3 Environment

Shipping is considered to be the most efficient and cost-effective mode of transport for international trade. However, due to the scale of the sector, the increased emissions can have a major impact on the environment. Hence, it is of fundamental importance that the shipping sector complies with the strict environmental regulations and incorporates practices and activities that enhance maritime sustainability development.

Aegean Shipping's goal is to keep its operations' impact on the environment as low as possible, by minimizing air and sea pollution, protecting the marine life and complying with industry regulations. In order to achieve that, we formulate our environmental strategy based on high global environmental standards, but also on targeted measures, such as operating new high-tech/ high-spec vessels that offer a more efficient operational performance. Our aim is to reduce carbon emissions, while increasing the energy efficiency of our vessels.

OUR ENERGY AND ENVIRONMENTAL POLICY AND MANAGEMENT SYSTEM

As stated in our energy and environmental policy we are committed to protecting the environment and we strive for continual performance improvement to every aspect, including pollution prevention.

OUR ENERGY AND ENVIRONMENTAL POLICY INCLUDES:

The implementation of control mechanisms to prevent pollution.

The integration of the Environmental Management System and Shipboard Energy Efficiency Management Plan (SEEMP) into the company's business processes.

The establishment of procedures to prevent environmental incidents and control emissions and waste streams.

Ensuring that the implementation of our energy and environmental management system achieves its intended results on-board and ashore.

Climate Change

Shipping sector is responsible for approximately 3% of total global emissions. In 2018, the International Maritime Organization (IMO) adopted a strategy on the reduction of GHG emissions from ships, which aims in a reduction in carbon intensity by at least 40% by 2030, pursuing efforts towards 70% by 2050. The strategy also aims in a reduction of the total annual GHG emissions by at least 50% by 2050, both compared to 2008.

As part of our commitment to improve our fleet's energy efficiency, reduce our emissions and meet the IMO's goals, we have implemented several measures and initiatives including:

ON-BOARD:

REDUCTION OF CO_2 EMISSIONS

Our modern and green fleet's fuel consumption and CO2 emissions are significantly lower from previous generation vessels.

USE OF ECO-FRIENDLY MATERIALS

Related to paints, lubricants, chemicals and spare parts.

MINIMIZATION OF RELEVANT FORWARDING ACTIVITIES

INCREASE OF VESSEL'S ENERGY EFFICIENCY

Through several operational initiatives that reduce energy consumption (i.e., energy saving devices, new technology led lighting systems).

REDUCTION OF SINGLE USE PLASTICS

We initiated a pilot program for the replacement of plastic bottles with reusable on-board in one of our vessels and plan to expand to the whole fleet by the end of 2021.

ON- SHORE:

REDUCTION OF ELECTRICITY CONSUMPTION

Specific measures are applied to reduce the power consumption of computers, information systems and their peripheral subsystems.

REPLACEMENT OF SINGLE USE PLASTIC BOTTLES

with water bottles in our office area.

Monitoring Energy Efficiency and Environmental Performance

We use the **Energy Efficiency Operational Indicator (EEOI)** set out in the IMO Guideline MEPC.1/circ.684 to measure and analyze our fleet's energy efficiency and performance. EEOI is used to evaluate the energy efficiency of a vessel and the impact of the technical measures and operational enhancements applied on-board.

EEOI is calculated as the ratio of mass of CO_2 emitted per unit of transport work (gr CO_2 / tonnes * miles travelled). The average EEOI of our overall fleet in 2020 was 9.76 g/CO_2/nm, reduced by approximately 3% compared to 2019. Our fleet's average EEOI for 2020 is 16.4% lower, compared to industry average (11.67 g/CO_2/nm based on the fourth IMO GHG Study 2020, published on July 29th, 2020).

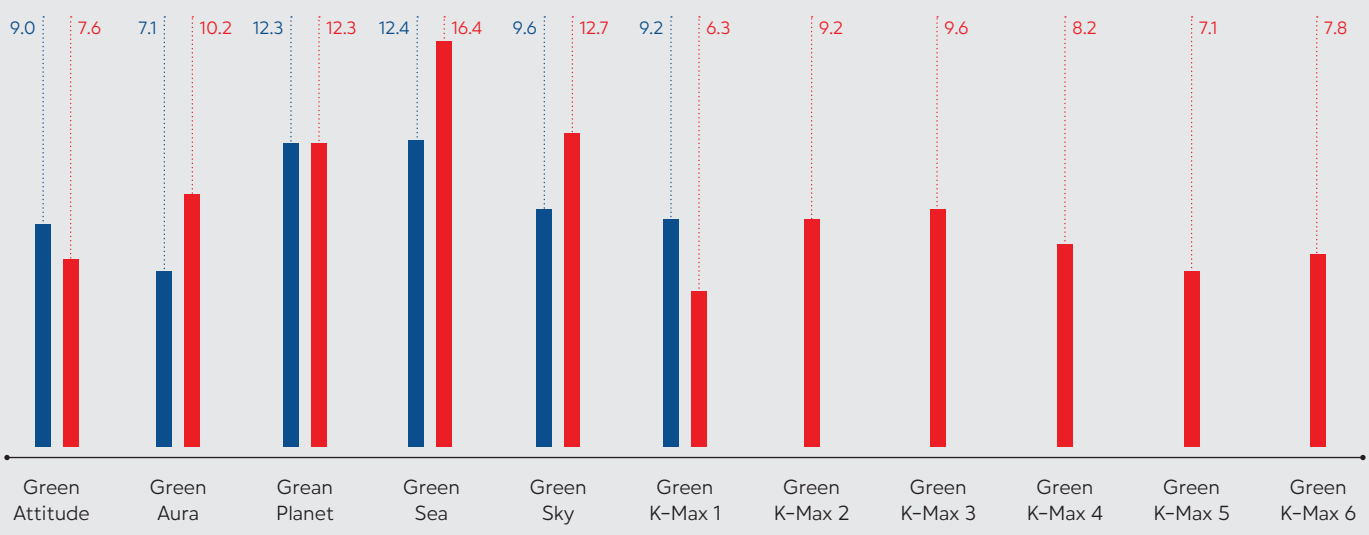
9.76
gr CO_2 / tonne – mile
EEOI of our fleet for 2020

↓3%
EEOI
on average EEOI of our fleet in 2020

↓16%
EEOI
compared to industry average

EEOI (gr CO_2 / TONNE – MILE)*

* EEOI is calculated based on actual voyages within the reporting year.



ENERGY EFFICIENCY DESIGN INDEX (EEDI)

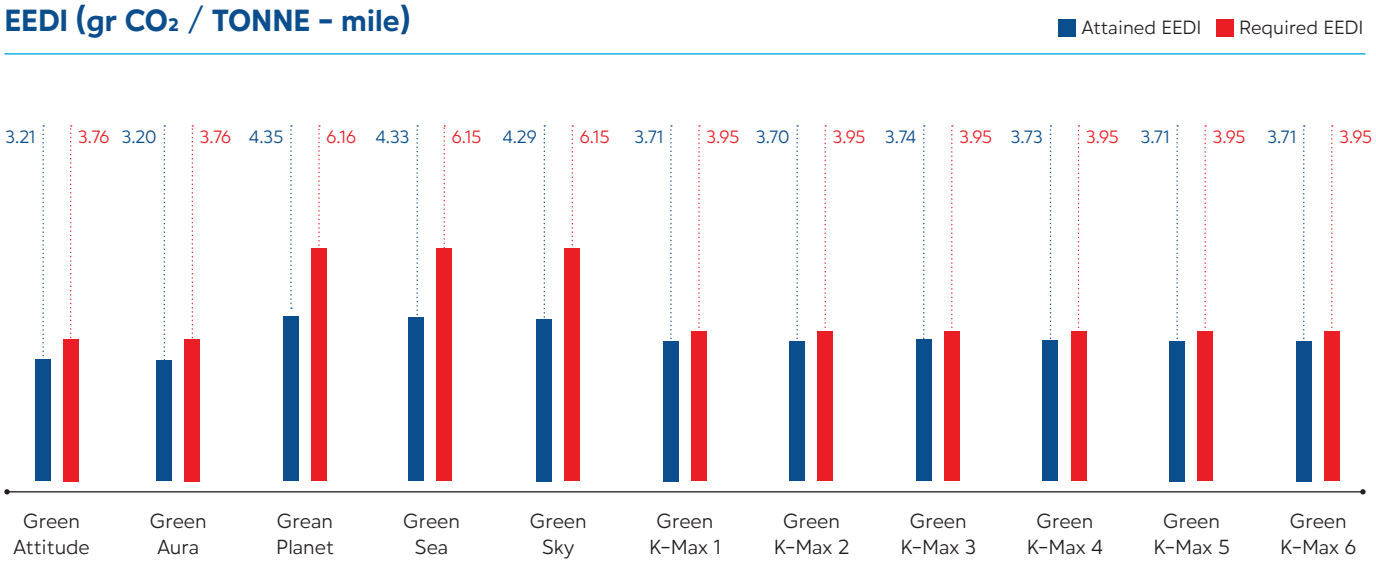
The Energy Efficiency Design Index (EEDI) per vessel, mandatory for new ships at MEPC.263(68), is a technical measure that evaluates the energy efficiency of the vessel by design (equipment and engines). EEDI is expressed in grams of carbon dioxide (CO_2) per ship's capacity–mile and is calculated by a formula based on the technical design parameters of the ship.

All of our vessels attain lower EEDI than minimum requirements.

↓16%

on average fleet Attained EEDI compared to Required EEDI

EEDI (gr CO_2 / TONNE – mile)



ANNUAL EFFICIENCY RATIO (AER)

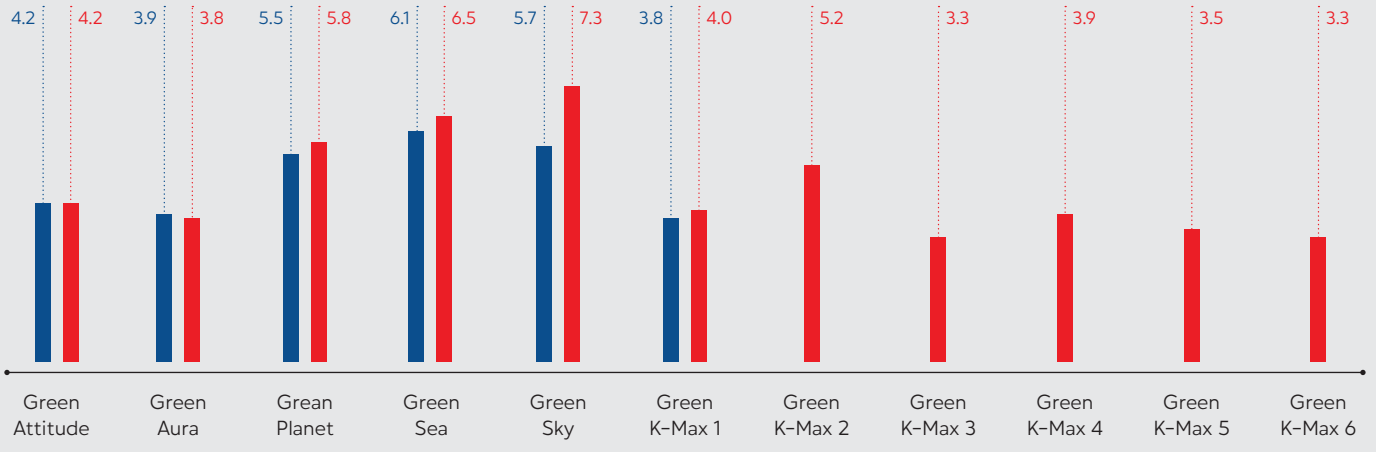
An additional carbon intensity metric calculated in accordance with Poseidon Principles, which is used for the assessment of the energy performance of ships, is the Annual Efficiency Ratio (AER). AER is mostly reported in grams of CO_2 per DWT – mile. The average AER for our fleet in 2020 was 4.62 grams of CO_2 / DWT – mile compared to 5.09 grams of CO2 / DWT – mile in 2019.

↓9%

on average AER of our fleet in 2020

AER (gr CO_2 / DWT – mile)*

* CO_2 emissions for 2019 and 2020 are calculated based on calendar days (based on IMO DCS).



Reducing emissions

We closely monitor our vessels' carbon footprint and support the reporting requirements set by the European Union (EU) Monitoring, Reporting and Verification (MRV) system, and the IMO Data Collection System (DCS) on fuel consumption.

IMO 2020 – REDUCTION OF SULPHUR LIMIT

On January 1st, 2020, a new limit on the sulphur content in the fuel oil used on-board the ships was introduced by IMO. The sulphur limit outside designated emission control areas was reduced to 0.50% m/m (mass by mass) from 3.50%. In order to comply with the IMO 2020, that limits sulphur emissions from vessels, we use marine fuel oil that meets the required sulphur content.

INSTALLATION OF EXHAUST GAS CLEANING SYSTEMS

In addition to a switch from HFO to VLSFO, we have installed Exhaust Gas Cleaning Systems (EGCS) in two of our vessels (Aframax).

100%

of our fleet comply with IMO 2020

In 2020, our fleet emitted 191,265 tonnes of CO_2 emissions from the consumption of 61,004 tonnes of fuel (HFO, LFO and MGO).

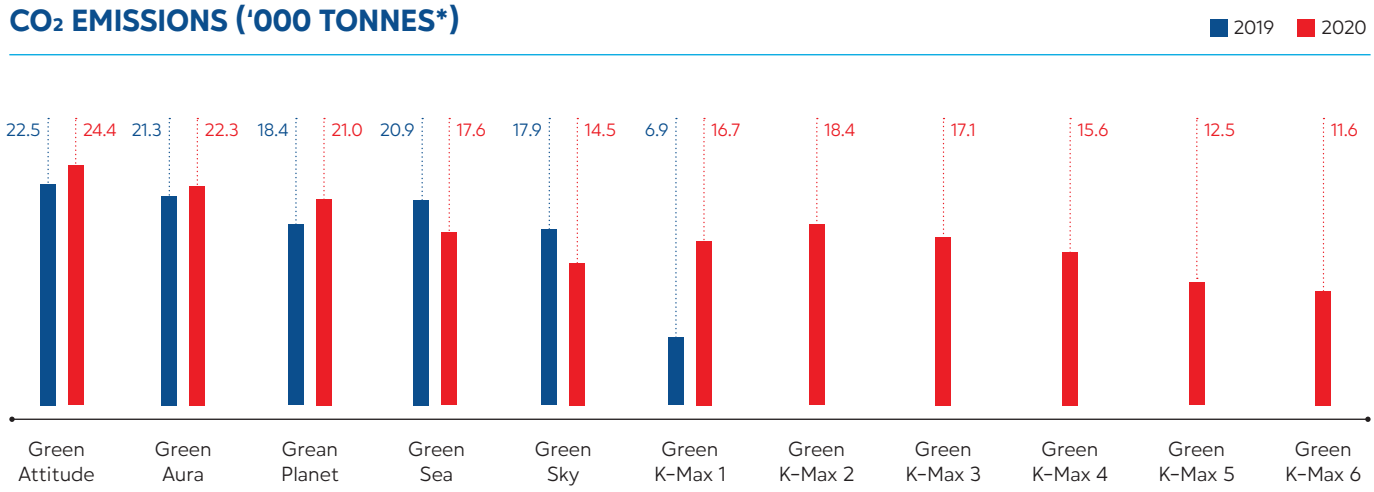
Fuel consumption and CO_2 emissions are directly proportional with the number of vessels; hence, the increase in comparison with 2019, when our fleet emitted 114,894 tonnes of CO_2 from the consumption of 36,533 tonnes of fuel, is justified by the increase of vessels in our fleet.

Although our fleet's emissions increased, the average CO_2 emissions metric tonnes per nautical mile across the whole fleet, showed a reduction in 2020 of 8% compared to 2019, indicating that the measures we have applied have helped us improve our fleet's environmental footprint.

191,695
tonnes CO_2

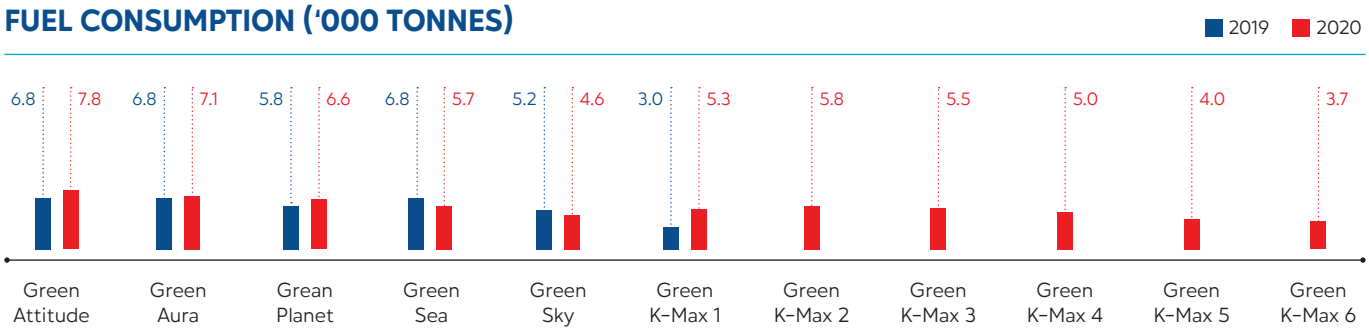
emitted by our fleet in 2020

CO_2 EMISSIONS ('000 TONNES*)



*The CF conversion factor used between fuel consumption and CO_2 emission is based on IMO Resolution MEPC.245(66) & MEPC 75-7-15 – Fourth IMO GHG Study 2020 – Final report (Secretariat): HFO (3.1144) / LFO (3.151) / MGO (3.206).

FUEL CONSUMPTION ('000 TONNES)



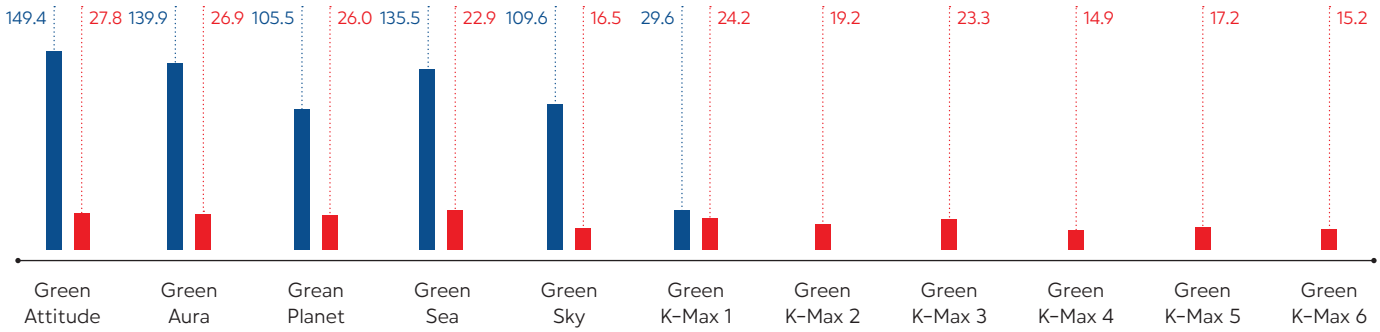
61,004 tonnes

total fuel oil consumed in 2020

HFO: **28,731** tonnes
LFO: **22,556** tonnes
MDO/MGO: **9,717** tonnes

During the reporting period, our absolute fleet emissions were 234.17 tonnes of SOx and 5,103.54 tonnes of NOx. The increase in our fleet size is directly related to the increase in the NOx emissions in comparison with 2019, when our fleet emitted 3,234.50 tonnes of NOx.

SOx EMISSIONS (TONNES)



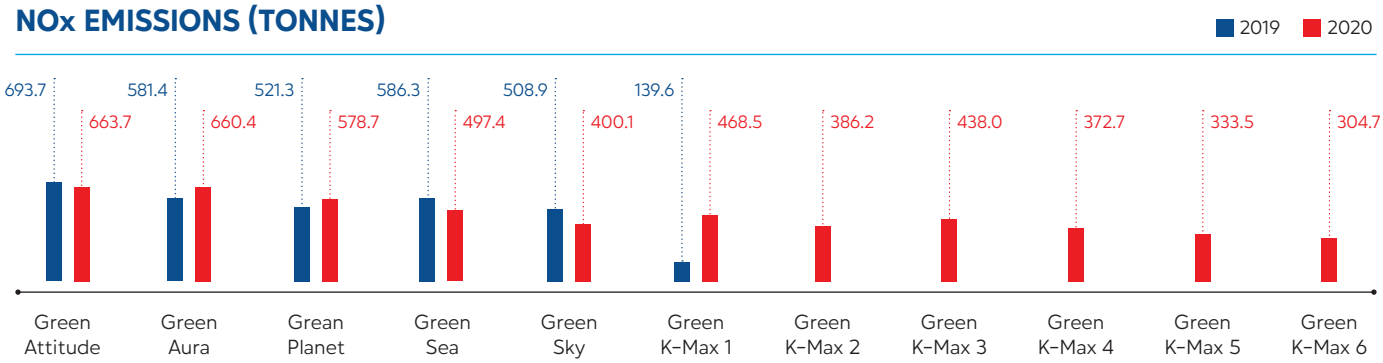
234 tonnes SOx

emitted by our fleet in 2020

↓67%

in fleet's SOx emissions in 2020

NOx EMISSIONS (TONNES)



5,104 tonnes NOx

emitted by our fleet in 2020

Protecting Marine Ecosystem

IMO BALLAST WATER MANAGEMENT CONVENTION

We comply with the requirements of The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), that entered into force in September 2017 and set the standards for proper management of ballast water and sediments to prevent the spread of harmful marine species.

In order to meet our strong commitment to the protection of the marine biodiversity, we invested approximately €3 million to retrofit all our vessels with approved Ballast Water Treatment Systems (BWTS). This process is aimed at removing and destroying inactive biological organisms (zooplankton, algae, bacteria) from ballast water, while ensuring that any discharges from our ballast operations occur in an ecologically responsible manner. We train our seafarers regularly on the BWT systems.

100%

of our fleet is equipped with BWTs

USE OF ECO-FRIENDLY LUBRICANTS

Since 2014 all the lubricants used by our ships are 100% environmentally friendly chemicals.

100%

of our fleet uses environmentally friendly lubricants

SPILLS AND RELEASES TO THE ENVIRONMENT

In our attempt to protect the marine biodiversity, we have initiated strict operating procedures, by conducting regular risk assessments and applying high level safety standards, in compliance with the current relevant legislations and our strong Health, Safety and Environmental management system.

0

spills to the marine environment

SHIP RECYCLING

INVENTORY OF HAZARDOUS MATERIALS (IHM):

requirements for a structured system to control hazardous materials on-board ships for the Safe and Environmentally Sound Recycling of Ships, that came into force on December 31st, 2020.

We comply with the International Maritime Organization's Hong Kong (HK) Convention for the Safe and Environmentally Sound Recycling of Ships as well as the EU Ship Recycling Regulation (EU SRR).

All our vessels hold a Class-approved Inventory of Hazardous Materials (IHM) ensuing that at the time of their decommissioning, they will be recycled in an effective way in certified ship recycling facilities.

100%

of our fleet hold an Inventory of Hazardous Materials certificate approved by a classification society

Meeting and exceeding the standards

We are committed to providing high quality services that meet the requirements of our customers and stakeholders. This is achieved by establishing and implementing managerial and operational processes, which have emerged from the combination of sound managerial principles and our long-lasting experience in the shipping industry.

ISO 9001:2015 (Quality Management)	We commit in providing world-class ship management services that meet or exceed our customers' requirements.
ISO 14001:2015 (Environmental Management)	We aim to maintain zero oil spills and zero pollution atmospheric incidents. We comply with the strictest international standards.
ISO 50001:2011 (Energy Management)	We follow best practice operational management processes and strive to continuously improve vessels' energy efficiency, energy use and consumption.
ISO 22301 (Business continuity)	We focus in the continuous and reliable delivery of our services to customers whilst maintaining contractual, legal & regulatory compliance.
ISO 45001 (Occupational Health and Safety)	We fully comply with all applicable industry's requirements, guidelines and standards and we focus in protecting the health and wellbeing of our people.

OUR VESSELS ARE ASSIGNED TO THE FOLLOWING CLASS NOTATIONS:

ECO

ECO (EEDI, IHM, P, VEC-L, DIST, EAL, GW, OW)

SHIPRIGHT

((BWMP (T, S, F)) VECS)

CLEANSHIP

(Prevention of sea and air pollution)

GREEN PASSPORT

(IHM, BWE, BWT)

OUR 4 NEW BUILDING AFRAMAX VESSELS WILL BE ASSIGNED TO THE FOLLOWING CLASS NOTATIONS:

- **BV I**
- **+HULL**
- **+MACH**
- **CSR**
- **CPS(WBT)**
- **ESP**
- **Unrestricted navigation**
- **+AUT-UMS**
- **+VeriSTAR-HULL CM**
- **MON-SHAFT**
- **CPS(COT)**
- **INWATERSURVEY**
- **BWT**
- **VCS**
- **IG**
- **SPM**
- **Tier III**
- **ERS-S**
- **LIHG-S3**
- **ETA**
- **ESA**
- **CYBER MANAGED**
- **CLEANSHIP SUPER**

Efficiently managing and reducing waste

Our waste management system complies with international and local regulations, and its primary function is to control, manage and safely dispose all types of waste generated on-board our fleet. Through this system, we carefully monitor the three main types of waste generated on-board (i.e., garbage, sludge and bilge), while we also ensure that other forms of waste (i.e., plastics, glass, dunnage, paper, metal, bulbs, hazardous materials and batteries) are collected and sent for recycling.

In addition, we have decided to proceed with the installation of garbage compactors in our fleet in order to reduce the volume stored on-board and then off landed. Compactors are on order for all our vessels, and will be installed during the next scheduled dry dock. The garbage compactors will reduce the garbage space on-board by approximately 70-80%.

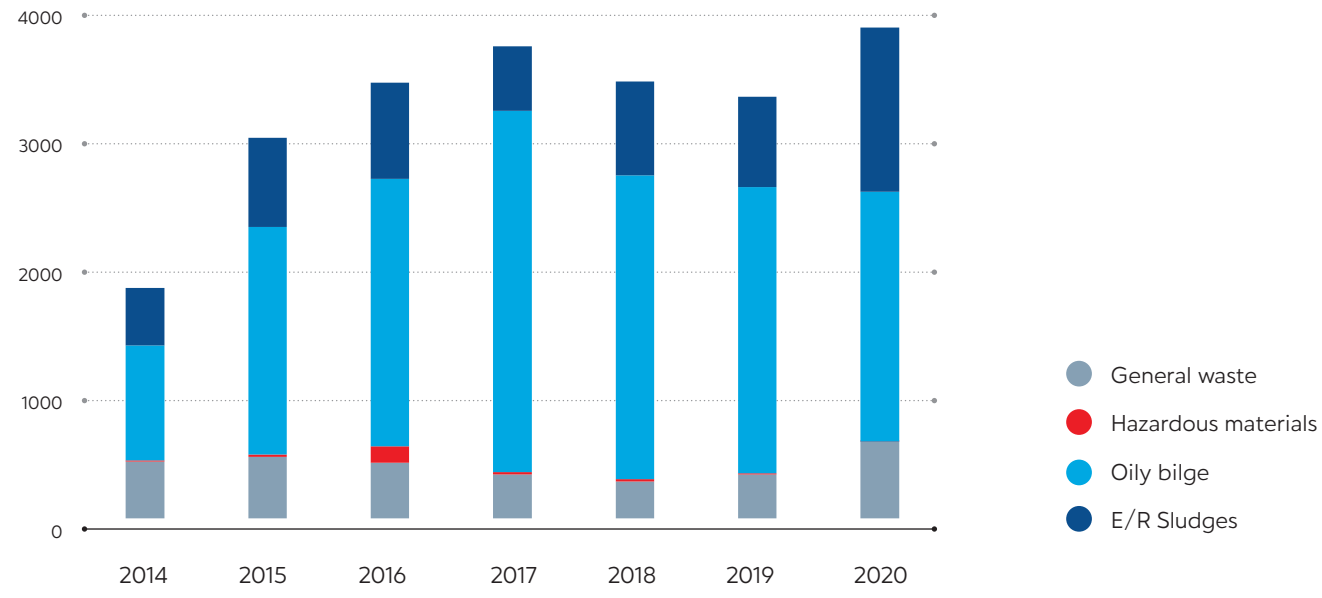
We have been continuously making steps towards waste reduction and we have set goals to reduce the waste generated on-board by approximately 1% annually. The increase of the waste generated on board our vessels in 2020 (3,499 m^3) in comparison with 2019 (3,006 m^3), is justified by the increase of vessels in our fleet.

3,499 m^3

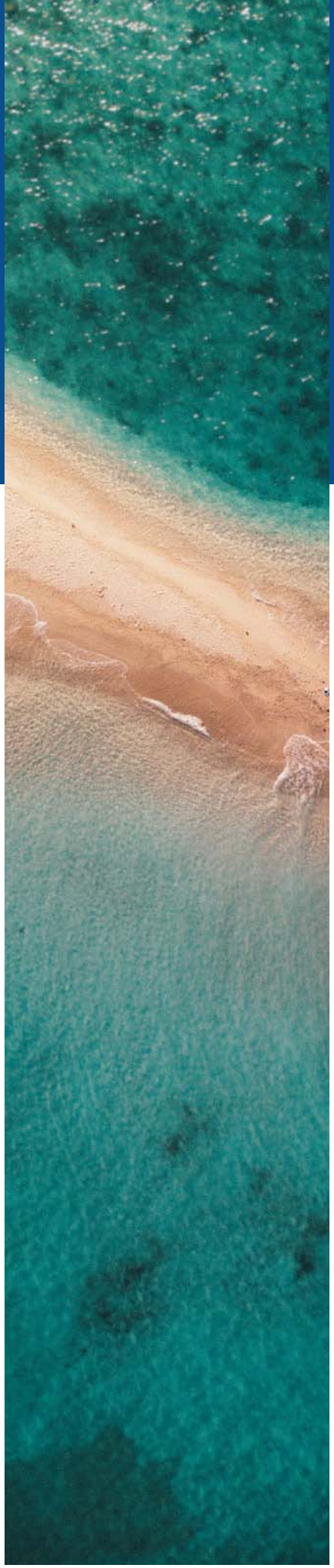
of waste generated on-board our fleet in 2020

WASTE GENERATION (m^3)*

* General waste includes waste produced by food, dunnage, paper, plastic, glass, metal and oil rags.



Initiatives to protect the environment



In our efforts to protect the environment and reduce our environmental footprint, we have undertaken the following initiatives both on-board our vessels and at shore:

On-board:

Elimination of non-essential single use items such as single-use plastic cups, plates and cutlery, food and beverage containers, food packing films, microwave dishes and replacement with sustainable alternatives such as tetra pack, glass or biodegradable plastics. Our target is to reduce the use of "single-use plastics" on-board by 80% by the end of 2024.

Reduction of food waste through new practices, trainings and campaigns to promote crew awareness.

On-shore:

Recycling of unwanted used computers and other electronic-waste using vendor's "take back" policy.

Reduction of paper consumption. Developing a fully paperless system, providing high class electronic services to users, vendors, suppliers and seamen.

Use of reusable cups and bottles.
For all office employees.