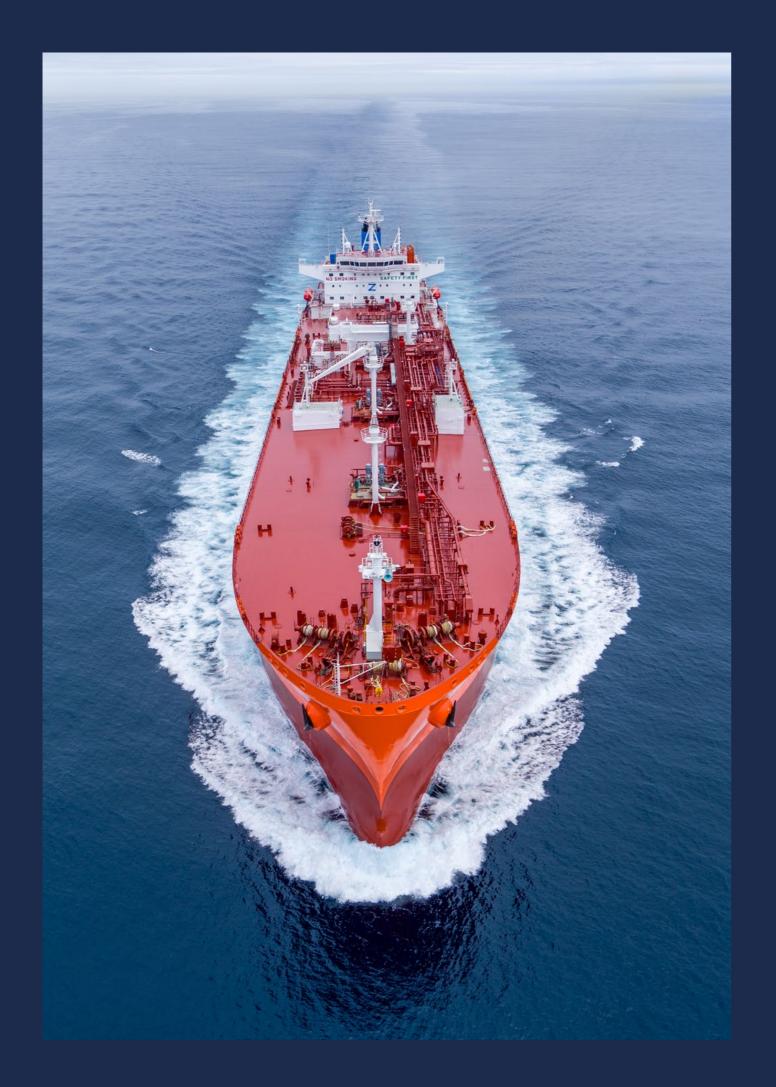


Published by Zodiac Maritime

# Health, Safety and Environmental Report 2023



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## View from the **Chief Executive Officer**

2023 has been a turbulent year across the globe. With the conflict between Russia and Ukraine ongoing, we also saw the situation in the Middle East erupt after the devastating attacks of 7th October, further destabilising an already volatile region. This has resulted in far-reaching consequences across the global maritime industry, with disruption to traditional trading routes and a heightened security risk in the Red Sea. At Zodiac Maritime, we continue to monitor the situation, working closely with all stakeholders so as to continue operating first class tonnage while prioritising the safety of our seafarers.

With a flexible approach and agile response to dealing with the challenges that arise from commercial, economic, and geopolitical complexities, we at Zodiac Maritime maintain our commitment to provide the highest quality ship management services to our clients.

The health and safety of our crew always remains our priority and we continue to improve on our safety culture across the fleet. Our outstanding safety performance for 2023 reflects the hard work that goes into maintaining these standards. This is something that the whole Zodiac Maritime team, at sea and on shore, should be proud of and is testament to the power of working together as a team towards a common goal.

The road to decarbonisation remains at the top of the global agenda for all industries. For shipping, managing the emissions of the worldwide fleet is an ongoing journey, and we can see efforts across the sector focused on testing, trialling solutions, and learning along the way. We must work collaboratively to find future solutions, but it is important not to let this distract us from taking responsibility in the present, and address the situation as we can, now. At Zodiac Maritime, we are addressing decarbonisation issues from a two-pronged perspective; what can we do now? And how can we prepare for the future?

We have been working hard to improve our current assets by implementing retrofits and focusing on how we can improve energy efficiency in the existing fleet. Having upgraded our energy efficiency management system, we expect to see immediate benefits both in reducing our carbon footprint, with enhanced vessel performance coming through analysis of more accurate data, and in assisting our vessels' compliance with EU and IMO emissions regulations.

In terms of future technologies, 2023 was indeed a milestone for Zodiac Maritime's own decarbonisation journey. This year, we welcomed our first vessel utilising transition fuel into the Zodiac Maritime fleet - an LPG-powered gas carrier and her successful delivery was thanks to the detailed planning and crosscollaboration between our shore-based teams, shipyard managers, and of course our dedicated crew who worked on her sea and gas trials, and maiden voyage. We look forward to 2024 and the arrival of numerous further dual-fuel vessels.

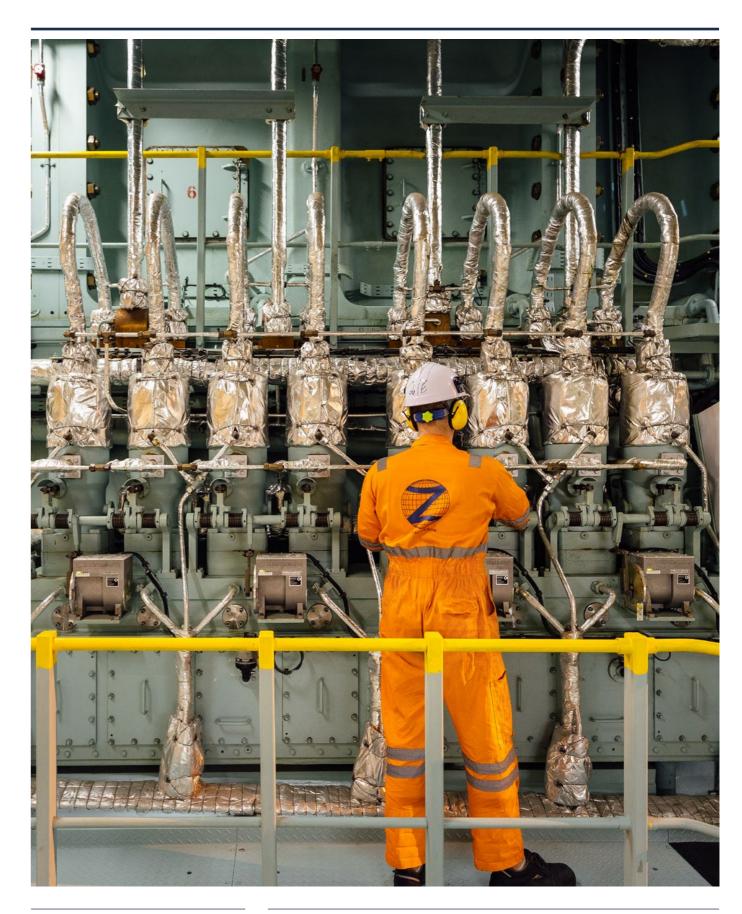
Streamlining and improving technologies is a consistent and iterative process that is ongoing on our ships and ashore. Our internal digital transformation program is well underway as we move our administrative and analytical capabilities to a new, in-house solution. We continue to see increased efficiencies to our operations as we transition to new technologies and we anticipate continuing improvements to work efficiency and information flows as we head into 2024, integrating and familiarising our teams with new platforms.

A significant part of our digital transformation is founded in our safety culture - promoting strong focus on a culture of health and safety must also take place across all aspects of a business and this includes our cyber security and staying safe in an ever more digital world. Increased cyber threats and misinformation, the integration of Artificial Intelligence into all kinds of systems as a few examples. These challenges continue to morph in complexity and increase in range. We are committed to staying ahead of any developing security issues, keeping our systems secure through a combination of hardware, software, robust procedures and rigorous training.

Whilst the future is never certain, against the current global setting, 2024 might seem a more unpredictable year ahead than most. But there will be opportunities to grasp, and at Zodiac Maritime, we begin 2024 confident of overcoming the challenges that lie ahead and excited for the milestones planned. As ever, we shall face any adversity as a team, work collaboratively and, with forward planning, we look forward to a year of continued successes, big and small. There is always room to improve, and we endeavour to build on our legacy of excellence of the past seven decades in any context.

And with that, please enjoy reading our HSE Report for 2023.

**Daniel Ofer** Chief Executive Officer



### Materiality Assessment

## About Zodiac Maritime

The 2023 Health, Safety and Environmental (HSE) Report covers any issues arising during the reporting period both on board commercial vessels operated and/or managed by 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 2023, 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.

Zodiac Maritime Limited ("Zodiac Maritime") is an international ship operating company for commercial vessels, providing a wide 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.

Zodiac Maritime manages a diverse portfolio of cargo-carrying vessels operating on international routes.

At the end of 2023, the managed fleet<sup>1</sup> included a total of 122 vessels.



NUMBER 31

#### CAPACITY: Over 330,000 TEU

VESSEL TYPES: 1,700 to 15,500 TEU

#### Other key figures for 2023:

### 3,000+ Seafarers on board at any time

218

Office employees

5,100+ Port calls

8.70m+ Nautical miles of distance covered

0 Spills

7

### 0.48 LTIF (Health & Safety)

### Tankers

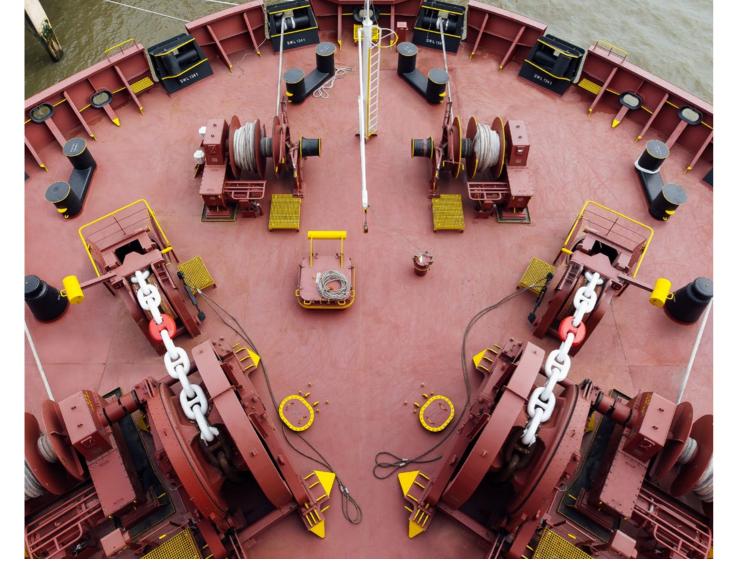


NUMBER: 43

CAPACITY: Over 4.0 million tonnes deadweight

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

1 As listed under Zodiac Maritime's Documents of Compliance (DOC), as issued by either the United Kingdom or Liberia.



Health, Safety and Environmental Report 2023

#### Fleet under Zodiac Maritime's management on 31 December 2023:1

#### Bulk carriers



NUMBER 36

#### CAPACITY:

Over 5.0 million tonnes deadweight

#### VESSEL TYPES:

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

#### Car carriers (PCTC)



NUMBER: 12

CAPACITY: Over 78,000 units

#### VESSEL TYPES:

5,900 to 7,400 Vehicle Carriers

### Environment

#### GHG Emissions, Energy Efficiency and Zodiac Maritime's strategy

Zodiac Maritime, along with the rest of the maritime industry, is aligning with the IMO's strategy for reducing carbon emissions throughout international shipping. This includes an enhanced common ambition to reach net-zero Greenhouse Gas (GHG) emissions from international shipping by or around 2050, with indicative checkpoints for 2030 and 2040.

With commercial shipping activity heavily relying on internal combustion engines and fossil fuels, decarbonisation is a priority across the maritime industry. Current major pollutants include carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NOx), sulphur oxides (SOx) and particulate matter (PM).

Zodiac Maritime recognises the importance of legal and regulatory requirements in environmental matters, especially MARPOL Annex VI. We aim not only to comply with these requirements but to achieve more.

We are strongly committed to reducing our air emissions and are making this happen by applying new technologies on board our vessels and improving monitoring and analysis of data from our vessels to increase performance efficiency in the fleet. Accurate and reliable data is essential for this, and Zodiac Maritime is installing and upgrading tools and equipment on board our vessels, such as mass flowmeters and proven shaft meters, to constantly monitor vessel efficiency, carbon intensity and emissions in the fleet. In addition, Zodiac Maritime's dedicated in-house energy efficiency team uses a sophisticated digital performance monitoring system that is responsible for overseeing vessels' performance.

Reduction of emissions is achieved through operational conservation practices applied on board. Additionally, Zodiac Maritime has invested in vessel and equipment retrofits and is proactively exploring new energyefficiency technologies to reduce the GHG emissions to meet the revised IMO goals, which are to reduce total GHG emissions by 20%, and striving for 30%, by 2030 and then by 70%, and striving for 80%, by 2040 (both targets relative to 2008 figures). Some of the retrofit projects undertaken

include: bulbous bow optimisation, propeller boss cap fins, propeller ducts, LED lighting, variable-frequency drive motors and high-performance anti fouling paint coatings.

Zodiac Maritime is in a continual process of renewing and expanding our fleet with more energy efficient tonnage. The addition of newbuild vessels able to run on alternative fuels (LNG and LPG) is a key step for a transition to green fuels.

#### SOx emissions

In compliance with the IMO 2020 SOx regulations, Zodiac Maritime has been successful in implementing a transition to very low sulphur fuels, recording similarly low levels of emissions the last three years. The installation of exhaust gas scrubbers and the incorporation of dual-fuel vessels (LNG/LPG) to the fleet has contributed to the reduction in sulphur dioxide emissions.

#### NOx emissions

Zodiac Maritime is actively tracking and monitoring NOx emissions of vessels in the fleet to ensure compliance with NOx emission limits of Regulation 13 of MARPOL Annex VI.

#### **Emissions** metrics

		Units	2021	2022	2023
Fuel consumption	Total fuel consumption (1)	Thousand metric tonnes (MT)	1,279	1,227	1,245
Emissions	CO <sub>2</sub> emissions (2)	Thousand metric tonnes (MT)	3,992	3,832	3,889
	SOx emissions (3)	Thousand metric tonnes (MT)	13	10	11
	NOx emissions (4)	Thousand metric tonnes (MT)	88	86	89
	Refrigerant gas losses (5)	%	14.2	12.7	13.3

#### Activity metrics

Fleet data	Average fleet size (6)	Number of ships	129	127	124
	Deadweight (DWT) (7)	Thousand deadweight tonnes (MT)	13,381	13,305	12,923
	Total distance travelled by vessels (8)	Thousand nautical miles (nm)	8,730	8,740	8,879

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 13 of this report.

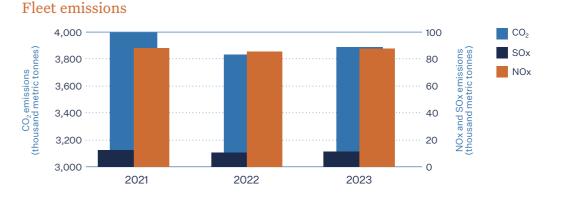
#### **Refrigerant gases**

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. The refrigerant gas losses are annually measured and at the end of 2023, refrigerant gas loss was 13.3% of the total refrigeration system capacity on our managed fleet. We continue to proactively assess what

additional measures can be taken to reduce this in 2024.

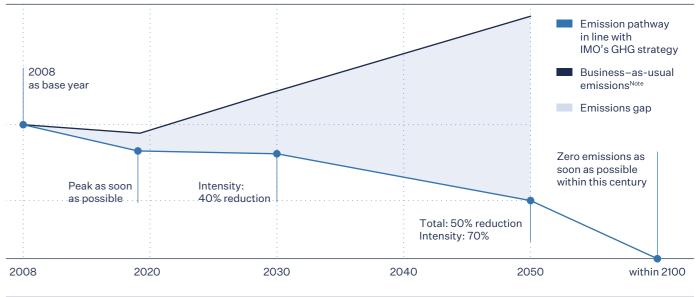
#### Other air pollutants

From 1st January 2026, the EU's Emission Trading System (ETS) will incorporate emissions of methane (CH4) and nitrous oxide (N2O), based on the CO<sub>2</sub> equivalent principle. Zodiac Maritime has already developed a procedure to monitor both emissions and figures for this will be included in future reports.



### IMO Strategy for major reductions in GHG emissions from shipping

Units: GHG emissions



Total: Absolute amount of GHG emissions from international shipping

Intensity: CO2 emitted per tonne-mile

Note: The DNV GL business-as-usual emissions are illustrative, and not consistent with the emissions baseline used in the DNV GL modelling. Source: DNV GL (2018a)

In 2023, we recorded a marginal increase in the total fleet consumption and a higher level of CO<sub>2</sub> emissions from the fleet as compared with 2022. On analysis, we saw a greater aggregate distance sailed by vessels in the fleet as a result of an increased fleet activity. This suggests an increase to the fleet's overall energy efficiency, which comes with a number of fuel efficient newbuild vessels joining the fleet, continuous monitoring of performance data for the entire fleet, and the retrofit of energy saving devices.

#### **Energy conservation practices**

Decarbonisation and reduction of emissions from our vessels requires significant investment in energy efficiency through operational measures and technical upgrades.

Some of the most effective energy conservation practices are implemented fleet-wide in the Ship Energy Efficiency Management Plan (SEEMP I):

- Slow-steaming (where possible), speed optimisation, weather routing, optimum scheduling and 'just-in-time' arrivals.
- Periodic inspections of the underwater hull area, propeller polishing, and regular hull cleaning when deteriorating performance is detected.
- Most-efficient engine configuration and strict compliance with the vessels' planned maintenance system.

Individual targets are included in the plans on a ship-by-ship basis and are annually reviewed.

The onboard performance monitoring system identifies the impacts on vessels' efficiency trends and supports shore management decisions in vessel profile improvements.

SEEMP I is complemented with a shipspecific Shipboard Operational Carbon Intensity Plan (SEEMP III), to achieve compliance with Carbon Intensity Index (CII) requirements.

#### **Efficiency improvement projects**

Zodiac Maritime's efforts in improving vessels energy efficiency have been focused on enhancing the vessels' propulsion, reducing hull resistance, and auxiliary service consumption.

Various fuel efficiency technologies have been installed on vessels throughout the fleet, including 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 autopilots, and variable-frequency drives.

Alternative Marine Power (AMP) allows vessels to be connected to shore power

when in port to reduce fuel consumption and emissions, and this is now available on seventeen container vessels.

Zodiac Maritime added a 91,000 cubic meter (CBM) newbuild dual fuel LPG tanker to the fleet in 2023, with two more sister vessels to join in 2024. These vessels have been built with shaft generators driven by the main engine to generate electricity for use on board. The benefits of shaft generator technology for two-stroke marine engines include potential fuel savings and reduced emissions.

As at the end of 2023, 70% of the vessels in Zodiac Maritime's fleet are fitted with propulsion-improving technologies, 32% of vessels have been coated with the most-advanced anti-fouling hull coatings, and 44% are being equipped with LED lighting. Extensive research is done on a case-by-case basis, to make sure the best technologies are used to upgrade performance on each vessel. Retrofitting existing technology in this way has been an integral part of Zodiac Maritime's commitment to improve fleet efficiency.

#### The total number of energy-saving technologies installed

### Installation Pre-propeller ducts / Pre-swirl stators Propeller boss cap fins Rudder bulbs / thrust fins / twisted rudders Optimised bulbous bow LED lighting Adaptive auto-pilot High-performance anti-fouling Alternative Marine Power (shore-power)

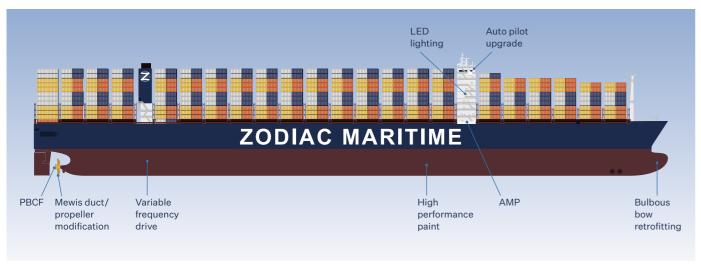
#### Shaft generator

Fuel savings from these installations range from 1% (auto-pilot upgrade) to 7% (propeller duct) of main engine consumption and can result in savings of up to 70% (LED lighting) in lighting consumption.

Moreover, we are also exploring other options, including variable-frequency drive motors in the engine room, the installation of exhaust gas economiser power packs, deadweight increase, and continuing the trials of biofuel blends.

Zodiac Maritime uses an enhanced performance-monitoring system which allows the collection and analysis of vessel energy consumption data. Different key performance indicators are presented to the shore-management team on a regular basis. This enables early detection of hull, engine and/or propeller performance deterioration, supporting efficient and timely decision-making when arranging hull cleanings, propeller polishings and engine overhauls.

#### Retrofitted energy-saving technologies





Bulbous bow optimisation - M/V Qingdao Tower

11

Number of vessels
66
25
46
3
54
13
40
17
1

#### **Monitoring performance**

The system also allows the collection and reporting of data for compliance purposes relating to:

- 1 the monitoring, reporting and verification (MRV) scheme run by the EU (Regulation (EU) 2015/757) since 2018 and the UK (MGN 662(M)) since 2023
- 2 the data collection system (DCS) run by the IMO (MEPC 278(70)) since 2019
- 3 the latest GHG regulations, including Carbon Intensity Indicator (MEPC.352(78)) and the EU Emissions Trading Scheme (Directive (EU) 2023/959).

#### **AER and EEOI**

We consider the Annual Efficiency Ratio (AER) as the most relevant metric for operational efficiency, a metric developed by the IMO and selected as a base for the Carbon Intensity Indicator and calculation of CII rating.

In addition to the AER metric, Zodiac Maritime is actively monitoring the Energy Efficiency Operational Index (EEOI) that indicates efficiency of a ship in its real operating condition, considering capacity utilisation.



Mewis duct and turbo ring - M/T Soho Square

### Environment

In 2023, both AER and EEOI have improved significantly, principally as a result of continued application of energy conservation practices on board and technology upgrades implemented within the fleet.

vessels achieved a better CII than the targeted "C" rating. This was due to a combination of technical and operational measures, including strict compliance with SEEMP Part III.

#### **Efficiency metrics**

		Units	2021	2022	2023
Efficiency Indicators	AER (9)	gCO <sub>2</sub> /DWT.nm	7.5	8.2	6.7
	EEOI (10)	gCO <sub>2</sub> /cargo ton.nm	18.7	19.5	16.4
	EEDI (11)	gCO <sub>2</sub> /DWT.nm	6.3*	6.2*	6.2

\*All fleets have been included in the EEDI values and are different from values published in the previous HSE report 2022

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 13 of this report.

#### **Carbon Intensity Indicator (CII)**

As of 1st January 2023, all ships above 5,000 GT are required under new IMO regulations to collect and report data for their annual operational carbon intensity indicator (CII) and CII rating.

Based on its CII, a vessel's carbon intensity will be rated A, B, C, D or E (where A is the best). The CII rating will be recorded in the IMO's Data Collection System (DCS) "Statement of Compliance". If a vessel achieves a "D" rating for 3-consecutive years or an "E" rating for a single year, the vessel's operator must put in place a corrective action plan.

Zodiac Maritime closely monitored fleet CII ratings in 2023 and the majority of

#### **Alternative fuels and Energy Efficiency Design Index (EEDI)**

The addition of newbuild vessels to our fleet with EEDI values lower than those required by MARPOL has contributed to the reduction of the total GHG emissions per cargo capacity. New vessels are equipped with optimised hulls, enhanced propellers, the latest electronic-injection diesel engines, and energy-saving devices such as propeller boss cap fins and preswirl stators.

Shipping is heavily reliant on fossil fuels. Zodiac Maritime acknowledges that in order to achieve a decarbonised future, a transition to low-carbon fuels and new technologies is required. In 2023, Zodiac Maritime added its first vessel powered by alternative fuels to the fleet, a 91,000

CBM LPG Carrier with a dual-fuel LPG engine, and two more sister vessels are due to join the fleet in 2024.

The use of LPG as a transition fuel significantly lowers a vessel's CO<sub>2</sub> emissions up to 18% for diesel cycle engines, between 90-100% for SOx emissions and up to 90% for particulate matter.

LNG is another alternative to conventional fuels that delivers an immediate reduction in emissions from ships. The use of LNG reduces CO<sub>2</sub> emissions up to 24% and SOx emissions to almost zero.

Within the next two years, ten new car-carrier vessels are scheduled to come into the fleet all fitted with dual-fuel LNG engines.

#### **Energy Efficiency Existing Ship** Index (EEXI)

In 2023, Zodiac Maritime successfully achieved compliance with the Energy Efficiency Existing Ship Index (EEXI) regulation across the fleet. The EEXI is calculated in a similar manner to the EEDI and aims to reduce GHG emissions from ships. Within the fleet, 48 vessels met their specific required EEXI due to efficient profile designs that include electronic main engines and energy saving technologies. For the remaining vessels, compliance is achieved through the installation of engine power limitation (EPL) and shaft power limitation devices (ShaPoLi).

#### 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 SOx emissions

Reported SOx 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 SOx emissions re calculated from the sulphur content indicated in the Bunker Delivery Note (BDN).

#### 4 NOx emissions

Reported NOx emission is based on the energy output of each engine installed for the period derived from each vessel's daily reports and the specific NOx 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 Average fleet size

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

#### 7 Deadweight tons (DWT)

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

#### 8 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.

### 9 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.

#### **10 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 2020, 2021 and 2022 in this report is the average of the individual EEOI numbers for the applicable vessels.

#### 11 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

#### Zero spills in 2023

The ecosystem and the health and economic activities of local communities can be significantly impacted by the release of hydrocarbons or other chemical substances in the marine environment. We are pleased to report that no such spills at sea occurred in our fleet in 2023.

#### Waste management

The MARPOL convention strictly regulates the management and disposal methods of shipborne waste. The only permitted discharges overboard are food waste and swept cargo residues (including cleaning agents) in wash water that are not harmful to the marine environment.

The annual waste production in our fleet is closely monitored. Discharges of garbage at sea accounted for approximately 16% of total garbage produced onboard, while 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. 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 as the carbon footprint of these deliveries.

#### Container loss at sea: impact to the environment

Containers can be lost overboard due to adverse weather conditions, navigation incidents, or improper stowage and securing arrangements on board. Lost containers can cause contamination of the marine environment, especially if their contents include harmful or toxic materials. In 2023, and for the fifth year in a row, not a single container was lost overboard in the fleet.

#### **Environmental incidents**

Zodiac Maritime takes environmental compliance very seriously and standards are strictly enforced across our fleet. In one case, a fine was imposed for disposing of uncomminuted food waste in a location which, due to an extended territorial baseline, was not permitted. On another occasion, a fine was imposed on a vessel due to cargo hold washing procedures not being followed properly, and so in breach of MARPOL's Control of Pollution by Noxious Liquid Substances in Bulk. Both incidents were thoroughly investigated, and the important lessons learnt were communicated across the fleet to prevent anything similar occurring on another vessel.

#### 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 sets the standards for all vessels' ballast water operations. This Convention prescribes that all relevant vessels must treat their ballast using a Ballast Water Management System (BWMS) by the deadline of 8 September 2024. As at the end of 2023, 99% of our fleet operates with a BWMS and plans are in place to ensure any vessels not currently doing so will be compliant prior to the deadline.

#### **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.

To mitigate the impact from ship biofouling, since 2019, IMO Biofouling Guidelines were adopted into mandatory fleet policies and procedures. In 2023,

#### Environmental performance metrics

Performance Indicator	Units	2021	2022	2023
Average fleet size	Number of ships (6)	129	127	124
Oil spills to water	Number of incidents (>1 barrel spilt)	0	0	0
	Number of incidents (<1 barrel spilt)	0	0	0
Garbage production	Cubic metres	10,400	10,600	10,400
Garbage disposal to sea	Percentage of total garbage production	14%	18%	16%

Note: Regarding any number in brackets within tables, please refer to the Assumptions section on page 13 of this report.



the IMO revised the Biofouling Guidelines and Zodiac Maritime has applied the necessary changes.

#### **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 not to discharge otherwise permitted waste and effluents when sailing in PSSAs 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 at a prescribed distance from shore.

#### **Responsible ship recycling**

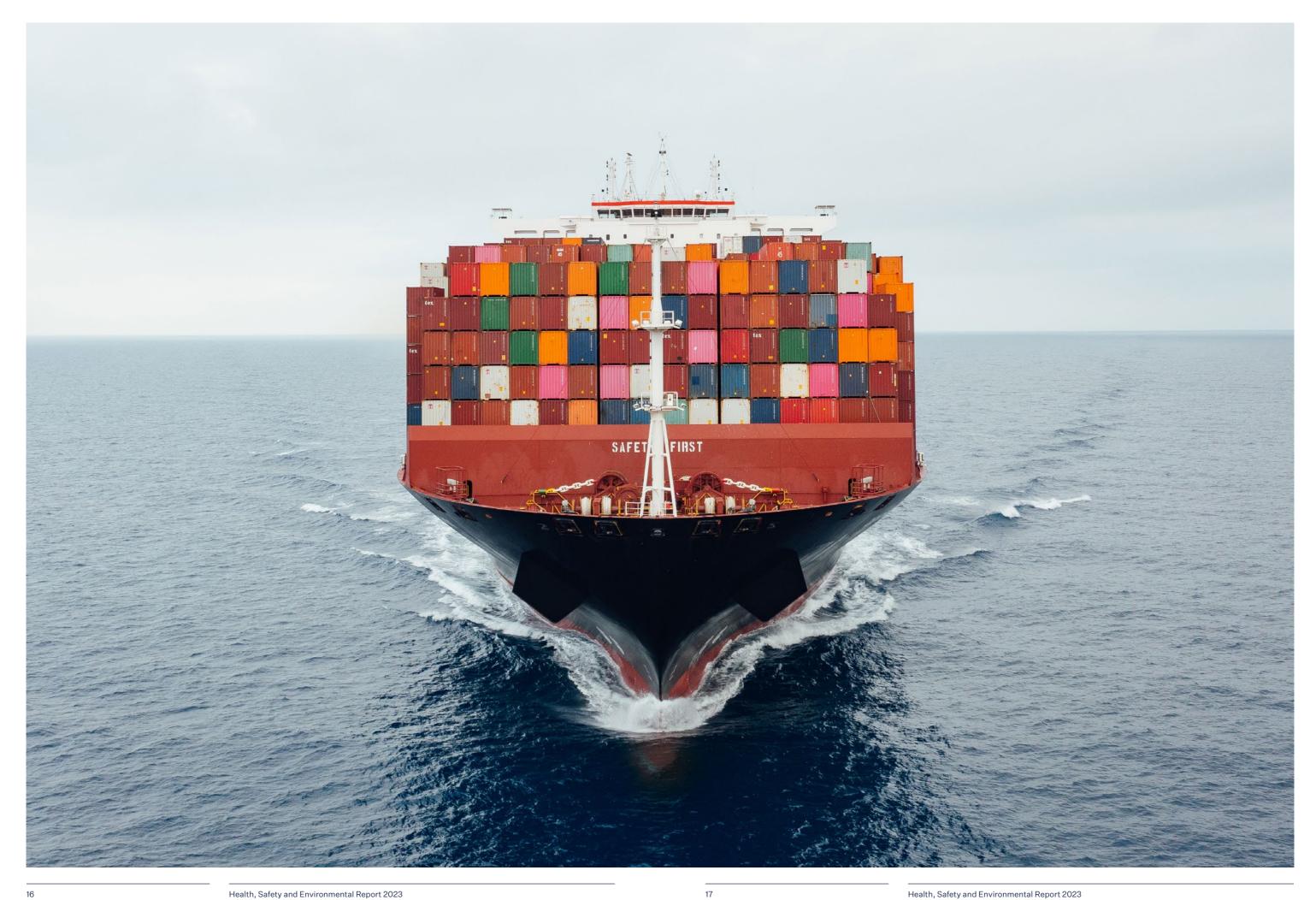
As part of its management services, Zodiac Maritime is able to provide assistance to ship owners looking to sell a vessel for recycling. As a responsible ship operator and manager, Zodiac Maritime has always ensured that such sales are conducted in a strictly lawful manner.

In 2023, one Zodiac-managed vessel was removed from the fleet by its owner for end-of-life recycling. On behalf of its client, Zodiac Maritime engaged industry leading, independent third-party experts to assist in finding a suitable recycling facility. In accordance with Zodiac Maritime's policy requirements, sale of the vessel was concluded in accordance with applicable laws and regulations, and the recycling facility proposed by the Buyers had been certified by Class (IACS member) as meeting the requirements of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

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.



## Health and Safety

#### Safety performance

In 2023, the strong fleet safety performance reflects our policy commitment to safety management across a number of performance indicators. 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). This is only one of the metrics against which we set ambitious targets following the SMART (Specific, Measurable, Achievable, Relevant and Time-bound) principle. During 2023, our LTIF performance improved across the fleet, finishing the year well within the set target.

As part of our safety strategy, we aim to reduce workplace risks and protect our employees while ensuring compliance with relevant laws and regulations. All injuries and incidents occurring within our fleet are subject to rigorous investigation by a combination of vessel crew and shore staff. In 2023, we focused on safety culture enhancement and leading indicator tracking through regular, direct communication with Vessel Management Teams (VMT) onboard. Increased engagement through training and safety campaigns was established which will reduce the possibility of incidents and help best practices be effectively transmitted to our whole crew.

Our long-term work to streamline our Safety Management System and simplification of processes continued

#### in 2023, allowing us to incorporate the latest industry best practice from the International Chamber of Shipping and Oil Companies International Marine Forum (OCIMF) and additional industry initiatives.

In 2023, a new Training and Development department was set up. A full overhaul of our computer-based training environment was conducted which has introduced new opportunities to deliver key learnings and feedback to vessel crews in addition to the existing programme of webinars and seminars delivered throughout the year.

In 2023, no collisions or allisions were reported from the fleet, but there was a grounding incident involving an uncharted object. Happily, no injuries or pollution resulted but, as with any incident, a thorough investigation into the circumstances took place and, as part of our commitment to continual improvement, we shall ensure our procedures are enhanced, optimised, and communicated to the entire fleet.

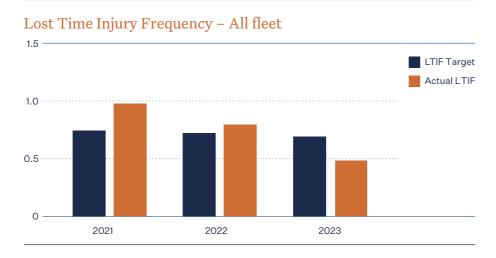
#### Occupational health

The health and safety of the seafarers on board our vessels is a top priority for Zodiac Maritime. Seafarers face a variety of occupational health hazards, with both short-term and long-term implications. To effectively identify and manage these risks Zodiac Maritime has a robust safety management system, incorporating guidance from the Code of Safe Working Practices for Merchant Seamen as well as complying with the requirements of the ISO 45001:2018 Standard for Occupational Health and Safety Management.

We are always looking to enhance the effectiveness of our safety management practices and in 2023, we introduced new engineering solutions to better address safety issues on board.

#### Health and wellbeing at sea

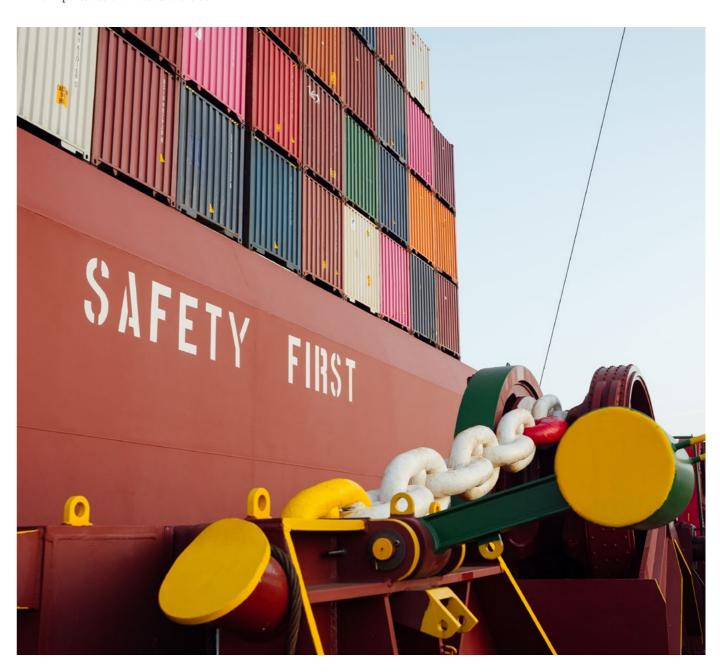
With vessels at sea for extended periods of time without access to shore facilities, maintaining the good mental and physical health of our seafarers is critical.



#### All crew undertake thorough medical examinations each time before joining a vessel, and officers have training in medical care provision. In addition to this, vessels have 24-hour access to the Maritime Telemedical Assistance Service (TMAS) where expert guidance is required for managing a health issue on board.

With mental health and physical wellbeing being closely linked, we believe in the importance of onboard exercise

and our vessels have fully equipped exercise spaces for this. Diet is important and our vessels serve a range of dietary options for meals. Relaxation from the rigours of work duties is also vital to seafarers' mental health and our vessels all have common areas where seafarers can congregate, socialise, and enjoy their down time together. In 2023, we upgraded the connectivity on board to allow all crew free internet access, enabling closer links with home and



access to social media platforms which form an integral part of modern life.

Unfortunately, despite everything done both on board and ashore to minimise the risks to our seafarers' health, illnesses do occur. During 2023, 67 seafarers were repatriated on medical grounds. Tragically, there were 4 cases where crew members were taken ill and passed away either on board or during subsequent hospitalisation.

### **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 2023, our vessels were inspected by PSC over 240 times throughout

the several thousand port calls made. The PSC 'clean inspection' rate remains high, as in previous years, with a positive 70% for the year.

We are pleased to report that 22 of our vessels qualified for the US Coast Guard's prestigious Qualship 21 initiative as at the end of 2023, increasing the total number of qualified vessels to 35. The United States Coast Guard implemented the Qualship 21 initiative to identify highquality foreign-flagged ships. Rigorous acceptance criteria apply to provide incentives to encourage high standards of performance for both the ship and the operating company.

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 2023 Paris and Tokyo MOUs included a CIC in the routine PSC focused on various aspects related to Fire Safety. Ships in the Zodiac Maritime fleet were inspected 31 times under the detailed requirements of the CICs, resulting in a single finding.

#### 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 wi legal and regulatory red industry standards.

Tankers in the Zodiac well in inspections in 20 year-on-year improven

#### Vetting performance summary 2021-2023

Programme	Average r	number of items raised	Management review of performance	
	2021	2022	2023	
Ship Inspection Report (SIRE) <sup>3</sup>	1.75	1.75	1.67	Achieved target performance
CDI	3.30	2.59	2.53	Achieved target performance

#### Dry bulk vetting

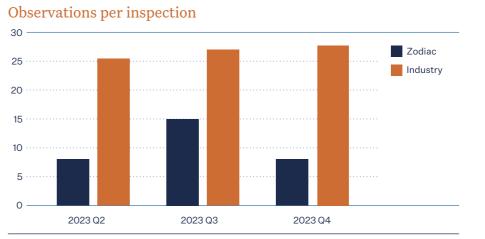
Vessels in our dry bulk fleet undergo regular inspections by RightShip. These inspections verify compliance with the RightShip Inspections Ship Questionnaire (RISQ), which are formulated to

reflect applicable legal and regulatory

The performance of vessels in RightShip inspections is a crucial metric for our commercial counterparts when they evaluate vessels for prospective

#### 2023 PSC inspection performance summary

Authority <sup>2</sup>	Total number of inspections	Number of inspections with zero observations	Average number of observations per inspection	Detentions
Paris MOU	46	28	0.83	0
Tokyo MOU	94	52	1.41	1
USCG	34	31	0.24	0
Viña del Mar MOU	34	29	0.26	0



Note: Data available on Rightship from Q2 2023.

2 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.

3 INTERTANKO shares the results of members' SIRE inspections

ith applicable	achieved, and company targets, which are
quirements and	more stringent that the industry average,
fleet performed 023. We saw nent in the results	were exceeded. 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.

requirements and industry best practices.

chartering business. We are pleased to announce that the performance of Zodiac vessels in these inspections in 2023 compares very favourably when benchmarked against the industry average.

## **Our People**



#### 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 2023, our staff turnover rate in our Head Office was only 5.5% (excluding planned retirement), with an average length of service of 8.5 years. Onboard retention rates remain high at 74% for the whole crew and  $87\%^4$ 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 2023 we presented 116 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 28 different nationalities on board and 27 different nationalities based ashore, all working side by side towards our common goals.

#### Professional development

Zodiac Maritime invests in its employees both at sea and ashore, to ensure their continual professional development, and we understand that this in turn will ensure constant improvement to the company's safety culture. The industry is developing fast in terms of regulation and technology, so Zodiac Maritime continually assesses where skill and knowledge gaps may exist or will likely arise and adopts training strategies to address them.

In 2023, Zodiac Maritime rolled out the Ocean Learning Platform across its managed fleet, to ensure that its Computer Based Training (CBT)

content is aligned with current industry requirements. The company also recommenced its in-person crew seminars, following the Covid-19 pandemic. Seven further crew seminars are planned globally for 2024.

Zodiac Maritime has continued to run a successful officer cadet programme for aspiring officers. 241 cadets commenced their training with us in 2023, including those on the bachelor's degree programme, which we now offer in the UK.

In 2023, Zodiac Maritime launched a pilot of its redesigned engine Rating to Officer programme. The first Motorman to complete the programme took his first assignment as a Junior Officer on one of our vessels in January 2024.

#### 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 15 years, 60 scholarships have been awarded, with a further 4 scholarships available for 2024.

4 Retention rate calculated based on an industry-standard formula developed by INTERTANKO. Available at 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,

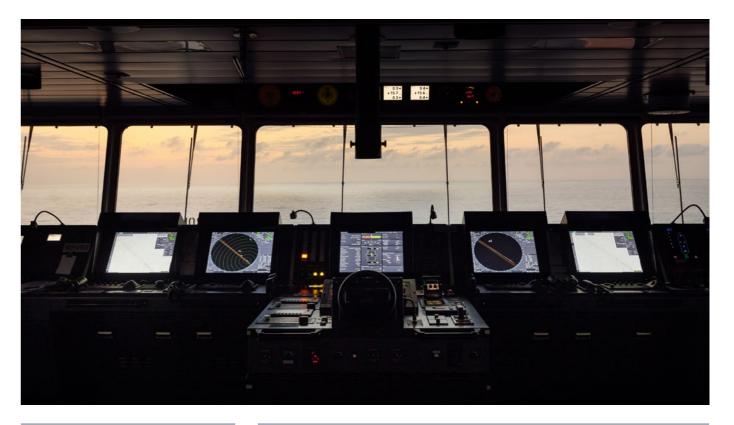
Zodiac Maritime does not tolerate any form of bribery or corruption and will not, accept and pay bribes or offer improper inducements or anything that could be perceived as such, and expects the same from its customers, business partners, and third parties that perform services or deliver business on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

## **Cyber Security** and Data Privacy

Zodiac Maritime is committed to strengthening its cyber security. Partnered with industry experts, we have refined our cyber threat intelligence collection and enhanced our abilities to detect and respond to cyber events.

This collaboration ensures our organisation stays strong in the face of modern cyber security challenges.

In tackling cyber threats, we recognise it is not solely about technology.



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.

Over the last 12 months, our cyber security programme has also continuously improved security assurance processes and security training delivery.

### LRQ/

### **LRQA Independent Assurance Statement**

#### Relating to Zodiac Maritime Ltd.'s Health, Safety and Environmental Report for the calendar year 2023

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 on its Health, Safety and Environmental Report 2023 ("the report") against the assurance criteria below to a limited level of assurance 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 as no errors or omissions were detected
- 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 and at the materiality of the professional judgement of the verifier.

Note: 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.

#### 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.

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# LRQ/

drafting the report.

#### Comments

- Further comments and findings, made during the assurance engagement, are:
- stakeholder engagement process.
- excluded from the report.
- Reliability: Data management systems are considered to be well defined.

#### Points of information

- factors do not account for any non-carbon dioxide combustion generated greenhouse gases.
- 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 Jackson (Lead Verifier) For and on behalf of LRQA Group Limited 1 Trinity Park, Bickenhill Lane, Birmingham, B37 7ES, United Kingdom.

Issued: March 10, 2024 LRQA reference: LRQ00002924

This Assurance Statement is subject to the provisions of this legal section:

LRQA its affiliates and subsidiaries, and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no esponsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract

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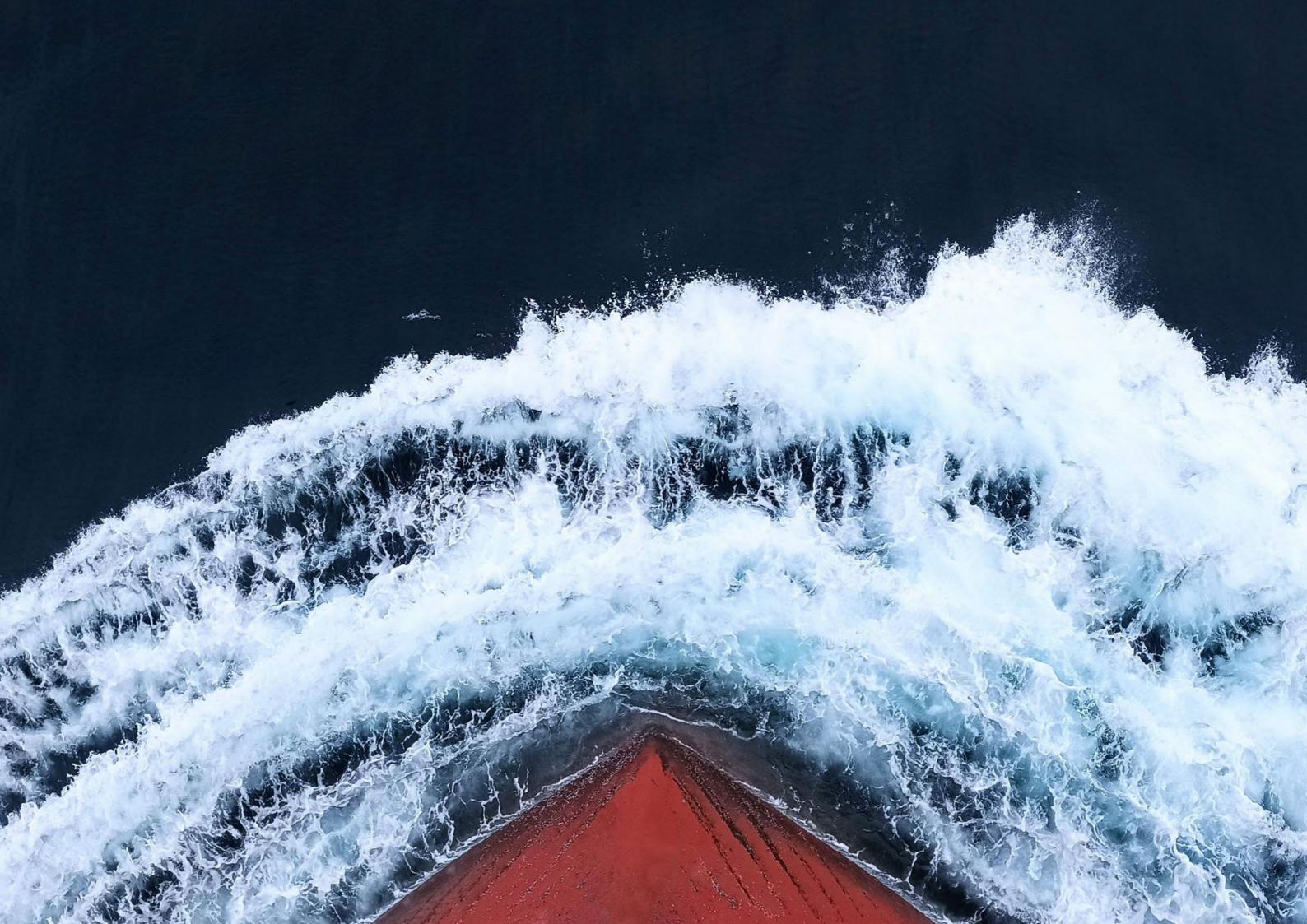
Auditing Zodiac's data management systems to confirm that there were no significant errors, omissions or misstatements in the report. LRQA reviewed the effectiveness of data handling procedures, instructions and systems, including those for internal verification. LRQA also spoke with certain key people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

Stakeholder inclusivity: LRQA is not aware of any key stakeholder groups that have been excluded from Zodiac's

Materiality: LRQA is not aware of any material issues concerning Zodiac's sustainability performance that have been

Responsiveness: LRQA is not aware of any weaknesses in the responsiveness of Zodiac to its stakeholders.

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)". These





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

Quality, Health, Safety and Environment Department

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