

# 2022 ENVIRONMENTAL SOCIAL & GOVERNANCE REPORT



## A MESSAGE FROM OUR CEO

Despite the slowdown in global growth in 2022, Star Bulk delivered a strong performance, enhancing its position in dry bulk shipping. We have maintained the scale of our fleet, strengthened our commercial and operational platforms, and kept our costs competitive.

Our 5th annual ESG report has been prepared according to the latest 2021 GRI standards. It offers a comprehensive account of our non-financial performance, targets, and strategies. As sustainability is a core corporate value at Star Bulk, we have established an ESG committee of our Board. This committee ensures that we steer a responsible course through environmental, social and governance issues.

Shipping will be one of the most challenging industries to decarbonize. We believe that our financial strength combined with the talent and dedication of our people will be up to the task ahead of us. We actively explore and adopt energy saving technologies and practices both to increase our profits and to reduce our published Scope 1, 2 and 3 emissions.

We are a partner in a Green Corridor project between Australia and East Asia that brings us familiarity with renewable zero-carbon fuels.

The safety, security and wellbeing of our people are paramount. As the war in Ukraine began, we acted swiftly to support our crew and facilitate their evacuation from the war zone. Our RightShip Safety Score remains one of the best in the industry. We have invested heavily in training programs and wellbeing initiatives both on board our ships and in the office. Our staff includes a significant percentage of women, and our work-from-home policy promotes a healthy work-life balance. We actively contribute to the broader community through donations and sponsorships, supporting vulnerable groups, health, education, and sports.

Strong governance is the bedrock of our company. Our directors take their responsibility to shareholders seriously. We take pride in our Code of Business Conduct and Ethics and do not tolerate corrupt practices. We continue investing in

digitalization, and we safeguard our operations and data through advanced cybersecurity technologies and practices.

In these times of conflict, uncertainty, and climate change, I draw inspiration from the word "crisis" itself, derived from the Greek word "κρίσις," meaning to have good judgment. We shall continue to make informed decisions, think innovatively, and work towards a more sustainable future.



*Petros Pappas,  
CEO, Star Bulk*

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# ABOUT THE 2022 ENVIRONMENT, SOCIAL, GOVERNANCE (ESG) REPORT

Star Bulk publishes an annual ESG Report since 2018. Our annual reports enable us to communicate our progress, commitments and achievements in relation to a series of Environmental, Social and Governance (ESG) issues, that are considered material by our Company and its stakeholders.

## REPORTING FRAMEWORKS

The 2022 ESG report, published on 09/10/2023, has been prepared in accordance with leading sustainability standards and frameworks, such as:

- Global Reporting Initiative (GRI) Standards
- Sustainability Accounting Standards (SASB) for Marine Transportation
- United Nations Global Compact (UNGC) Principles
- NASDAQ ESG Reporting Guidelines 2.0

This report outlines our commitment towards the **United Nations' Sustainable Development Goals (SDGs)** and is part of our **Communication on Progress (CoP) to the United Nations Global Compact**.

## SCOPE AND BOUNDARY

The data and information in this report refer to the period starting from **1st January 2022 to 31st December 2022** (in line with our financial reporting practices), and includes vessels managed by third parties unless explicitly stated otherwise. Information from previous years is incorporated for comparative purposes.

## EXTERNAL ASSURANCE

The report has undergone a limited external assurance from Ernst & Young (Hellas) Certified Auditors Accountants S.A. on specific GRI disclosures and SASB indicators, for the 3rd consecutive year. In the past years, our Board has decided to externally assure our ESG reporting disclosures as a means of validating the accuracy of the information presented and build trust with our stakeholders. Please refer to the independent assurance statement on pages 81, 82 for further information.



# ABOUT STAR BULK CARRIERS CORP.



# WE ARE A GLOBAL DRY BULK SHIPPING COMPANY THAT PROVIDES HIGH QUALITY TRANSPORTATION SERVICES

## OUR VISION

To be the global leader in sustainable dry bulk shipping.

## OUR MISSION

Star Bulk owns and manages efficiently a diverse and modern fleet of high specification bulk carriers. We protect human health, the environment and the vessels in operation, meeting or exceeding the safety and quality standards of our industry and customers.

## OUR GOALS



Zero incidents



Environmental protection



Wellbeing of our people



Maximum value for our shareholders



Transparency and accountability



Superior service to our charterers\*

\* We are certified with ISO 9001:2015 Quality management systems

## COMPANY FACTS

One of the largest US listed dry bulk carrier companies, based on deadweight, listed on the Nasdaq Global Select Market (“SBLK”)

**17** years of presence in the shipping market

**4** offices around the world  
Athens (headquarters), Limassol, Singapore and New York

**RIGHTSHIP**

One of the best performing companies in the RightShip Rating score globally

First dry-bulk company to undergo an Audit against the Dry-BMS standards

## SCALE OF OPERATIONS

**\$1,437** mil revenues in 2022

**> 370** office employees work ashore

**127** vessels with carrying capacity between 52,000 to 210,000 DWT

**~ 72** mil tonnes of cargo carried in 2022

**> 4,000** pool of active seafarers

# WE OWN AND MANAGE A MODERN, HIGH SPECIFICATION AND DIVERSE DRY BULK FLEET

Our fleet includes modern, fuel-efficient and high-quality vessels, that transports major bulks, such as iron ore, minerals and grain, and minor bulks such as bauxite, fertilizers and steel products.

## OUR FLEET

As of the release date of this Report:

**127\*** vessels on a fully delivered basis with carrying capacity between 52,000 to 210,000 DWT

**~14m** deadweight tonnage

**~10.9** years average age of our fleet



## FLEET BREAKDOWN



## TECHNICAL MANAGEMENT OF OUR OWN FLEET

Our in-house team technically manages 84% of our own fleet (i.e., 101 out of 120 owned vessels) and is responsible for the vessels’ day-to-day operations, including technical maintenance, manning, operational performance, health, safety and environmental performance. For the technical management of the remaining 19 vessels, we cooperate closely with experienced third-party managers.

## COMMERCIAL MANAGEMENT OF OUR FLEET

The chartering function of all our vessels is undertaken in-house.

\* 1. 120 owned and 7 chartered in vessels (1 chartered in vessel on the water and 6 NB vessels with expected deliveries throughout 2024).

2. As of 31.12.2022, which is the end of the reporting period of this ESG Report, the Star Bulk fleet comprised of 128 vessels (17 Newcastlemax, 24 Capesize, 7 Post Panamax, 41 Kamsarmax, 2 Panamax, 19 Ultramax and 18 Supramax). All relevant data (e.g. emissions) included within this ESG Report, are presented on the basis of the 128 vessels.

# OUR VESSELS TRADE ACROSS THE WORLD

Number of port calls in the most visited countries in 2022 (more than 40 port calls)

## DURING THE REPORTING PERIOD:

**~72 mil** Metric tonnes of cargo carried

**7.2 mil** Nautical miles travelled

**100** Countries visited

**2,976** Port Calls

**95%** Fleet utilization

**44,384** Operating days

**46,720** Ownership days





# WE CONTINUE TO GENERATE AND SHARE STRONG ECONOMIC VALUE

## DURING THE REPORTING PERIOD:

- Our **revenues increased** to \$1,437,156 million for the year ending December 31st, 2022, from \$1,427,423 million for the year ending December 31st, 2021.
- The **available days remained at the same level**.
- The **TCE rate decreased** to \$25,461, compared to \$ 26,978 in the previous year.
- **The shareholders' equity remained approximately at the same levels with 2021, recording** \$2.02 billion for the year ending December 31st, 2022, from \$2.08 billion for the year ending December 31st, 2021 and \$1.55 billion for the year ending December 31st, 2020.
- We declared \$526 million in cash dividend to the shareholders, in 2022, in comparison with \$435 million during 2021.

## OPERATING EXPENSES

- Our **daily OPEX are consistently below industry average**, while maintaining a high RightShip Safety Score.
- Our average daily OPEX increased by 7%, because of the maintenance requirements to ensure high quality services for our customers.
- We achieved a **95% utilization rate** in 2022.

## OUR COMMERCIAL MODEL

### Trade of large size vessels through CCL pool

- 40 of our Newcastlemax and Capesize dry bulk vessels participate in the **Capesize Chartering Ltd (CCL) pool**, together with Bocimar and C Transport Maritime. The CCL fleet consists of approximately 110 modern Newcastlemax and Capesize vessels and is being managed out of Athens, Singapore and Antwerp. All vessels of the Pool are traded on the spot market and earnings are distributed to each Member according to the Pool Points of each vessel.

### Trade of small and medium size vessels

- Our in-house team manages our small and medium size vessels that are mostly employed on a time charter basis. Rates vary according to prevailing market conditions, the length of the charter period, the position of the vessel and its specific characteristics such as age, length/beam and fuel consumption.

## ECONOMIC VALUE GENERATED & DISTRIBUTED

\$ '000s	2021	2022
<b>Economic value generated</b>	<b>1,427,423</b>	<b>1,437,156</b>
Revenue	1,427,423	1,437,156
<b>Economic value distributed</b>	<b>697,793</b>	<b>1,164,822</b>
OPEX <sup>*(1)</sup>	206,027	224,778
Employee wages and benefits	16,757	16,005
Payments to providers of capital	472,238	919,642
Payments to governments <sup>*(1),(2)</sup>	2,650	4,082
Community investments	121	315
<b>Economic value retained</b>	<b>729,630</b>	<b>272,334</b>

## CAPEX ON GREEN INFRASTRUCTURE

\$ '000s	2021	2022
<b>Total CAPEX on green infrastructure</b>	<b>32,213</b>	<b>24,051</b>
EGCSs CAPEX	10,745	1,646
Ballast Water Treatment CAPEX	21,468	17,877
ESD CAPEX	-	4,528
<b>Solvency (debt/ total capitalization)</b>	<b>43%</b>	<b>39%</b>

**19%** below average industry daily OPEX

**\$ 526 mil** in cash dividend declared to the shareholders in 2022

<sup>\*(1)</sup> OPEX excludes tonnage tax expenses which are included under "payments to governments" line.

<sup>\*(1),(2)</sup> Payments to governments by country for 2021: \$ 2,511,325 in Greece, \$123,032 in Cyprus, \$16,332 in Malta and \$(130) in Switzerland.

Payments to governments by country for 2022: \$ 3,732,634 in Greece, \$105,219 in Cyprus, \$237,294 in Malta and \$7,874 in Germany.

# ESG AT STAR BULK



# WE HAVE MADE STRONG ESG COMMITMENTS

## REDUCING OUR IMPACT TO THE ENVIRONMENT

- Timely preparation** for GHG emissions reduction regulations
- Implementation of the decarbonization** strategy in place and development of a **climate transition plan** in the following years
- Transparent reporting** of Scope 1, 2 and 3 emissions
- Adoption of energy efficiency technologies** on board and application of **operational improvement** measures
- Active waste and water management** on board and ashore
- Investments in Research and Development projects** on green energy and technology
- Contribution to environmental alliances**

## PROMOTING A SAFE, DIVERSE, AND EQUITABLE WORKPLACE

- Zero tolerance on human rights violations**
- Minimization of hazards and elimination of workplace accidents**
- Promotion of a diverse and inclusive working environment**
- Enhanced programs for our people's well-being**
- Strong performance** in RightShip Safety Score and Port State Controls
- Wide performance management processes** linked with compensation and benefits
- Professional development and talent management**
- Extensive internship program** for young professionals
- Active contributions to the Community**

## OPERATING EFFICIENTLY WITH INTEGRITY AND TRANSPARENCY

- Enhancement of transparency** through annual ESG reporting and participation in ESG rating indexes
- Strong independent Board of Directors** comprised of financial investors and experienced shipping professionals
- Climate Related Risk Assessment**
- High end digital technology and advanced cyber security systems**
- Zero tolerance** to bribery, corruption and any form of harassment or discrimination
- Solid risk management practices**
- Continuous monitoring and transparent reporting** on ESG Key Performance Indicators (KPI's)
- ESG Committee** at a Board of Directors level

**E**

**S**

**G**

# OUR ESG PRIORITIES AND PROGRESS

## OUR ESG PRIORITIES



### Environment

Reduce the impact of our operations to the environment and **implement a robust decarbonization strategy.**



### People

Foster a **diverse and inclusive workplace** that creates equal opportunities for everyone while ensuring human rights protection.



### Health and Safety

Comply with highest safety standards and regulations to eliminate risk of hazards.



### Governance

**Commit from the top** and integrate ESG into the Company's decision-making process.

## OUR FOCUS AREAS

- **Climate change and energy efficiency**
- **Marine environmental protection**
- **Green technologies and alternative fuels**
  
- **Employment practices**
- **Talent attraction and retention**
- **Social empowerment and community support**
  
- **Occupational health, safety**
- **Security of operations**
  
- **Corporate governance, ethics and transparency**
- **Regulatory compliance**
- **Partnerships**

## OUR PROGRESS DURING 2022

- ✓ Calculated our Scope 3 emissions
- ✓ 98% of our fleet has Ballast Water Treatment Systems (BWTS) installed
- ✓ 80% decrease in plastic mineral bottle purchase (for 10 vessels with water filtration systems)
- ✓ Achieving a score of B in CDP under Climate Change for our voluntary disclosures

- ✓ 42% women across our workforce
- ✓ 23% increase of total amount spent on crew trainings and development
- ✓ 20% increase of total amount spent on wellbeing initiatives on board
- ✓ Introduction of work from home policy
- ✓ 78% increase in new hires

- ✓ 10% reduction in Lost Time Injury Frequency (LTIF)
- ✓ 6.7% reduction in Total Recordable Case Frequency (TRCF)
- ✓ 10% increase in reported near misses
- ✓ 10,294 hours of training for health and safety issues

- ✓ Establishment of an ESG Committee
- ✓ Zero cyber security incidents
- ✓ Zero whistleblowing incidents
- ✓ Zero incidents of corruption and bribery
- ✓ Zero fraud incidents

# WE INTEGRATE SUSTAINABILITY INTO EVERY ASPECT OF OUR OPERATIONS

## ESG GOVERNANCE

We recognize the importance of ESG governance as a key element of our corporate strategy. We have established robust structures and practices to ensure that our ESG objectives align with our business goals. Additionally, we have implemented policies and procedures to guide our actions accordingly while ensuring compliance with relevant laws, regulations and international standards.

As the highest governing body, the Board of Directors assumes a comprehensive oversight role and the Senior Management holds the overall responsibility for our engagement with ESG issues and drives our efforts towards continuously improving our performance while minimizing any negative impacts associated with our business activities. Furthermore, the BoD and the Senior Management closely monitor the progress we make to achieve our objectives. They oversee the stakeholder engagement process and the identification of material issues, the actions taken to effectively manage our impacts and also approve the content of our annual ESG reports. The performance of our BoD is also assessed in parallel with the progress we make to fulfil our ESG aspirations, with prominent example being the climate performance of Star Bulk.

With regards to our Senior Management, our Chief Operating Officer (COO) is responsible for technical and operational measures around our environmental performance, while the Chief Financial Officer (CFO) oversees the financial aspects related to

our ESG efforts. Additionally, the Chief Strategy Officer (CSO) is tasked with the communication of our progress to the ESG Committee during quarterly meetings, which take place before each BoD meeting.

To strengthen our sustainability governance, we have established an ESG Committee that is accountable for the adoption of our strategic directions, the assessment of risks and opportunities related to ESG and climate change, and supports the implementation of our Company's decarbonization strategy. The Committee is responsible for evaluating potential initiatives and integrating relevant ESG matters into our business strategy and core operations. It also holds a significant role in our sustainability reporting process, including monitoring the effectiveness of our internal controls as a means of strengthening the credibility and transparency of our organization.

Any critical concerns related to the organization's potential and actual negative impacts on stakeholders are raised through specific processes or identified through other mechanisms, as established in our Code of Ethics, and are communicated directly to the BoD. During 2022, we have not identified any critical concerns pertinent to Star Bulk's business operations.



Star Bulk achieved remarkable distinction among over 200 nominations in 3 categories at the first Greek ESG Shipping Awards for 2023, an initiative under the auspices of the Greek Ministry of Maritime Affairs & Insular Policy and Hellenic Chamber of Shipping. Star Bulk was awarded the following:



**ESG Leader Silver Award** as a mark of recognition of our achievements and efforts towards sustainable development in line with international standards.



**Climate Change Gold Award** in commendation of our strong decarbonization action plan that addresses climate change across all aspects of our operations.



**Governance Silver Award** for our Integrity & Accountability plan demonstrating our commitment to fostering a transparent and ethical culture.

# WE ENGAGE WITH A DIVERSE RANGE OF STAKEHOLDERS TO DRIVE OUR STRATEGY FORWARD

Stakeholder engagement is a top priority for us. We believe that maintaining an open dialogue with all entities and individuals significantly influenced by Star Bulk is crucial in shaping our decision-making process. We place great importance on their insights and perspectives to understand how they are affected by our operations and effectively manage our positive impact, while seeking to implement preventive measures to minimize potential negative impacts. Our engagement efforts are centered around the respect and responsiveness to the needs of all stakeholders. The consultation with them is conducted via two-way communication channels, ensuring that their viewpoints and concerns are addressed in an appropriate manner. Additionally, information is provided in a transparent and understandable manner via our corporate presentations and annual reports.

## Customers

- Vessel owners
- Charterers
- Cargo owners

## Authorities

- Governments
- International Maritime Organization (IMO)
- Flag administration
- Port authorities / coast guards

## Financial Institutions

- Banks
- Leasing financial institutions
- Underwriters
- Insurance companies

## Seafarers & office employees

- Crew on board
- Office employees
- Manning agent

## Industry Organizations

- Classification societies
- Recognized organizations
- P&I clubs
- Insurers
- Vetting companies

## Shareholders / Investors

- Natural persons
- Institutional shareholders
- Funds/Private Equities

## Community & Society

- Academic institutions
- Local communities
- NGOs
- Media

## Suppliers

- Manufacturers
- Shipyards
- Brokers
- General suppliers
- Port agents



# MATERIAL ESG TOPICS ARE DETERMINED THROUGH A RIGOROUS PROCESS

## ESG TOPICS VALIDATION

### Phase 1

The starting point for our materiality analysis involves identifying sustainability issues that may be relevant to our Company. Over the past 4 years, we strengthened and matured sustainability within Star Bulk by examining the issues raised by prominent sustainability standards and frameworks (SDGs, GRI, SASB, etc.), and benchmarking with organizations and companies to align with the business and industry landscape. While our 2022 list of topics accounted for those assessed during our last materiality analysis, it underwent some modifications in order to ensure a more balanced approach and avoid overlaps.

## IMPACT IDENTIFICATION

### Phase 2

We performed a thorough assessment to identify: i. positive and negative, ii. actual and potential impacts of our operations on the economy, environment, and people, including impacts on their human rights. Throughout this process, we reviewed our business operating model and professional connections, and also searched across a wide variety of sector-relevant sources such as top sustainability reporting frameworks and best practices across the industry to gain a clearer understanding of our strengths and weaknesses.

## STAKEHOLDER ENGAGEMENT

### Phase 3

In order to assess the significance of impacts identified, we conducted an online survey among our internal and external stakeholders. The survey included the following parameters:

For all impacts:

- **Scope:** How widespread would the impact be on populations, economies and ecosystems affected.
- **Scale:** How beneficial / grave would the impact be.

For negative impacts:

- **Irremediable Character:** Would it be possible to counteract or make good of the resulting harm and how difficult would it be.

For potential impacts:

- **Likelihood:** How likely is the impact to occur.

All impacts were evaluated using a three-point scale from 1 (low significance) to 3 (high significance).

## OUTWARD IMPACTS ASSESSMENT

### Phase 4

Upon gathering stakeholders' feedback, we proceeded to evaluate the data collected from the engagement survey. We calculated the average score for each impact and classified the results into one overall ranking of sustainability topics to obtain a comprehensive overview of stakeholders' insights.

## MATERIAL ESG TOPICS IDENTIFICATION

### Phase 5





Once the impacts were defined, they were then grouped into broader thematic categories (i.e. the ESG topics). We identified critical ESG topics for Star Bulk by considering the significance of their associated impacts. Finally, we adopted significance thresholds to validate the list of material topics and determine our priorities. The material topics disclosed in this report were reviewed and approved by Star Bulk's Senior Management.

### What changed between the list of topics in 2021 & 2022

- The following categories were merged into the single category "Responsible employment practices": Labor practices depicting the relationship between Management and office employees / crew personnel, Career opportunities and advancement, Remuneration and benefits, Employee training / competency development, Talent attraction and retention including internship programs.
- Social empowerment and community support replaced Support of local communities and Humanitarian aid.
- Risk mitigation and control integrated with Regulatory compliance and application.
- Corporate and employee performance management was removed since it is covered through Corporate governance and Responsible employment practices.

# WE HAVE ASSESSED AND VALIDATED OUR IMPACTS ON THE WIDER ECONOMY, SOCIETY AND ENVIRONMENT

Our 2022 impact materiality assessment encompassed a comprehensive evaluation of 20 topics and focused on 13 environmental, 17 social, and 13 governance-related impacts. Based on the results of the analysis, the topics that were attributed a low outward impact are: Sustainable procurement practices, Commercial strategy and economic performance, Relationship with business partners, Vessel recycling, Partnerships for advancing sustainability, Waste management and recycling, Diversity and inclusion, Social empowerment & community support, Volunteering / pro bono work, and Impact of environmental regulations on fleet profile. The table outlines the highest ranked ESG topics based on the significance assigned to their related impacts.

	Material Topic	Impacts	Context	Significance
ENVIRONMENT	GHG emission reduction and energy efficiency	Reduction of Company’s fleet’s carbon intensity, through the implementation of our decarbonization strategy, including the improvement of vessels’ energy efficiency based on Ships’ Energy Efficiency Management Plans (SEEMP).	Positive / Potential	 2.635
		Contribution to the decarbonization strategic plans of the industry, through the active participation in environmental initiatives along with leading companies and stakeholders.	Positive / Actual	
		Improved environmental performance, linked with regulatory requirements or ambitions, including EU ETS, IMO CII and IMO 2050 ambition.	Positive / Potential	
		Failure to reduce fleet's carbon intensity due to technical (e.g. insufficient upgrade of machinery and equipment) or operational (e.g. increased vessels' speed due to commercial aspects) factors.	Negative / Potential	
ENVIRONMENT	Water pollution prevention, control & compliance with respective regulations	Protection of the marine life, through the responsible management of ballast water.	Positive / Actual	 2.597
		Increased use of fresh water due to the lack of efficient water management for fresh water production from sea water, treatment, use and return to the marine environment.	Negative / Potential	
		Pollution of the marine environment due to the release of oil and chemical spills and leakages.	Negative / Potential	
	Green technologies & alternative fuels	Knowledge sharing and collective impact on decarbonization across the sector, through the participation in R&D projects.	Positive / Potential	 2.693
SOCIAL	Occupational health, safety & security	Safe working environment with minimum on board and ashore accidents, through the adoption of proactive safety measures and dedicated trainings on health and safety issues.	Positive / Actual	 2.776
		Inadequate protection of physical, mental health and well-being due to work related accidents caused by insufficient implementation of the certified Health and Safety Management system.	Negative / Actual	



# WE HAVE ASSESSED AND VALIDATED OUR IMPACTS ON THE WIDER ECONOMY, SOCIETY AND ENVIRONMENT (cont'd)

	Material Topic	Impacts	Context	Significance
SOCIAL	Responsible employment practices	Creation of opportunities that promote people development, through training plans on board and ashore, the cooperation with third parties for the provision of training services and the funding of training business/practice certification for employees.	Positive / Actual	 2.571
		Increased quality and quantity of employment, through the implementation of programs for the retention of seafarers and onshore employees, financing of postgraduate studies and the provision of internships to young people.	Positive / Actual	
		Reduced contribution to human capital development and education, through the lack of an individual training plan for all employees.	Negative / Potential	
		Reduced contribution to employment and low employee engagement due to mismanagement of human resources and insufficient employee benefits.	Negative / Potential	
	Employee well-being	Enhanced employee wellbeing through the implementation of an action plan following the results of the satisfaction survey.	Positive / Potential	 2.724
	Respect of human rights	Protection and promotion of human rights, through the adoption of high ethical standards and the implementation of a robust whistleblowing mechanism.	Positive / Actual	 2.654
Human rights violations due to insufficient monitoring of labor standards, incomplete reporting and investigation of complaints.		Negative / Potential		
GOVERNANCE	Corporate governance, ethics and transparency	Ensuring high business ethics, through the implementation of the Code of Ethics and Conduct, which applies to Directors, all employees, customers, partners, suppliers and the local community.	Positive / Actual	 2.773
		Limited monitoring of Code of Ethics violations, resulting to possible incidents of corruption, anti-competitive behavior, conflict of interest, anti-monopoly sanctions, lack of transparency of financial and non-financial data.	Negative / Potential	
	Regulatory compliance and application	Ensuring regulatory compliance, through the establishment of monitoring procedures related to laws and regulations.	Positive / Actual	 2.706
		Penalties and fines due to noncompliance with regulatory requirements, as a result of ineffective internal audit processes, poor internal controls and monitoring systems.	Negative / Potential	
	Security of operations both physical and cyber security	Protection of our customers, employees, and operations' data and elimination of data breaches, through investments in high-end digital technologies and advanced systems.	Positive / Actual	 2.653
Increase of security threats and cyberattacks due to insufficient internal management systems and measures.		Negative / Potential		

## WE CLOSELY MONITOR AND REPORT OUR ESG KEY PERFORMANCE INDICATORS

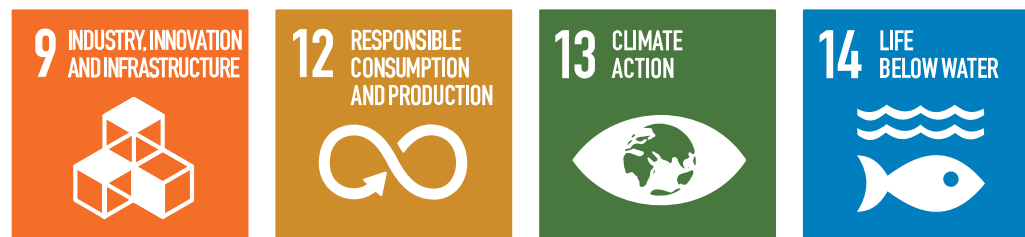
ENVIRONMENT	KPI	2022	2021	2020
	Average fleet Energy Efficiency Operation Index (EEOI) (gr CO <sub>2</sub> / Tonne-mile)*	6.45	6.64	6.22
	Average fleet Annual Efficiency Ratio (AER) (gr CO <sub>2</sub> / DWT-mile)	3.29	3.43	3.25
	Scope 1 GHG emissions (tn CO <sub>2</sub> e)	2,745,466	2,878,190	2,611,955
	Scope 2 GHG emissions (tn CO <sub>2</sub> e)	525	511	601
	Scope 3 GHG emissions (tn CO <sub>2</sub> e)	777,242	-	-
	Fuel consumption (tn)	865,560	910,071	823,676
	SOx emissions (tn)	7,676	8,146	7,346
	NOx emissions (tn)	61,423	63,311	60,732
	Total fleet and office Energy Consumption (GJ)	35,113,906	36,880,563	33,383,000
Number and volume of spills and releases to the environment	0	0	0	
Percentage of fleet equipped with EGCSs	94%	94%	98%	
Percentage of fleet equipped with BWTS	98%	73%	55%	
Carbon intensity (t CO <sub>2</sub> eq / \$ '000s)	1.91	2.02	3.77	

\*Excluding the vessels managed by our third party managers

SOCIAL	KPI	2022	2021	2020
	Number of seafarers	> 4,000	3,999	3,944
	Seafarers' retention rate (%)	95.4	94.1	95
	Employees ashore	>370	>330	>315
	Women employees (%)	42	42	41
	% of employees with seagoing experience	27	26	27
	Number of serious marine incidents	0	0	0
	Number of port state control (1) deficiencies and (2) detentions	229 / 5	155 / 3	111 / 2
	Average Port State Control deficiency ratio	0.8	0.9	0.8
	Lost time injury (LTIF) rate per 1.000.000 manhours	0.57	0.62	0.67
GOVERNANCE	Total Recordable Cases Frequencies (TRCF) per 1.000.000 manhours	1.40	1.49	1.16
	Port calls in countries that have the 20 lowest rankings in the Transparency International CPI (%)	11	12	12
	Amount of legal and regulatory fines associated with bribery or corruption	0	0	0
	Incidents of non-compliance with laws and regulations	0	0	0
	Incidents of environmental and socioeconomic non-compliance	0	0	0
	Number of material weaknesses or deficiencies	0	0	0

# ENVIRONMENTAL PROTECTION

## RELATED SDGS



# WE ARE IMPLEMENTING A RIGOROUS STRATEGY TO REDUCE OUR CARBON FOOTPRINT

## OUR VISION

We aspire to lead by example and to contribute actively to the industry’s efforts to reduce GHG emissions.

## THE PILLARS OF OUR DECARBONIZATION STRATEGY

### Renewing the Star Bulk fleet

We gradually dispose of older less efficient tonnage, while chartering-in and/or investing in new more energy efficient vessels.

### Monitoring and transparent reporting

We monitor our vessels’ GHG emissions through telemetry and advanced systems that ensure validity and reliability of data and assist us in managing and reporting our carbon footprint with accuracy and transparency.

### Improving the energy efficiency of our fleet

We continuously assess, test and implement operational and technical solutions which enhance the energy efficiency of our vessels, while we invest in R&D on new technologies which reduce fuel consumption and improve the carbon intensity of our fleet.

### Participating in R&D for new technologies and alternative fuels

We actively participate in R&D projects and feasibility studies across the maritime value chain for new green technologies which reduce our vessels’ GHG emissions and for zero and low emission marine fuels.

### Developing partnerships and participating in alliances

We establish partnerships with leading companies and stakeholders across the world, and we participate in global organizations and initiatives to jointly tackle decarbonization in the industry.

## IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS AND OPPORTUNITIES

## OUR TARGETS

We are committed to implementing a **climate transition plan** consistent with the International Maritime Organization (IMO) GHG reduction targets set for the industry, specifically:

1. Reduce our fleet’s **carbon intensity** ratio by 12% by 2026, using 2019 as a baseline year, consistent with the IMO CII targets.
2. Reduce our **fleet’s GHG emissions** by minimum 20% by 2030, 70% by 2040, and net zero by 2050, using 2008 as baseline year and assuming same fleet size and composition.



**Reduction of our fleet’s carbon intensity**

# WE SUPPORT THE POSEIDON PRINCIPLES AND THE SEA CARGO CHARTER INITIATIVES



**LAUNCHED ON 18 JUNE 2019**

Poseidon Principles establish a framework for assessing and disclosing the climate alignment of ship finance portfolios.

Represent **\$200 billion** in shipping finance

Signed by **30 leading international banks**

## OUR CONTRIBUTION

For 2022, we provided data to various financial institutions that we cooperate with, as part of their alignment process with the Poseidon Principles.



**LAUNCHED ON 7 OCTOBER 2020**

The Sea Cargo Charter provides a framework for aligning chartering activities with responsible environmental behavior to promote international shipping's decarbonization.

Applicable to bulk ship charterers

Signed by **35 charterers**

## OUR CONTRIBUTION

We provide data to our charterers upon their request as part of their alignment process with the Sea Cargo Charter.



**FOR MARINE INSURANCE. LAUNCHED ON 15 DECEMBER 2021**

The Poseidon Principles for Marine Insurance provide guidance for assessing and disclosing the climate alignment of insurers' hull and machinery portfolios.

Signed by **10 leading marine insurers**

**9 Affiliate members, 1 Supporting partner**

## OUR CONTRIBUTION

We participated in the development of the Poseidon Principles for Marine Insurance.

The Poseidon Principles for Financial Institutions, the Sea Cargo Charter and the Poseidon Principles for Marine Insurance complement one another to establish a common global framework for aligning the marine industry with society's goals.

In 2021, Star Bulk agreed with three separate European financial institutions, three sustainability linked facilities totaling ~\$245 million. The facilities have an annual sustainability margin adjustment mechanism linked to Star Bulk's commitment to continuously improve the carbon intensity of its fleet in line with the IMO 2030 and 2050 decarbonization targets. The agreements for the facilities are still in effect as of the release date of the report.

# WE UTILIZE ADVANCED ENVIRONMENTAL AND ENERGY MANAGEMENT AND MONITORING SYSTEMS

## ENERGY MANAGEMENT SYSTEM REVIEW REPORT

Our Energy Management System Report, is certified with **ISO 50001**, is reviewed annually by our Company, following the ISO requirements, and covers a wide range of energy efficiency and conservation management topics.

Our energy management policies are available on the Star Bulk website.

## ENVIRONMENTAL MANAGEMENT SYSTEM REVIEW REPORT

Our Environmental Management System Report is an environmental review, designed and performed by Star Bulk, on an annual basis. The system is certified with **ISO 14001**.

Our environmental management policies are available on the Star Bulk website.

## USE OF TELEMETRY AND ADVANCED MONITORING SYSTEMS

Our dedicated in-house Vessel Performance Monitoring (VPM) team of 10 experts is responsible for monitoring and reporting on our vessels' performance.

Our team has developed, and deployed telemetry equipment on board our vessels and also a sophisticated Vessel Performance Reporting (VPR) Software to enable the collection of accurate vessel performance data.

On a daily basis, we collect and analyze data from the vessels in order to support our technical, operational and commercial activities, optimizing the performance of our fleet.

Accurate and critical weather forecasts are being daily delivered through a collaboration with weather and voyage optimization companies.

The data which is captured daily, such as speed, consumption, position, engine temperature, etc., is used to generate automated reports to flag and support decision-making when it comes to maintaining the condition of the vessel and optimizing vessel planning and execution.

This data is also visualized through business intelligence reports which illustrate dynamic real-time information and help keep track of Key Performance Indicators as well as provide a daily monitoring and reporting tool for vessel's CO<sub>2</sub> emissions and CII level.



# IN 2022, WE IMPROVED PERFORMANCE ON ENERGY EFFICIENCY INDICATORS

## IN ORDER TO IMPROVE THE ENERGY EFFICIENCY OF OUR FLEET:

We use weather routing systems and speed optimization practices.

We use Energy Saving Devices (ESD) and low friction hull paints.

We use underwater Remotely Operated Vehicles (ROV) for inspecting and cleaning the underwater hulls.

We apply enhanced biofouling management, assessment of the underwater fouling increase and frequent UW cleaning.

We use a web-based platform to monitor and assess fouling of the vessel and UW cleaning performance.

Energy efficiency indicators (EEOI, AER, EEXI)

### ENERGY EFFICIENCY OPERATIONAL INDICATOR (EEOI)

Star Bulk oversees the energy efficiency of vessels' transport through the Energy Efficiency Operational Indicator (EEOI), which is the ratio of annual total CO<sub>2</sub> emissions per transport work, as defined by the IMO. In 2022, the average EEOI of our managed fleet **decreased by approximately 3%** compared to 2021\* and is recorded as **6.45**.

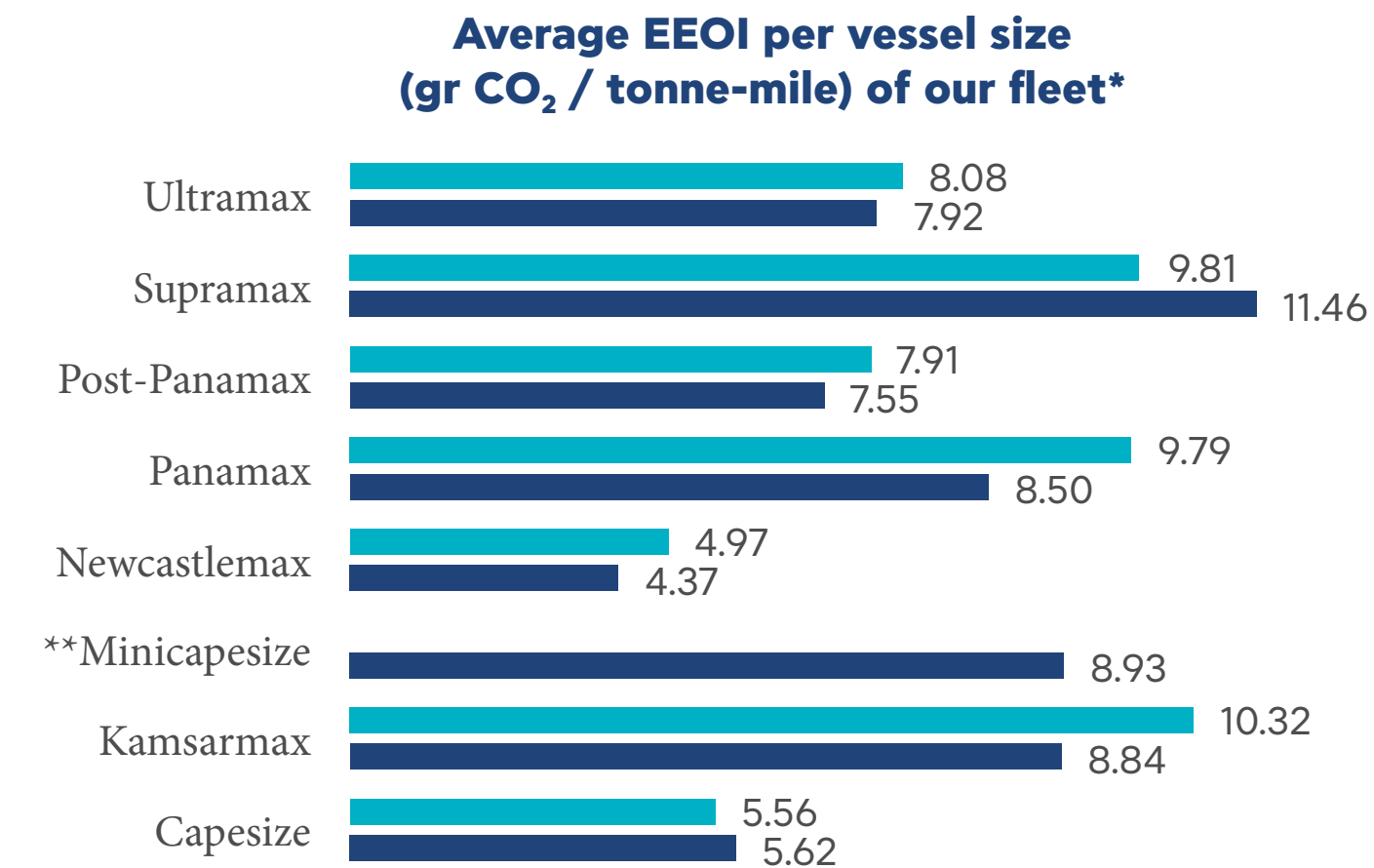
### ANNUAL EFFICIENCY RATIO (AER)

For the monitoring of our ships' energy performance, we use the Annual Efficiency Ratio (AER), a measure adopted by the Poseidon Principles framework for financial institutions. This ratio is determined by dividing the annual CO<sub>2</sub> emissions of a ship by the product of the distance sailed and the deadweight of the ship. In 2022, the average AER of our fleet **has been reduced by approximately 4%** in comparison to the previous year and reported as **3.29**.

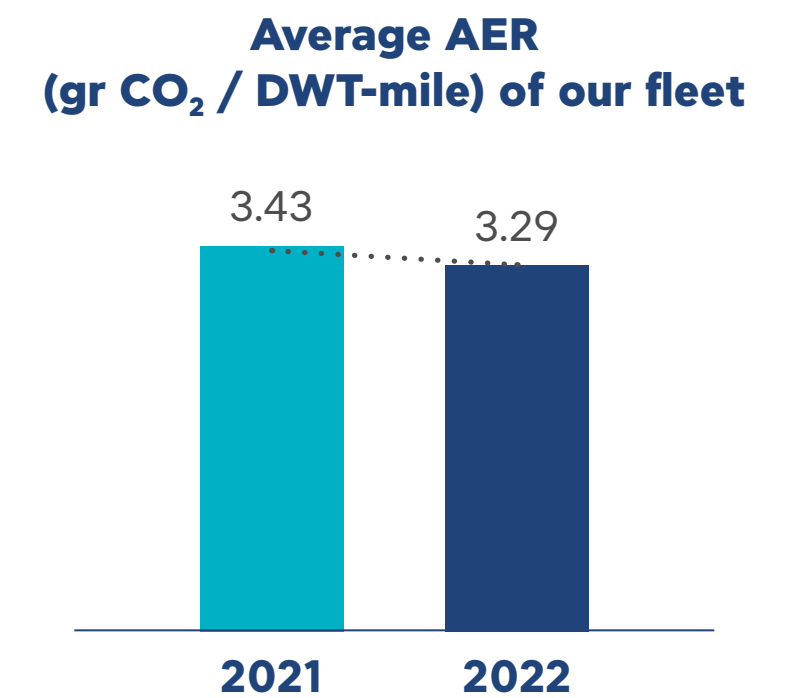
### ENERGY EFFICIENCY EXISTING SHIP INDEX (EEXI)

We have planned and continue to implement a vast array of modifications on board our vessels, as a means of enhancing energy efficiency across our fleet. These include but are not limited to shaft power limitations, energy-saving device retrofits, propeller trimming, and new sea trials for Vref (reference speed) improvement. All the Company's ships are in full compliance with IMO's EEXI Regulation.

\* In 2021, vessels' speed increased due to a strong dry-bulk market.



■ 2021 ■ 2022 \*Excluding the vessels managed by our third-party managers. \*\*There were no minicapesize vessels on our fleet during 2021.

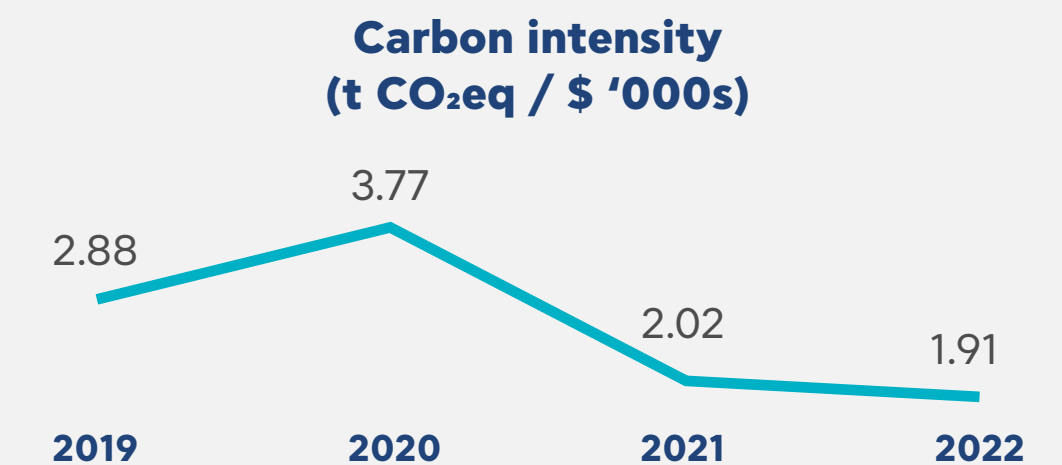


### CARBON INTENSITY TREND

In 2022, we introduced an additional key performance indicator to assess the carbon intensity of our fleet, relative to our income generated.

The carbon intensity indicator is calculated by summing up our Scope 1 and Scope 2 emissions for each fiscal year, expressed in tonnes of carbon dioxide equivalent (t CO<sub>2</sub>eq), per thousand US dollars of voyage revenues for the same fiscal year.

Over this period, we observed a 34% reduction compared to the average of the previous three years, which was 2.89.



# WE ACHIEVED A REDUCTION IN OUR TOTAL CO<sub>2</sub>e EMISSIONS THROUGH OPERATIONAL AND TECHNICAL INITIATIVES

## WE CONSISTENTLY MONITOR AND REPORT OUR CO<sub>2</sub>e EMISSIONS TO MITIGATE OUR CARBON FOOTPRINT

In 2022, the total fleet CO<sub>2</sub>e emissions **decreased by 4.6%** as a result of the adoption of appropriate operational and technical measures. The majority (99.9%) represents Scope 1 emissions with 2,706,226 metric tonnes of CO<sub>2</sub>e, while Scope 2 emissions amounted to 524.57 metric tonnes of CO<sub>2</sub>e.

### SCOPE 1 EMISSIONS

Our vessels covered a distance of 7,185,004 nautical miles during 2022, resulting in the consumption of 865,560 metric tonnes of fuel. The average daily fuel consumption per vessel in our managed fleet amounted to 18.53 mt, representing a **7.9% decrease** compared to the preceding year (from 20.11 in 2021 to 18.53 in 2022). The fuel consumption of our entire fleet breaks down to **720,965 mt of HFO, 44,202 mt of LFO and 100,393 mt of MGO**. Our fleet's total energy consumption from non-renewable sources was 35,112,805 GJ in 2022, reflecting a **decline of 4.8%** compared to 2021 levels.

Overall, the reduction of fuel and energy consumption enabled us to record a **4.6% decrease in Scope 1 emissions**. Specifically, Scope 1 emissions decreased mainly because of increased monitoring vessel performance, hull cleaning or antifouling upgrades and weather/route optimization.

### SCOPE 2 EMISSIONS

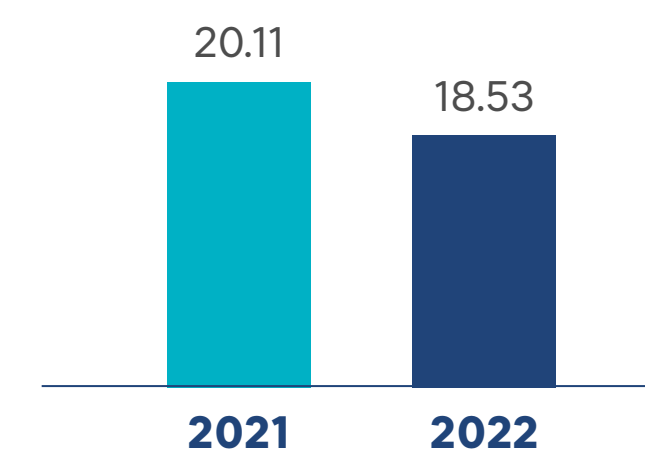
To calculate our Scope 2 indirect emissions, we measured the electricity consumption of our offices in Greece, Cyprus, and Singapore, as well as the electricity purchased by our ships during the dry-dock process. CO<sub>2</sub>e per kWh is not specific to supplier, thus, we use location-based emission factors in our calculations.

The CO<sub>2</sub>e emissions resulting from **electrical power purchased for ships' repairs and retrofitting** in 2022, were **405.93 tonnes**, while the CO<sub>2</sub>e from **electrical power purchased for office use totaled 118.64 tonnes**. The slight increase can be attributed to stoppages necessary for the installation of ballast water systems and energy-saving devices.

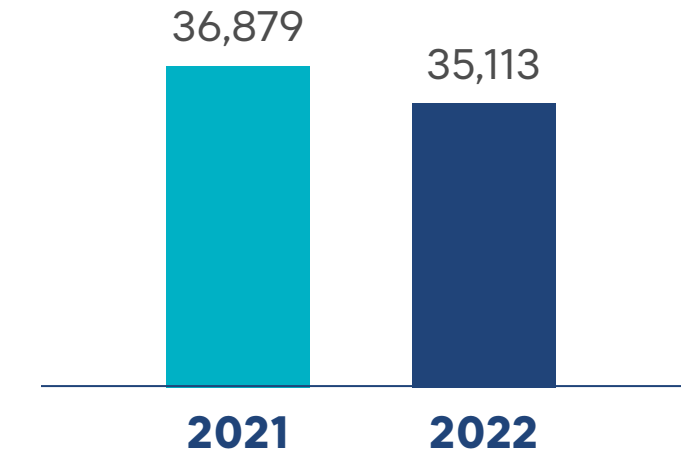
\* We maintain a rolling baseline year for monitoring emissions reductions, therefore we present quantitative data for 2022 and 2021 for comparative purposes.

\*\* In 2022, we recorded zero energy consumption from renewable sources.

Average fuel consumption per day per vessel (tonnes) - Our fleet



Total energy consumption ('000 GJ) - Our fleet



↓ **4.6%** Total Scope 1 & 2 emissions (CO<sub>2</sub>e)

↓ **4.8%** Total energy consumption (GJ)

↓ **4.9%** Total fuel consumption (tonnes)

The CF conversion factor used between fuel consumption and CO<sub>2</sub> emissions is based on IMO Resolution MEPC.245(66) and MEPC 75-7-15 - Fourth IMO GHG Study 2020 – Final report (Secretariat) HFO (3.1144) / LFO (3.151) / MGO (3.206). / The consolidation approach used for emissions calculations was operational control. / 2021 is used for comparison purposes with the 2022 data.

The GWPs used in the calculation of CO<sub>2</sub>e are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period. Our calculation include HFO/LFO (CO<sub>2</sub>, CH<sub>4</sub>: 1.27kg/ton fuel, N<sub>2</sub>O: 44.24kg/ton fuel) and MGO (CO<sub>2</sub>, CH<sub>4</sub>: 0.81kg/ton fuel, N<sub>2</sub>O: 43.19kg/ton fuel), consumed in our vessel's main engines and diesel generators, source: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>.

Conversion factors used for calculating fleet energy consumption from fuels: HFO = 40,200 kj/kg, MGO = 42,700 kj/kg, LFO = 41,700 kj/kg (Source: MEPC 75/7/15: Fourth IMO GHG Study 2020).



# FOR THE FIRST TIME, WE MEASURED AND REPORTED SCOPE 3 EMISSIONS

Star Bulk is highly aware and sensitive on environmental issues and recognizes the impacts of climate change, which is directly linked to the emissions of Greenhouse Gases (GHGs). We have established and implemented a process for the monitoring and reporting of GHG emissions in accordance with the **international standard GHG Protocol “A Corporate Accounting and Reporting Standard”**, which is also used in our response to the Carbon Disclosure Project (CDP).

While Scope 1 and Scope 2 emissions can often be managed and controlled more directly, Scope 3 emissions present great challenges due to their extensive reach and involvement of various stakeholders. **By actively working to measure and reduce our Scope 3 emissions, we demonstrate our values and commitment to operate and grow responsibly and sustainably, in an increasingly carbon-restricted environment.**

Scope 3 emissions refer to Greenhouse Gas (GHG) emissions that occur indirectly across our value chain, capturing upstream and downstream categories. Out of the 15 Scope 3 categories in the protocol, seven categories are currently determined as applicable to Star Bulk’s business model and activities.

**Starting from 2022**, we reported the GHG emissions that derive from purchased goods and services, capital goods, fuel- and energy-related activities, upstream emissions from transportation and distribution, treatment of waste generated by the Company, business travels of the crew and the office personnel, and employee commuting.

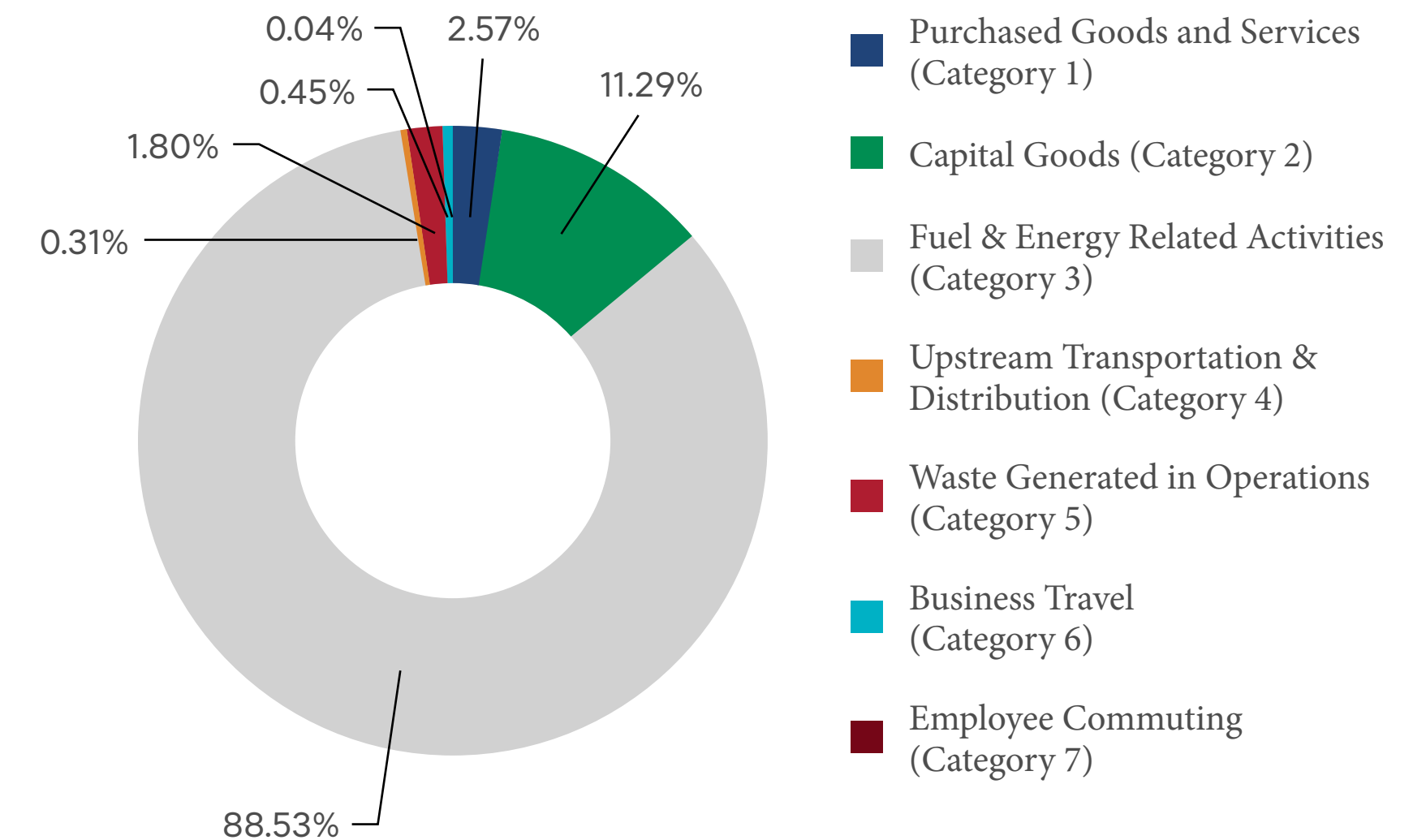
The chart illustrates the percentile contribution of each Category to the Scope 3 emissions of the Company.

- The Category that contributes the most is Fuel -and Energy- Related Activities (Category 3) with around 83.53%.
- 99.97% of these emissions are attributed to the production of the fuels, also known as well-to-tank emissions.

Category 3: Fuel -and Energy- Related Activities (tonnes CO <sub>2</sub> e)		
Upstream emissions of purchased fuels	649,060	99.97%
Upstream emissions of purchased electricity	106	0.02%
Transmission and distribution (T&D) losses	62	0.01%
<b>TOTAL</b>	<b>649,228</b>	

Our Company is dedicated to ensure accurate measurement and management of Scope 3 emissions.

Scope 3 GHG emissions (tonnes CO <sub>2</sub> e)	
Purchased Goods and Services (Category 1)	20,005
Capital Goods (Category 2)	87,779
Fuel- and Energy-Related Activities (Category 3)	649,228
Upstream Transportation & Distribution (Category 4)	2,440
Waste Generated in Operations (Category 5)	13,966
Business Travel (Category 6)	3,525
Employee Commuting (Category 7)	299
<b>TOTAL</b>	<b>777,242</b>



# OUR EFFORTS IN 2022 RESULTED IN SO<sub>x</sub> AND NO<sub>x</sub> EMISSIONS REDUCTIONS

Preserving air quality is a priority for Star Bulk

Star Bulk makes efforts to reduce pollutant emissions to the atmosphere from combustion of hydrocarbon fuels containing sulfur and nitrogen oxides, which are our fleet’s primary pollutants.

During 2022, we successfully achieved a reduction in the total fleet SO<sub>x</sub> and NO<sub>x</sub> emissions compared to the levels recorded in 2021.\*

## SULFUR OXIDES (SO<sub>x</sub>) EMISSIONS

The amount of sulfur oxides in the engine exhaust is nearly equivalent to the amount of sulfur in the fuel burnt.

- Approximately 94% of our vessels are equipped with Exhaust Gas Cleaning Systems (EGCS) or scrubbers which effectively remove sulfur from the heavy fuel oil, containing about 3.5% sulfur, before it is released into the atmosphere.
- In 2022, the total SO<sub>x</sub> emissions from our fleet reached to 7,676 tonnes, showing a **decrease of 6%**.
- On average, each vessel discharged 59.97 mt of SO<sub>x</sub> during 2022, representing a **5.8% decline** compared to the 63.64 mt recorded in 2021.

## NITROGEN OXIDES (NO<sub>x</sub>) EMISSIONS

Our Company has implemented controls on equipment replacement, calibration and sailing phases to mitigate NO<sub>x</sub> emissions from our vessels and reduce their environmental impact. NO<sub>x</sub> is created through the reaction of nitrogen and oxygen gases during fuel combustion at high temperatures in engines.

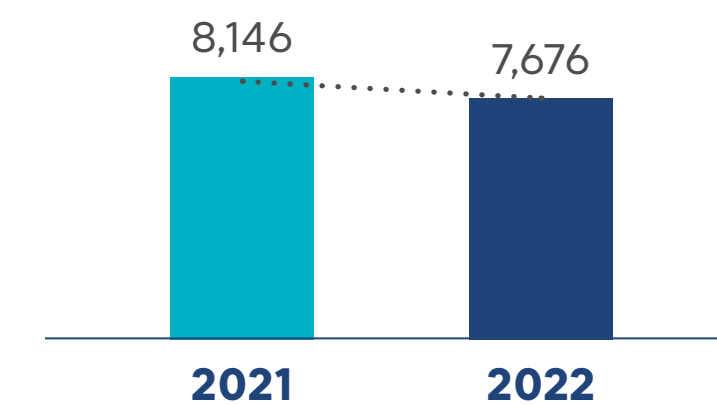
- Our total fleet emitted 61,423 tones of NO<sub>x</sub> during 2022, marking a **3% reduction** compared to the 2021 emissions of 63,311.
- In 2021, the average NO<sub>x</sub> emissions per vessel were 494.61 mt, while in 2022 they **decreased to 479.86 mt** per vessel, due to the implementation of appropriate operational and technical measures.

The figures for SO<sub>x</sub> and NO<sub>x</sub> emissions reflect the total annual emissions of our entire fleet in 2021 and 2022.

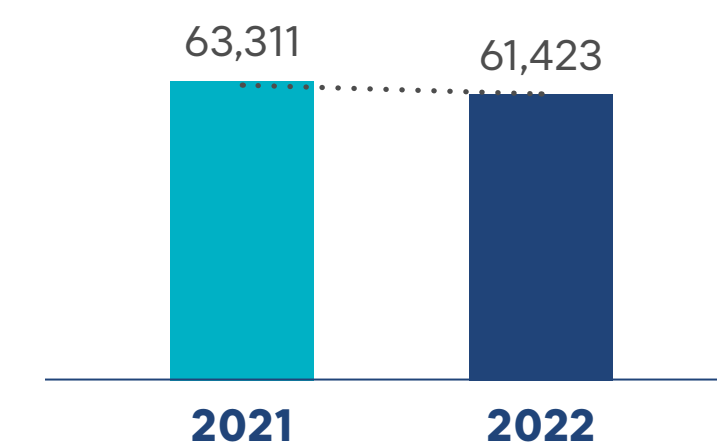
\*We closely monitor only CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> emissions. PM2.5 and PM10 emissions are considered immaterial to us, while other type of emissions (VOC, POP, HAP, etc.) are not related to the nature of our operations. For the calculation of our SO<sub>x</sub> and NO<sub>x</sub> emissions, we used the emission factors from MEPC 75/7/15, 4th IMO GHG study 2020.



SO<sub>x</sub> emissions (tonnes) - Our fleet



NO<sub>x</sub> emissions (tonnes) - Our fleet



# WE CLOSELY MONITOR AND MANAGE THE WASTE GENERATED ON BOARD AND ASHORE

We promote responsible waste management practices across our offices and vessels, implementing a variety of measures to improve our environmental impact. All of our vessels adhere to MARPOL Annex V regulations, which aim to minimize the discharge of waste into the sea.

We actively encourage and support the recycling of materials at our offices. As a result, 1,435 kg of paper, 40 kg of aluminium cans, 33 kg of batteries, and 375 kg of electronic devices, UPS, toners, and cartridges were recycled in 2022.

Our Kamsarmax vessels generate the majority of the waste, followed by the Ultramax vessels. We dispose of sludges primarily onshore, with some being incinerated. Regarding bilges, we disposed during the reporting year 8,498 m<sup>3</sup>, through Oily Water Separators (OWS) on board.

During the period 2018 to 2022, we recorded a **significant reduction in plastic waste from the printers on board our vessels**. More specifically, 2.93 tons of ink cartridges and 623 kg of plastic waste were avoided by repairing the printers instead of disposing/replacing them. The average number of ink cartridges saved equates to 388 cartridges per ship/year and the number saved over a four-year period in total is more than 156,000 cartridges.

Waste generation (m <sup>3</sup> )*	
Sludges produced	8,516
Sludges disposed ashore	5,293
Sludges incinerated	2,201
Bilges disposed through OWS	8,498
Bilges disposed ashore	648
Garbage of all types	10,875

\*Excluding the vessels managed by our third-party managers



**1,883 kg** were recycled in our offices

**zero** spills or releases to the environment

# WE REDUCED THE AVERAGE BOTTLED MINERAL WATER CONSUMPTION BY 80%\*

## WATER MANAGEMENT

We use fresh water which is either produced on board through generators that turn sea water into fresh water or supplied from the shore.

In order to minimize the consumption of plastic drinking water bottles on our vessels, we joined in 2021 the “Getting to Zero” Project, an initiative by IMPA SAVE and we had installed reverse osmosis Water Filtration Systems on 55 of our vessels by the end of 2022.

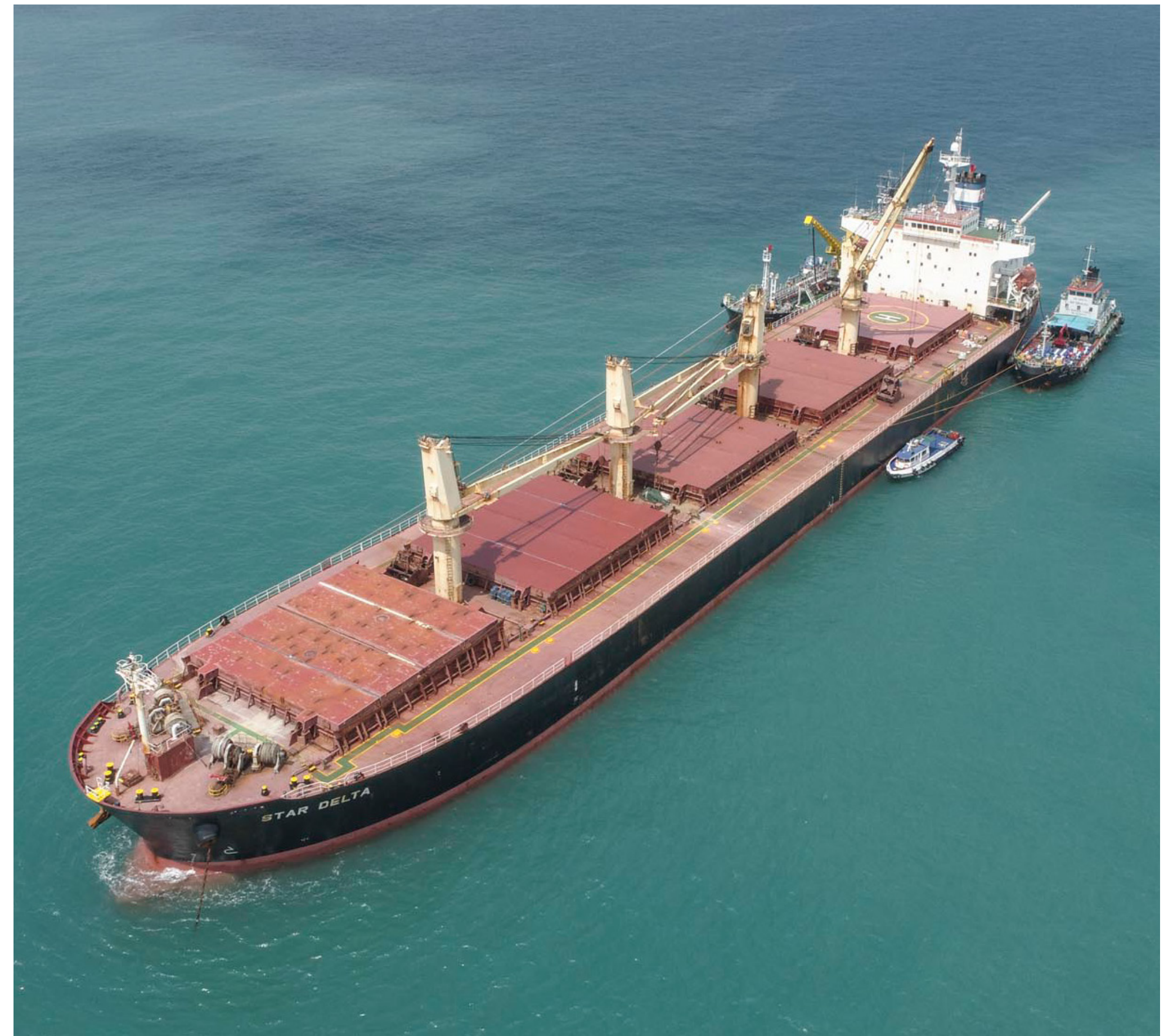
In early 2019, we started using Drinking Water Filtration Systems on a few of our vessels and as of 2022, the average fresh water consumption for 10 of our vessels was 31,320 bottles, instead of 153,300 bottles in 2021, indicating a substantial **80% decrease**.

At the publication date of the report, installations of water filtration systems have been completed on 55 vessels, which is 100% of our target.

## LED-LAMP RETROFIT PROJECT

We are in the final stage in the process of replacing conventional lights on board our ships with LED lights to reduce energy consumption. The LED-Lamp Retrofit Project has already been completed on 51 out of 55 vessels, demonstrating a 93% of our goal.

\* This refers to vessels that are equipped with drinking water filtration systems.



# OUR ELECTRICITY, PAPER AND WATER CONSUMPTION ASHORE REMAINED AT APPROXIMATELY THE SAME LEVELS WITH 2021

In addition to our vessels' environmental footprint, we place great emphasis on monitoring our offices' consumption, in terms of energy, paper, water and battery. We have introduced and implemented dedicated **Environmental Management Programs** to keep track of our offices' performance.

We adopt various measures to reduce our impact on the environment and also take actions to raise our employees' awareness on sustainability issues.



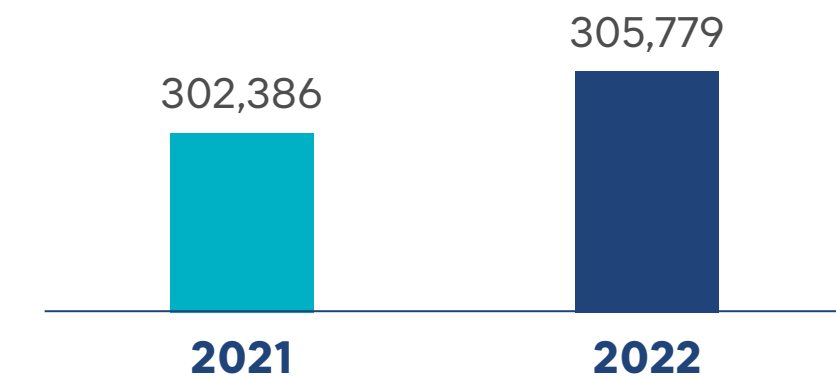
During 2022, the energy consumption from our premises in Greece, Cyprus and Singapore, as well as the purchased electricity by our ships during dry dock, showed a slight increase of 1.1% compared to the 2021 levels.

The paper consumption across our offices was 2,925 kg, while the total water consumption was 536 m<sup>3</sup>.

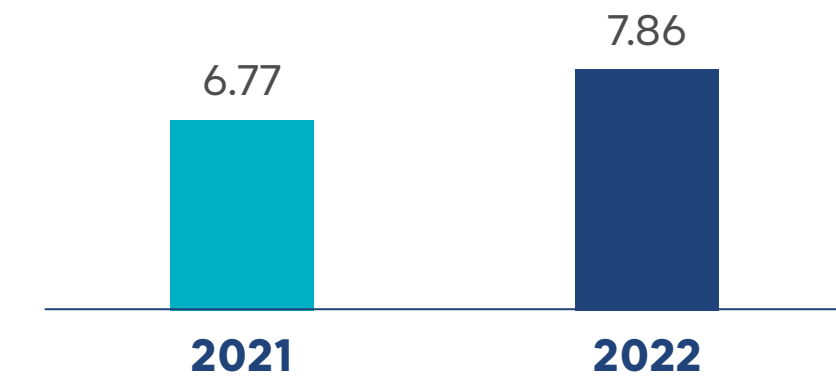
The increase of the consumption ashore is mainly due to the following reasons:

- the expansion of our workforce, from 333 to 372 employees, and
- the increased attendance at the office following the relaxation of COVID-19 restrictions.

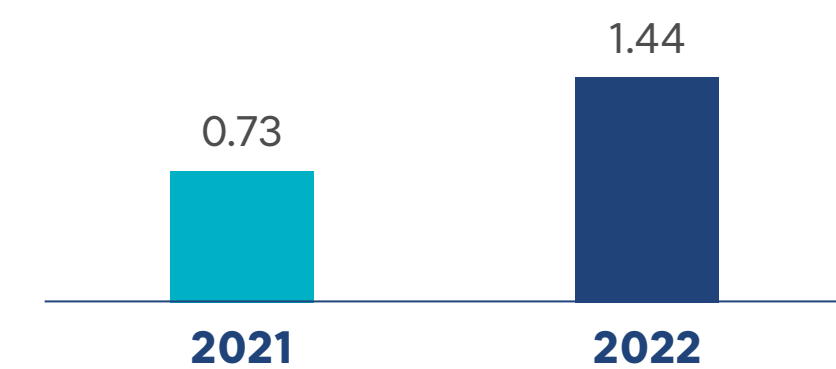
**Electricity consumption (kWh)**  
- Our offices



**Paper consumption (kg)**  
- Per employee



**Water consumption (m<sup>3</sup>)**  
- Per employee



# WE COMPLY TIMELY AND EFFICIENTLY WITH ALL MARITIME REGULATIONS

## EGCS FITTED FLEET

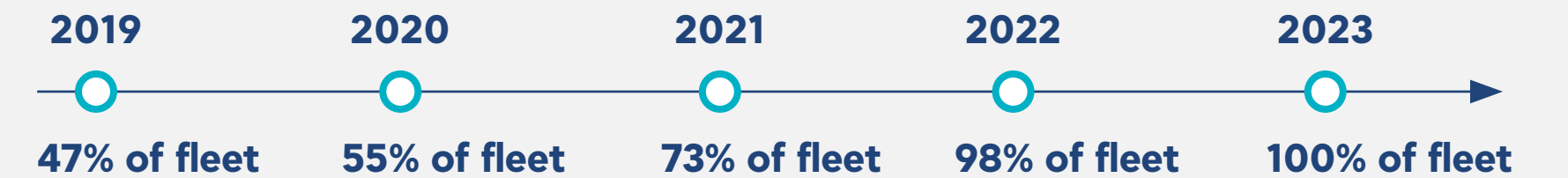
In response to IMO’s sulfur cap regulation introduced on January 1st, 2020, we successfully completed our retrofit plan based on our installation schedule, by completing the installation on 114 out of 116 vessels by 2020, as initially planned. 8 vessels that were added to our fleet as secondhand acquisitions in 2021, are not scrubber fitted.

## BALLAST WATER TREATMENT

Following the requirement of the IMO Ballast Water Management Convention, that entered into force on September 8th, 2017, we had fitted 98% of our fleet with Ballast Water Treatment Systems (BWTS) as of December 31st, 2022.

We have scheduled to have 100% of the fleet fitted by end of 2023. All our vessels are equipped with a ballast water exchange system.

### Ballast Water Treatment Installation Schedule



## SAFE SHIP RECYCLING

We are fully compliant with the EU regulation (1257/2013 on Ship Recycling) that came into force on December 31st, 2020 and refers to vessel recycling activities and the identification and monitoring of hazardous materials. All of our vessels hold a verified IHM certificate.

## REFRIGERANTS AND BIODEGRADABLE LUBRICANTS

We strictly prohibit the use of any refrigerants that significantly affect the ozone layer (such as R22) to reduce the impact on the ozone layer and global warming. During maintenance activities eco-friendly refrigerants are used (such as R407 and R404). We used biodegradable lubricants and eco-friendly stern tube systems (air, seal) on 45% and 56% of our vessels, respectively, in 2022.

## CYBER SECURITY

We monitor and assess cyber risks and implement measures across all our operations to eliminate all significant threats. We implement an appropriate scheme of cyber security governance and controls to protect our information assets.

## EU MRV AND IMO DCS

We comply with the EU MRV and IMO DCS regulations. We collect, calculate and analyze the fleet’s data, with the help of our in-house Vessel Performance Monitoring (VPM) system.

**We have not identified any non-compliance with applicable environmental laws and/or regulations**

**zero**

emissions of ozone-depleting substances (ODS)

**44.5%** of our fleet

use biodegradable (stern tube) lubricants

**55.5%** of our fleet

use eco-friendly stern tube systems

# WE CLOSELY MONITOR REGULATORY DEVELOPMENTS AND THEIR IMPACT ON OUR DECISIONS

## by 2030

- Reduction of carbon intensity by at least 40%
- Reduction of GHG emissions by at least 20%

## by 2040

- Reduction of GHG emissions by at least 70%

## by 2050

- Attainment of Net Zero GHG emissions

## by 2030

- Reduction of net GHG emissions by at least 55%

## by 2050

- Europe to become the world's first climate - neutral continent



During the latest meeting of the Marine Environmental Protection Committee (MEPC) it was decided to adopt IMO's strategy on the reduction of GHG emissions from ships with a target to reach net zero GHG emissions close to 2050, with check points as follows: reduce GHG emissions by at least 20% (striving for 30%) by 2030 and by at least 70% (striving for 80%) by 2040, compared to 2008. IMO's previous amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, for the reduction of ships' carbon intensity through a combination of mandatory technical and operational measures, remain unchanged.

The measures require all ships to calculate their Energy Efficiency Existing Ship Index (EEXI) which is determined by the technical characteristics of each ship and to establish their annual operational carbon intensity indicator (CII) and CII rating.

From 1 January 2023, it is mandatory for all ships to calculate their attained Energy Efficiency Existing Ship Index (EEXI) and to initiate the collection of data for the reporting of their annual operational carbon intensity indicator (CII) and CII rating.

We have verified the EEXI values for all our vessels and closely monitor their CII rating, based on the guidelines set by the IMO. We plan to proceed with Engine Power Limitation (EPL) to meet the IMO requirements.



Under the framework of the European Commission's legislative proposals to implement the European Green Deal, the 'Fit for 55' package, released on 14 July 2021, included various measures aimed at mitigating the climate impact of maritime transport.

The EU is the first jurisdiction to put an explicit carbon price on emissions from maritime transport.

Starting January 2024, the EU Emissions Trading System (EU ETS) will be expanded to encompass CO<sub>2</sub> emissions from all large ships (with a gross tonnage of 5000 and above) arriving at EU ports, regardless of their flag registration.

**Our actions in preparation for the EU ETS regulation target two focus areas:**

- **CO<sub>2</sub> emissions reductions:** We have implemented and continue to adopt measures to decarbonize our fleet and improve the Carbon Intensity Indicator (CII).
- **Minimization of financial impact:** Inclusion of a clause in our charter party agreements imposing an obligation on the charterer to cover the cost associated with the CO<sub>2</sub> emissions generated during voyages to/from and within the European Union.

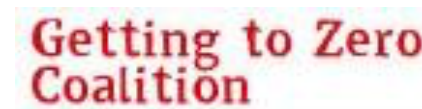
**The EU aims to substantially increase the use of renewable and low-carbon fuels to reduce the carbon footprint of the maritime sector.**

On 23 March 2023, the European Parliament and the Council agreed on FuelEU Maritime, a new EU regulation that includes a provision, among others, to gradually decrease over time the greenhouse gas intensity of fuels used by the shipping sector, by 2% in 2025 to as much as 80% by 2050.

# WE SUPPORT INDUSTRY-WIDE ENVIRONMENTAL PROTECTION INITIATIVES THROUGH OUR ACTIVE PARTICIPATION



The Global Maritime Forum is an international not-for-profit organization committed to shape the future of global seaborne trade, increase sustainable long-term economic development and human wellbeing. **Star Bulk supports the Global Maritime Forum as a Partner.**



Star Bulk is a **member** and actively participates in the “Getting to Zero Coalition”, an alliance of companies across the maritime, energy, infrastructure and finance sectors. It is supported by key governments and IGOs which are committed to bringing commercially viable, deep-sea, zero-emission vessels into operation by 2030.



Star Bulk **signed the Call to Action for Shipping Decarbonisation in 2021**, which is a call on governments to work together with the industry to deliver the policies to support the transition and make zero-emission shipping viable by 2030.



In May 2022, we joined the “**Green Corridor**” Project, **establishing a consortium to assess the development of an iron ore Green Corridor between Australia and East Asia.** Led by the Global Maritime Forum, other members include BHP, Rio Tinto, and Oldendorff Carriers GmbH & Co. KG. The consortium explores the appropriate conditions to create demand and to feasibly scale zero or near-zero-GHG emission shipping on the corridor.



The International Bunker Industry Association (IBIA) represents the global bunker industry, providing to all shipping stakeholders (bunker sellers, bunker buyers, fuel producers, financiers, Classification Societies, Oil Majors, Surveying Companies, Laboratories) an international forum for bunker, and wider energy, industry issues, related to current and future/alternative fuels. It represents the industry in discussions and negotiations with national and international policy makers, legislators, and regulatory bodies. IBIA has an official consultative status in the IMO as a non-governmental organization and is actively engaged in the assessment of low and zero carbon fuels, making official interventions in order to affect policy and ultimate regulations. Star Bulk is an active member of IBIA and actively participates and leads within IBIA’s working groups for ammonia, methanol, LNG and other alternative fuels.



We participated in the Carbon Disclosure Project (CDP), a carbon rating that measures the climate resilience and mitigation effort of a company, for a second year in a row, and we **achieved a score of B under Climate Change for our voluntary disclosures**, improving our performance relative to last year (2021) where we achieved scored B-.



We **joined the “Getting to Zero Project” of @IMPA SAVE**, to reduce the use of plastic drinking water bottles on board by 2025, along with a group of individuals representing global ship owners and maritime suppliers who are responding to the United Nations’ universal call for action to promote prosperity, while protecting the environment. The aim is to research alternatives to plastic drinking water bottles on board, seeking several solutions to reduce the amount of plastic consumed by the industry.



**Star Bulk is an active member of the Hellenic Marine Protection Association (HELMEPA), and one member of our management team serves as Board member.** HELMEPA, is an organization of Greek seafarers and ship owners dedicated to safeguard the seas by spreading a pollution prevention and safety spirit throughout the industry.



The Clean Shipping Alliance 2020 (CSA 2020) represents a group of 38 leading global companies from the commercial shipping and cruise industries. Members of CSA 2020 have been leaders in emission control efforts and have conducted thorough research and made significant investments to comply with the 2020 fuel requirements through the installation of Exhaust Gas Cleaning Systems (EGCS) on their fleets. **Star Bulk is an active member of the Alliance and a member of our management team is a director of CSA 2020.**



# WE INVEST IN R&D PROGRAMS, IN NEW TECHNOLOGIES AND ALTERNATIVE FUELS INITIATIVES

## Martecma

Star Bulk is an active member of the Marine Technical Managers Association (Martecma), with the objective to share knowledge, and experience on matters related to ship management, design, rules/regulation, operation, maintenance, promoting the quality, safety, security and environment/seafarers friendly procedures.

## GATERS

GATE Rudder System as a Retrofit for the Next Generation Propulsion and Steering of Ships: GATERS proposes the first retrofit application of a novel propulsion and maneuvering device for ships, called “Gate Rudder System”. It aims “to develop and demonstrate to TRL6 and higher an innovative, cost-effective retrofit solution for marine shipping to provide substantial improvements regarding environmental impacts and life cycle costs”. By taking advantage of the remarkable fuel saving (a max of 14% in trials and 30% in-service) and excellent maneuverability of the gate rudder system, “GATERS will demonstrate significantly reduced emissions from ships particularly within coastal and port areas to meet and even exceed the current and future legislative requirements of the IMO for emissions”.

## ShipFC

Piloting Multi MW Ammonia Ship Fuel Cells: ShipFC’s main mission is to prove and show the case for large-scale zero-emission shipping. We do this through developing, piloting and replicating a modular 2MW fuel cell technology using ammonia as fuel. The project will first adapt and scale-up existing fuel cell solutions to a 2MW system, develop ship and land fuel systems for ammonia and integrate the full system on board a large offshore construction vessel. Then the solution will be validated through commercial operation for at least 3000 hours during a one-year period. Moreover, socio-technical models and analysis will be performed and a full feasibility study on a series of additional vessels will be conducted.

## i-MARINE

(National Program)

Intelligent adaptive-controllable alignment in marine propulsion systems for performance optimization and failure prevention. The program aims to develop and apply computational and experimental tools for the introduction of smart components in the propulsion system of commercial vessels. The project vision is thus the transformation of a conventional propulsion shaft arrangement into an intelligent, controllable and adaptive system, capable of sensing component status, controlling system performance and reacting in the case of critical behavior.

## Bio-CO<sub>2</sub>-Mare

We submitted a proposal in 2022, about the production of 3rd generation of biofuels coming from the maritime vessels’ emissions.

We will be collecting, onshore, CO<sub>2</sub> stored on ships from their own off-gas to convert them into acetic acid using novel TBR with in-situ H<sub>2</sub> generation. Then we will grow microalgae on acetic acid and use a novel valorisation strategy using acoustic waves cell disruption and natural deep eutectic solvents, in collaboration with Wageningen University, to separate the oils (for biodiesel) and the protein-rich fraction (for aquafeed).

## MIRAACLE

We submitted a proposal in 2022 called MIRAACLE, for an innovative Robotics as a Service (RaaS) framework, that allows for rapid configuration and reconfiguration of robotics, improved deplorability, reductions in time to deployment and increased user driven configuration. MIRAACLE moves away from “pure research and in-vitro deployment” towards a real life and operational demonstration of potentiality and added value of robotics in major application paradigms:

- I. For maritime focusing on seaworthiness;
- II. For agriculture and aquaculture focusing on food security;
- III. For cables’ laying focusing on telecommunications infrastructure security;
- IV. For crisis management focusing on post event management.

Furthermore, MIRAACLE introduces the operational utilization of robotic fleets/swarms and through fully autonomous tasking, wishes to fully engage and co-experience with the five sectors and their stakeholders, the high socioeconomic and environmental potential gains, of Robotics by directly upscaling the effectiveness and efficiency of their processes.

## WE INVEST IN R&D PROGRAMS, IN NEW TECHNOLOGIES AND ALTERNATIVE FUELS INITIATIVES (cont'd)

### BugWright2

Autonomous Robotic Inspection and Maintenance on Ship Hulls and Storage Tanks: The objective of BUGWRIGHT2 will be to bridge the gap between the current and desired capabilities of ship inspection and service robots by developing and demonstrating an adaptable autonomous robotic solution for servicing ship outer hulls. By combining the survey capabilities of autonomous Micro Air Vehicles (MAV) and small Autonomous Underwater Vehicles (AUV), with teams of magnetic-wheeled crawlers operating directly on the surface of the structure, the project inspection and cleaning system will be able to seamlessly merge the acquisition of a global overview of the structure with performing a detailed multi-robot visual and acoustic inspection of the structure, detecting corrosion patches or cleaning the surface as necessary – all of this with minimal user intervention. The detailed information provided will be integrated into a real-time visualization and decision-support user-interface taking advantage of virtual reality technologies. Although ships are the targeted application, BUGWRIGHT2 technology may be easily adapted to different structures assembled out of metal plates, and in particular to storage tanks, which is our secondary application domain.

### DT4GS

DT4GS is aimed at delivering an “Open Digital Twin Framework” for both shipping companies and the broader waterborne industry actors to tap into new opportunities made available through the use of Digital Twins(DTs). The project will enable shipping stakeholders to embrace the full spectrum of DT innovations to support smart green shipping in the upgrade of existing ships and new vessels. DT4GS will cover the full ship lifecycle by embracing federation of DT applications as well as utilizing DTLF (Digital Transform and Logistics Forum) policies and related shared-dataspace developments for the sector.

DT4GS applications will focus on shipping companies but will also provide decarbonisation decision-support system for shipyards, equipment manufacturers, port authorities and operators, river commissions, classification societies, energy companies and transport/corridor infrastructure companies. DT4GS’s objectives are to:

1. Support shipping companies in achieving up to 20% reduction in CO<sub>2</sub>e with a 2026 horizon, by developing and deploying real-time configurable DTs for ship and fleet operational performance optimization in 4 Living Labs involving shipping companies, with different vessel types, and establishing fully validated industry services for Green Shipping Operational Optimization. It is expected that DTs will be adopted by 1000+ ships by 2030
2. Establish a comprehensive zero-emission shipping methodology and support Virtual Testbed and Decision Support Systems that address both new builds and retrofits comprising:
  - a. A DT4GS (Green Shipping) Dataspace for the broader shipping sector contributing to GAIA-X by establishing a core European industry resource that accelerates the green and digital transition of waterborne shipping and transport value chains.
  - b. Simulation based solutions to retrofit ships, targeting 55% reduced CO<sub>2</sub>e reduction by 2030.
  - c. A smart green “new-build” reference design per vessel type.
  - d. Virtual Testbed services for reducing the cost of physical testing of GS solutions by 20%

### Alternative Fuel

Star Bulk is currently exploring the use of several alternative fuels including hydrogen and ammonia. In this vein, Star Bulk has participated in a Joint Development Project and HAZID workshop (HAZard identification) with different partners including Engine Builders, Shipbuilders, Classification Societies, Shipping companies, Vendors to work together on Ammonia as an alternative fuel for the marine industry. The deliverable of the workshop relates to the introduction of Rule / Regulations, Safety aspects, Design requirement and operational procedures.

# OUR PEOPLE AND CULTURE

## RELATED SDGS



# OUR SEAFARERS



# WE FOSTER OUR SEAFARERS' PROFESSIONAL DEVELOPMENT

## CHARACTERISTICS OF OUR CREW

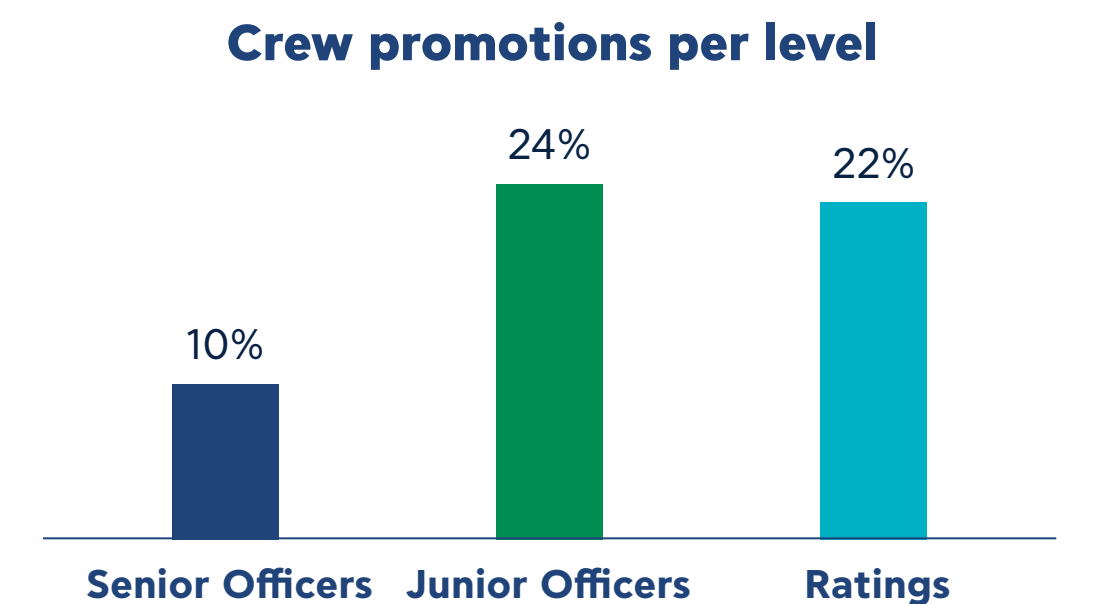
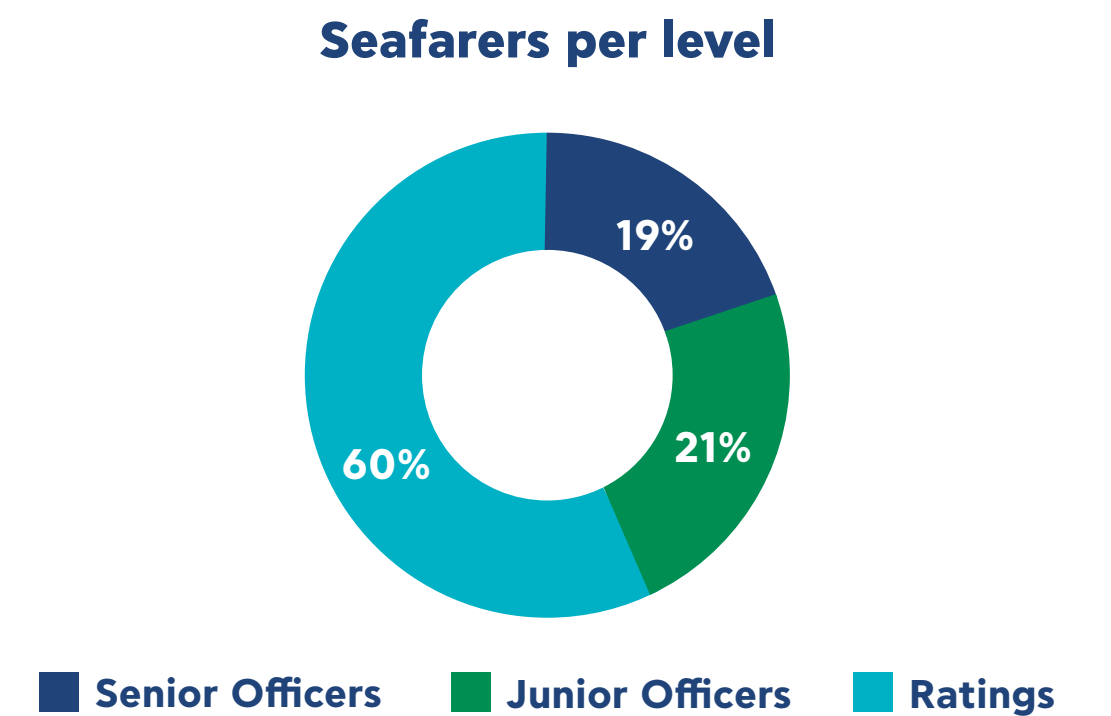
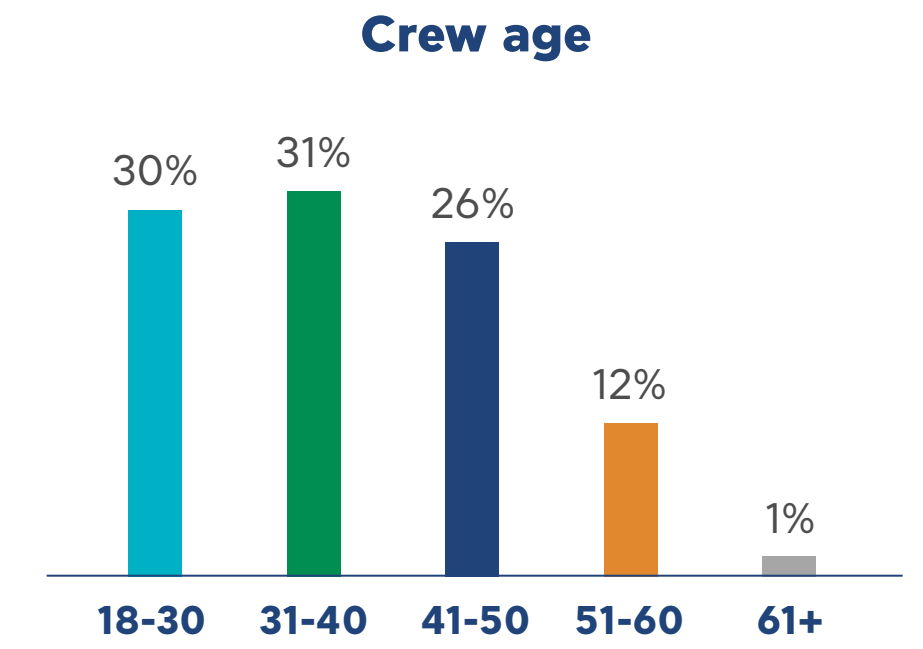

In 2022, **2,688 seafarers** were employed at any time on board our vessels, selected from a pool of more than 4,000 active seafarers.

The Company has an exclusive and long-lasting business partnership with a manning agency located in Philippines. Our collaboration enables us to ensure high competency, as seafarers participate in multiple recruitment, selection, training and development programs.

The Philippines agency recruited in 2022, 96.6% of our on board workforce.

We have an active collective bargaining agreement for our entire fleet.

**The average crew age of our seafarers was 38.6 years old**, with the majority of crew members falling within the 31-40 age group.

We are actively participating in international organizations promoting labor standards. A member of our management team serves as Chairman of the Republic of Marshall Islands Vessel Owners Committee in the ILO MLC Special Tripartite Committee since 2014.

## RETENTION AND PROFESSIONAL GROWTH

Our **top priority** is to ensure that all our seafarers work in a fulfilling environment while **continuously improving their capabilities and skills**. To this end:

- We upgraded our internal promotion program.
- 100% of our seafarers received a performance and career development review.
- We maintained high retention rates across all rankings, with an average of 95.4%, slightly increased compared to 94.1% in 2021.

### Crew country of origin

Philippines 96.6%  
 Bulgaria 0.6%  
 Romania 0.5%  
 Ukraine 2.2%  
 Russia 0.1%

### Number of seafarers per level

Junior Officers: 824 (21%)  
 Senior Officers: 765 (19%)  
 Ratings: 1,347 (60%)

# OUR SEAFARERS' DEVELOPMENT AND WELL BEING ARE KEY PRIORITIES

## PROVISION OF COMPETITIVE COMPENSATION

We provide fair remuneration and benefits to all our seafarers, in line with the competency requirements of each rank.

**During 2022, we offered more than \$102.9 million in wages, bonuses and social security contributions to our crew.**

The average salary of our seafarers is approximately 8.6 times higher than the local GDP per capita in the Philippines, which is the country where the majority of our crew originates. This demonstrates our commitment to providing competitive compensation and benefits to attract and retain the best talent in the industry.

## TRAINING PROGRAMS FOR CREW MEMBERS

Star Bulk provides continuous training and development opportunities to its seafarers to maintain high performance levels.

We collaborate with reputable external training centers and our in-house teams to implement ashore and on board training programs covering areas such as **cargo operations, vessel handling & maneuvering, Exhaust Gas Cleaning System (EGCS) Simulation, engineering, and hazardous materials.**

Through our advanced training program, we provide our crew with the necessary tools and knowledge to succeed in their careers. In 2022, we **invested over \$518,000 in crew training and development.**

## WE ENHANCE THE MENTAL HEALTH AND WELLBEING OF OUR CREW MEMBERS

We offer health promotion programs to support our crew's wellbeing. In 2022, we spent more than \$300,000 on crew wellbeing initiatives.

Ongoing and additional measures implemented that positively contribute to the wellness of all our seafarers:

- Provision of private medical insurance for all seafarers regardless of rank.
- Establishment of a psychological support line that provides medical consultation services.
- Establishment of gym and karaoke equipment that promotes physical activities and entertainment.
- Provision of free internet access to enhance the communication of our crew members with their families.

In response to the humanitarian crisis that occurred following the Ukraine-Russia war, we immediately took action to support our crew. We initiated a direct communication line through phone calls and emails, for our seafarers and their families. Furthermore, we supported the evacuation of 72 people from the war zone, ensuring their safe repatriation to other countries. Star Bulk also plans to cooperate with the International Organization for Migration (HELIOS Project) that aims to effectively integrate the Ukrainian community in Greece.

Recognizing that the nature of our seafarers' work is everchanging, we strive to ensure that they remain satisfied and motivated. Therefore, we provide one month notice for operational changes that may affect their day-to-day activities.

**Proportion of seafarer salary in relation to local (Philippines) GDP per capita**



**Categories of trainings**

- Marine, Safety and Quality
- Technical
- Human Resources
- Health and Safety

- > \$102.9m**  
in crew salaries, bonuses and social security contributions
- > \$300,000**  
in wellbeing initiatives on board
- > \$518,000**  
in crew training and development

# WE ACTIVELY SUPPORT AND PROTECT HUMAN RIGHTS



**0** incidents of human rights violations in 2022

## GUIDING PRINCIPLES

As stated in our Code of Ethics and associated whistleblowing procedures, we have a strict zero tolerance policy towards any type of discrimination, harassment, violence or intimidation based on gender identity, ethnicity, national origin, race, color, religion, age, sexual orientation, disability or marital status.

We have also adopted a policy to address modern slavery, ensuring that no incidents occur within our operations and all forms of forced and compulsory labor are prevented.

## ACTIONS AND IMPACT

We have planned the conduction of a number of series of seminars for our employees to ensure that everyone is aware of our approach to prevent discrimination and harassment, and promote diversity and inclusion in the workplace. We provide equal development opportunities for both men and women by following merit-based employment practices.

## ALIGNMENT WITH GLOBAL FRAMEWORKS

Star Bulk closely follows global frameworks, standards and initiatives to refine its human rights approach, including the conventions of the International Labor Organization (ILO), the UN Convention on the Rights of the Child (UNCRC) and the United Nations Universal Declaration of Human Rights.

As a member of the United Nations Global Compact (UNG), we are committed to enforce effective systems and due diligence control mechanisms to ensure that we uphold all universally recognized human rights across our operations and wider value and supply chain.

# OUR ONSHORE EMPLOYEES





# WE ATTRIBUTE OUR SUCCESS TO OUR PEOPLE



We foster an **inclusive and diverse work environment** that enables our employees to reach their full potential. We maintain a diverse workforce and closely follow **National Labor laws and the Industry's Collective Bargaining** agreements to adhere to fair and transparent employment practices.

For the management of our vessels, our onshore team comprises **370 full-time employees**, and 2 part-time employees, from which 364 are under permanent and 8 are under temporary contracts. From the 372 employees, 354 are based in Athens, 17 in Cyprus and 1 (permanent full-time) in Singapore. 100% of our office-based employees are covered by collective bargaining agreements.

**27%** of our employees from Operations, Technical and MSQ Departments, have significant **seagoing experience**, and support the technical management of the vessels managed by Star Bulk.

Out of our total workforce, **156 (42%) of our employees are women**, 146 are permanent and full-time employees in Athens and 7 in Cyprus. Additionally, 16 (24%) of our management and executive officer positions are held by women. In terms of age, 19% of employees are below 30 years old, 61% between 31 and 50 years old, 13% between 51 and 60 years old, and 7% above 60 years old. Our workforce is diverse, consisting of individuals from **19 different nationalities**.

**42%**

women across our workforce

**19**

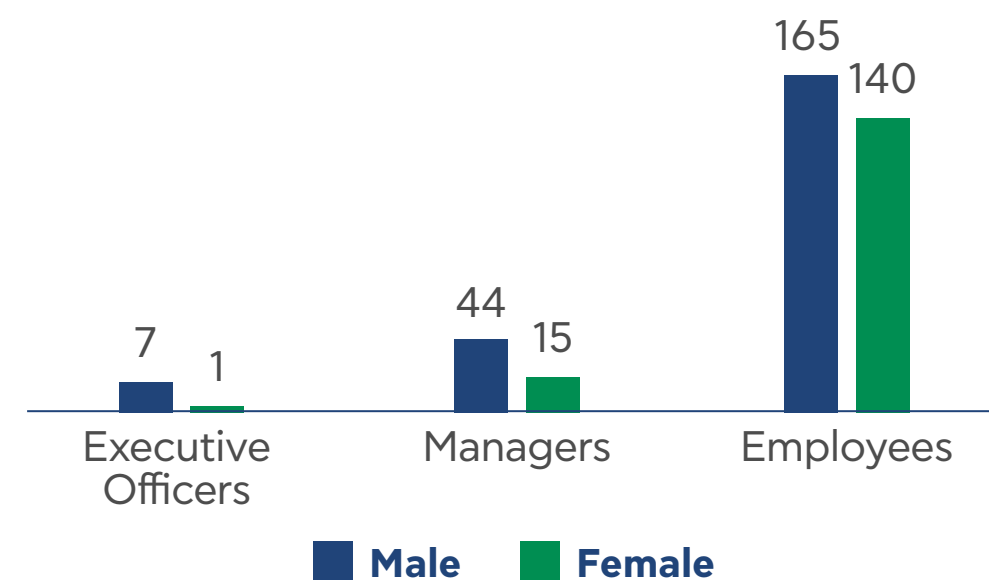
nationalities comprise our workforce

## SUPPORTING THE EMPOWERMENT OF WOMEN IN SHIPPING

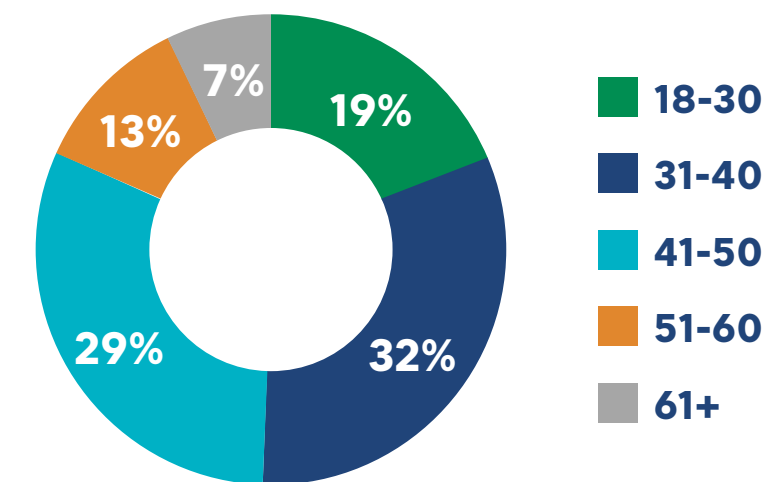
Active members of the Association within our female workforce, while a member of our management team served as President of WISTA Hellas from 2014 till 2020.



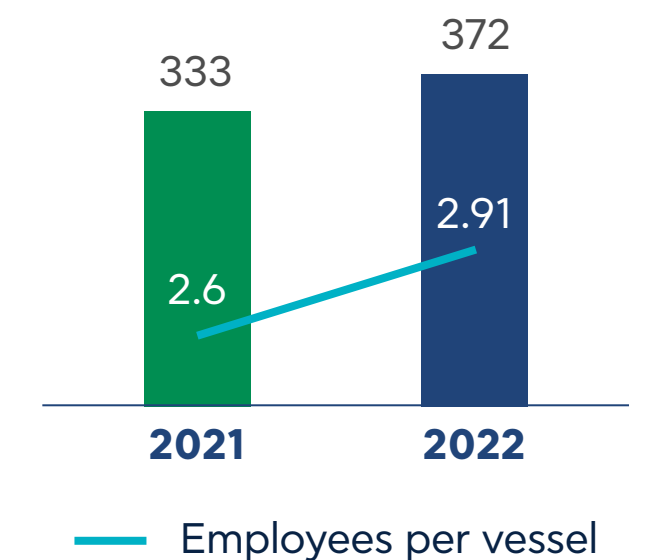
**Employees Gender Composition per level**



**Age Composition**



**Total Headcount**



# IN 2022, WE ENHANCED THE WELLBEING PROGRAMS OF OUR EMPLOYEES

We believe that a thriving working environment is dependent upon the wellbeing of the people that comprise it. We hold ourselves accountable for the provision of physical and mental health support to all our employees, and as such, we implement numerous initiatives.

## EMPLOYEE ASSISTANCE PROGRAM

In April 2022, we launched an Employee Assistance Program with the introduction of an external 24/7 Mental Health Hotline for all employees and their immediate family members.

Since the scheme’s launch, 172 calls have been received and 64 individuals have used the hotline.

## WELL-BEING INITIATIVES

- Constant medical and health advice by the Company’s occupational physician.
- Special anatomic office equipment for employees who need it.
- Implementation of an engagement survey to assess employee satisfaction.
- Provision of benefits such as discounts and special offers on restaurants, gym memberships, pharmacies, parking, beauty and wellness.

## WORK FROM HOME POLICY

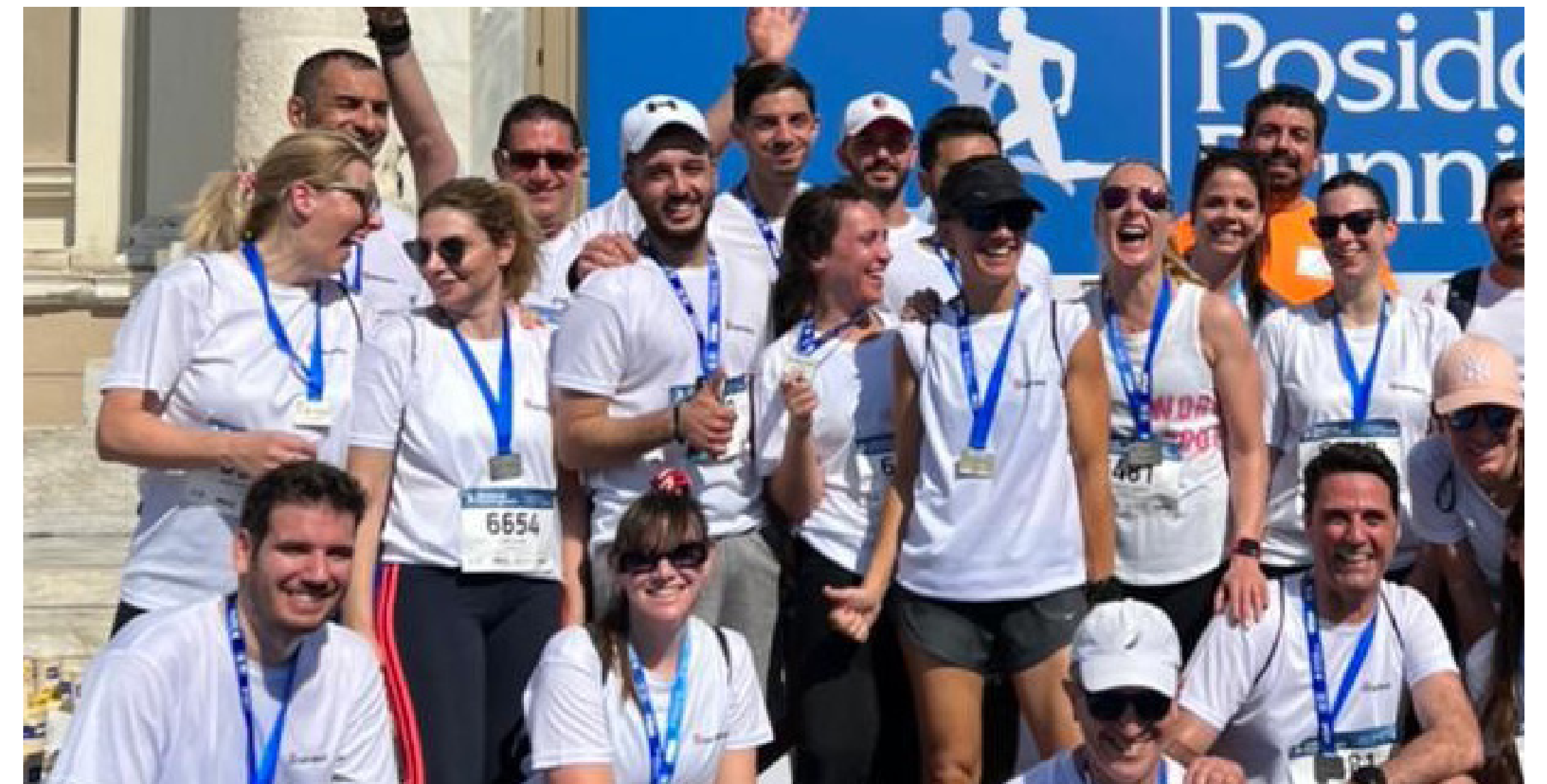
In October 2022, the company piloted a “one day per week remote work” policy for a two-month trial period for all employees ashore. In December 2022, the Company implemented the policy to provide its people with a hybrid working model and enhance flexibility.

## PARENTAL LEAVE

In 2022, 16 employees (1 man and 15 women) utilized this benefit, while we maintained a 100% retention rate.

## ENGAGEMENT ACTIVITIES

- Participation of 31 Star Bulk employees in the Posidonia Running Event 2022.
- Participation in the HELMEPA Joint Beach Cleanup at the Piraeus coast.
- Provision of welcome kits to all new hires to enhance their onboarding experience.
- Initiation of a blood bank with the voluntary participation of our employees launched in 2023.



# WE SUPPORT OUR EMPLOYEES' PROFESSIONAL DEVELOPMENT

## ENABLING CONTINUOUS LEARNING

At Star Bulk, it is of great importance to maintain a workforce that consistently performs at a high level. Therefore, we encourage our employees to pursue ongoing education and professional development opportunities offered by accredited educational institutions and training providers.

We maintain a highly educated workforce, 44% of our employees have higher education, university degrees, while 41% hold a post-graduate degree.

We continue to invest in our employees and offer access to educational opportunities. We strive to provide the necessary hands-on experience and build their skillset in order to be well-positioned to thrive in today's competitive job market and realize their full potential within our Company.

During 2022, we implemented various training programs on GDPR, ISO, Ballast Water Treatment System, Exhaust Gas Cleaning System, Air Compressors, Classification matters, Cyber Security, Auditing techniques, First Aids, Use of Defibrillator, Fire Fighting, Lub-oil analysis, Blasting & Coating, Corrosion Controls, Marine Claims etc. Also, a leadership development program is planned for 2023.

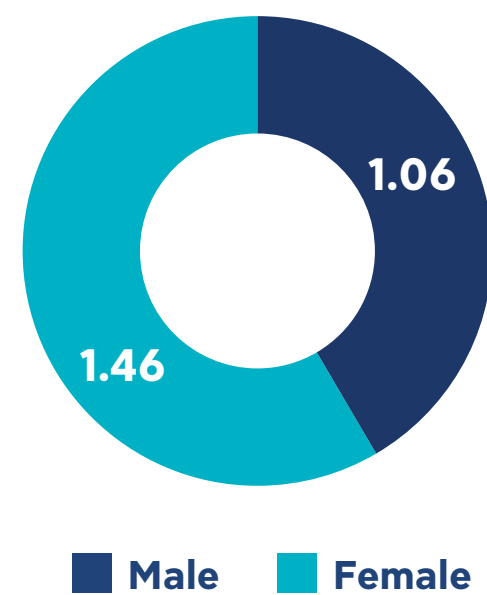
## DRIVING PROFESSIONAL DEVELOPMENT

Star Bulk has established an annual performance review process which facilitates goal setting among managers and employees and sets the framework for their development within the Company. The process consists of mid-year and year-end evaluation. During the mid-year review, employees discuss their progress against their goals and make any necessary changes. During the year-end review, employees are evaluated based on a horizontal competency model and the achievement of the goals set at the beginning of the year.

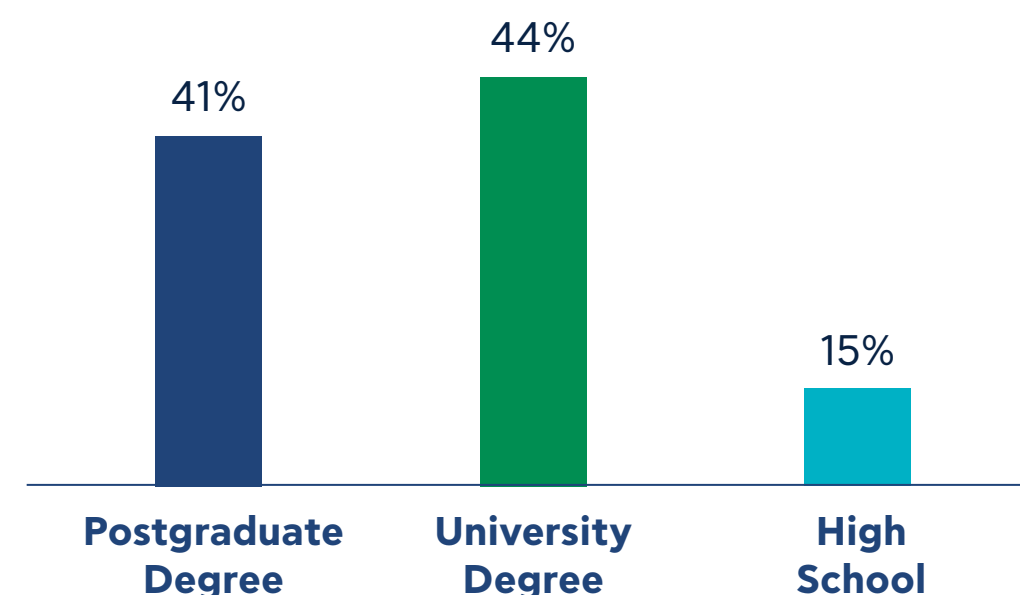
The evaluation process begins with the employees' self-assessment, followed by a discussion and agreement with their line manager and the finalization of each employee's personal performance score. The performance review process is linked to our Company's compensation and benefits scheme, and stimulates career progression within Star Bulk.

In 2022, 97% of our employees participated and successfully completed the performance evaluation process. This includes all entitled employees across various levels. Twenty-two employees were promoted throughout the Company (9 women and 13 men). Eight of them were between 18-30 years old, 11 between 31-40, while 3 were between 51-60 years old.

Average training hours per gender



Educational Background



**97%** participation in annual performance review process

**22** promotions during 2022

**84** total hours on occupational health and safety training programs during 2022

# INCREASED HEADCOUNT AS WE BROUGHT IN MANAGED VESSELS

We believe that staying connected to the rapidly changing business environment is of vital importance for the success of our Company.

**Investing in young talent is a key component of our corporate regeneration strategy.** We provide **internship opportunities** to students and have established **partnerships with academic institutions** to enhance employer branding and attract talent through participation in career forums and conferences.

During 2022, we **provided 17 internships**, with **6 of our interns being offered full time jobs within our Company.** Thirteen of our interns were Greek, 2 Greek-Americans, 1 American and 1 Ukrainian and all of them were between the ages of 18 and 30.

The number of people in our workforce **significantly increased during 2022**, as we expanded our team with 89 new hires, marking a **78% increase compared to 2021.** The increase in headcount is also attributed to the transfer of ships, previously managed by third-party companies, to our in-house management teams between 2021 and 2022. New hires comprised 83 Greeks, 2 Cypriots, 1 Greek-Cypriot, 1 Albanian, 1 Moldovan, and 1 Ukrainian, 41 of which are women and 48 men.

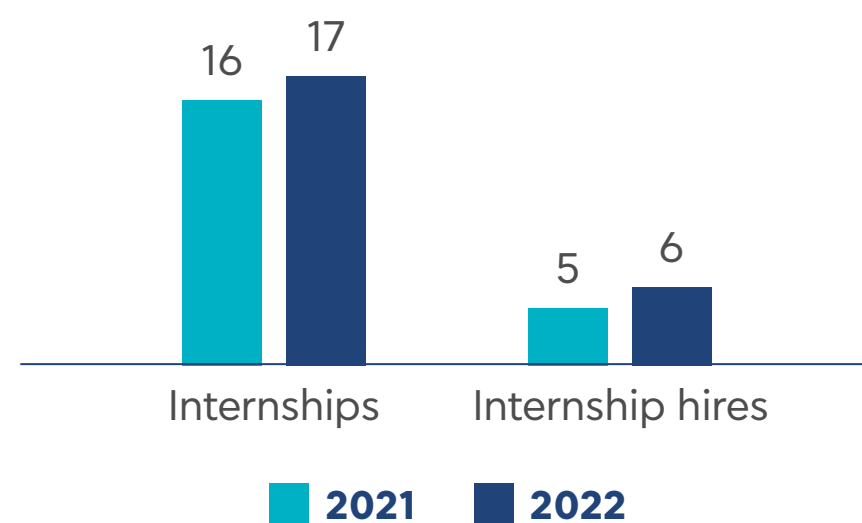
In 2022, our retention rate was at 76.1% and our turnover rate at 23.9%.

During the reporting year, the number of internal job transfers was increased to 12, compared to 4 in 2021. All 12 internal transfers were Greek, from which 7 were women and 5 men, with 9 under 40 years old, 2 between 41-50 years old and 1 over 61 years old.

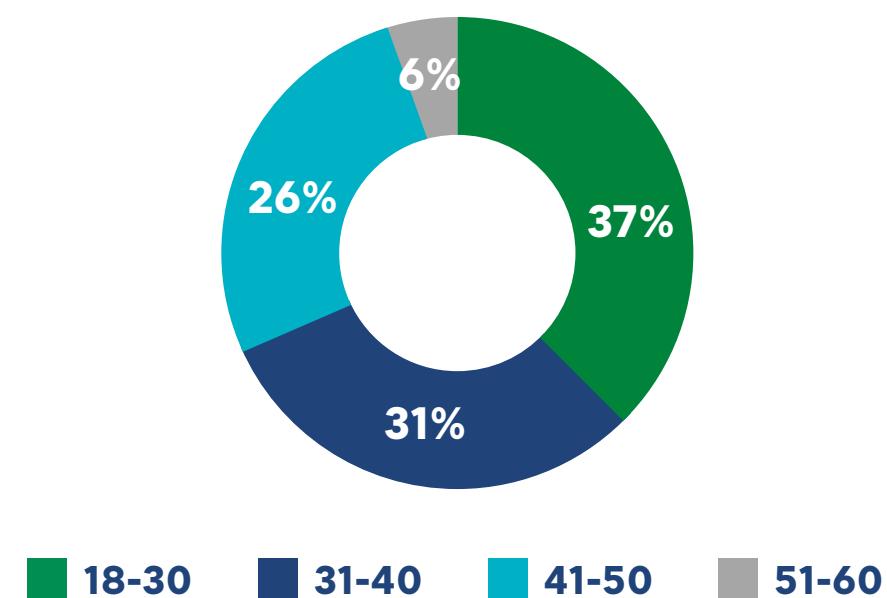
We strongly believe that internal job transfers provide our employees with exciting opportunities to develop their careers within our Company.



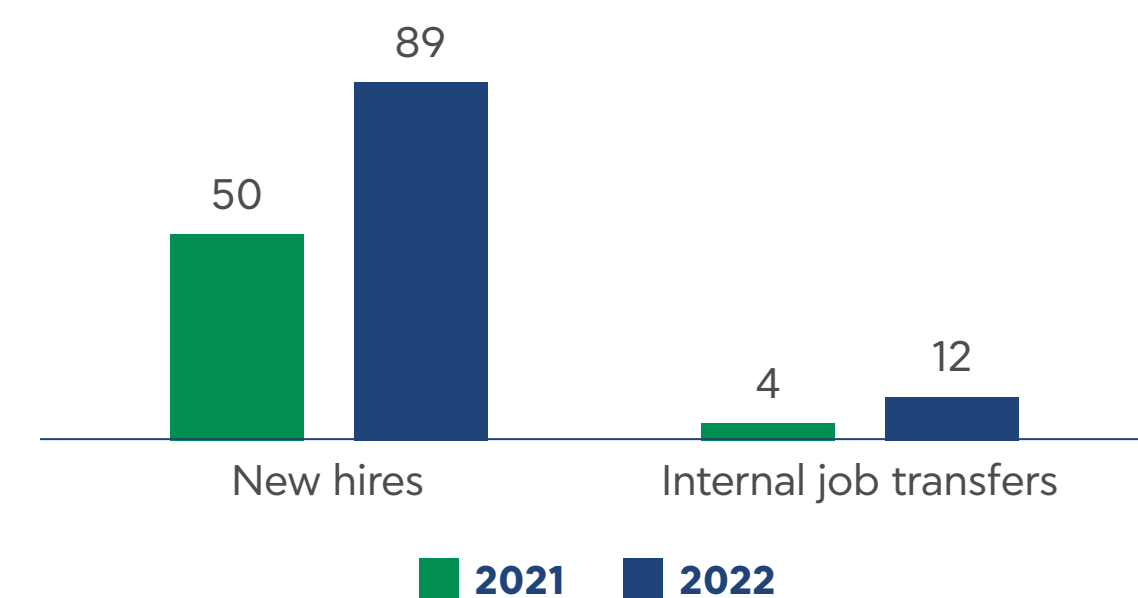
**Internships and internship hires**



**New hires per age category**



**New hires and internal job transfers**



# SAFEGUARDING HEALTH AND SAFETY



# A LEADING PERFORMER IN SAFETY IN THE DRY BULK SECTOR

In 2022, we continued to align our daily operations with our strong commitment to improving our health and safety performance. Our team of experienced professionals employs advanced tools and systems to carefully monitor and manage potential risks, and we remain agile in incorporating additional measures when required.

Star Bulk has in place an ISO 45001 certified Occupational Health & Safety Management System that covers all permanent employees.

We strive to create a safe working environment and take action to foster a culture of safety on board. Additionally, we raise awareness among our employees on potential risks and hazards, and expect them to operate in accordance with the safety standards and regulations.

To promote awareness, we offer dedicated training programs such as: Crane and Rigging Safety, Dockside Signals and Safety, Electrical Safety, Exhaust Gas Scrubbers and Caustic Soda Safety, Galley Safety: Health and Hazards, Job Safety Analysis, Basic Safety Awareness, Personal Injury Prevention, etc.

**We are certified with the ISO 45001:2018  
Health and Safety Management**

We subscribe to the Oil Companies International Marine Forum (OCIMF) categorization for documenting seafarers' accidents.

In 2022, we recorded 13 Lost Time Injuries (LTI) and zero fatalities on board resulting from work-related injuries, during 22,860,532 hours of exposure. In addition, we had 180 reportable instances of work-related illness resulting in 3 fatalities.

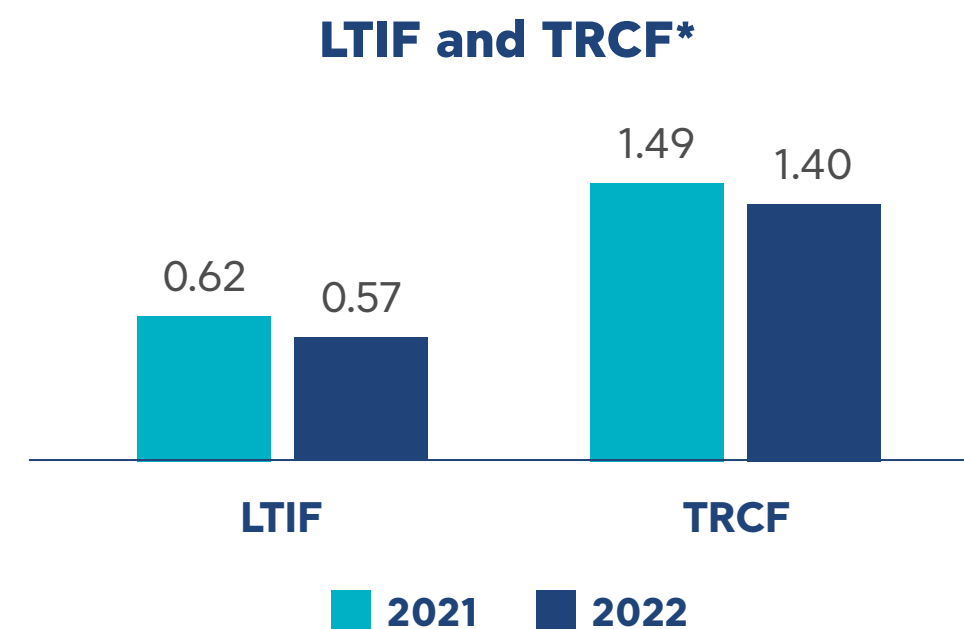
No fatalities were recorded ashore in 720,936 working hours.



## DURING THE REPORTING PERIOD:

**0.57** in Lost Time Injury Frequency (LTIF)

**1.40** in Total Recordable Case Frequency (TRCF)



## ROBUST SAFETY MEASURES AGAINST COVID-19

During the pandemic, we aligned our daily operations with the national health guidelines, and we took proactive safety measures to ensure the safety of our people.

Our crew members were provided with COVID-19 kits, while our vessels were stocked with necessary provisions and spares, as required by MLC and ILO regulations to maintain smooth operations and ensure crew well-being.

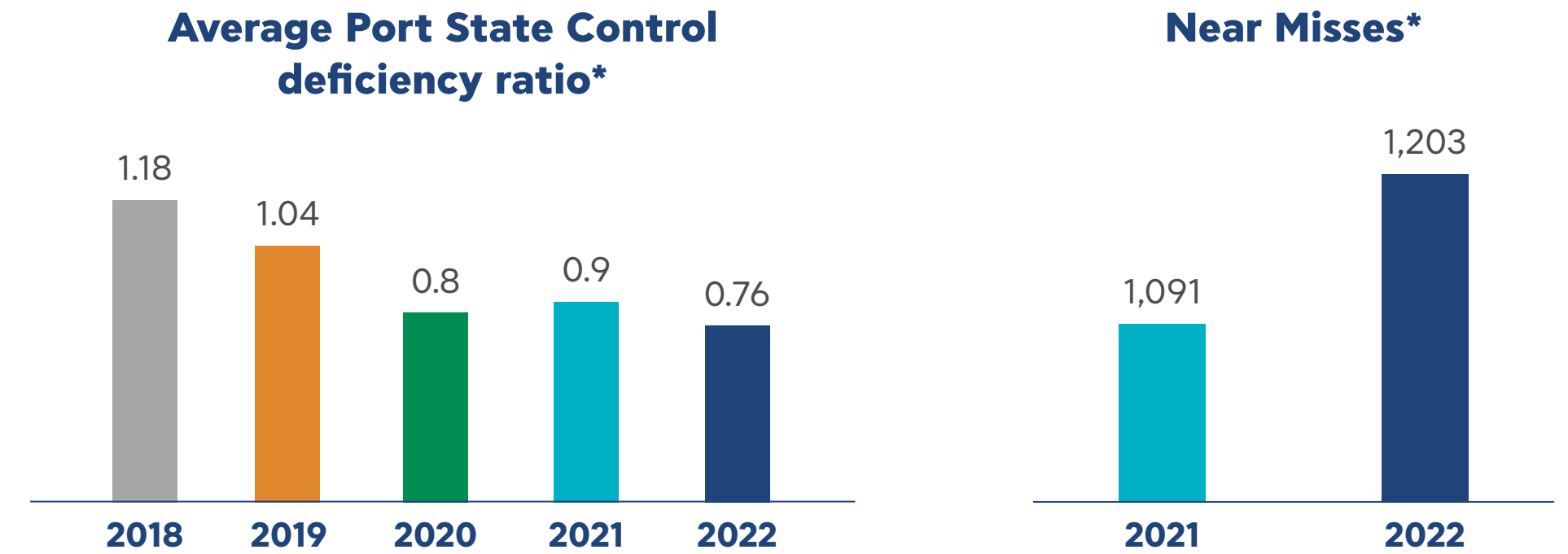
Ashore, the Company implemented remote work policies with our office attendance percentages being lower than the government's instructions. Moreover, one additional day of general cleaning and sanitizing was added on a weekly basis, additional cleaning staff was hired, and deep cleaning and disinfections were performed by an external provider.

\*The reported data refer to our managed vessels as of December 31, 2022. Accident rate was calculated based on 1,000,000 hours worked.

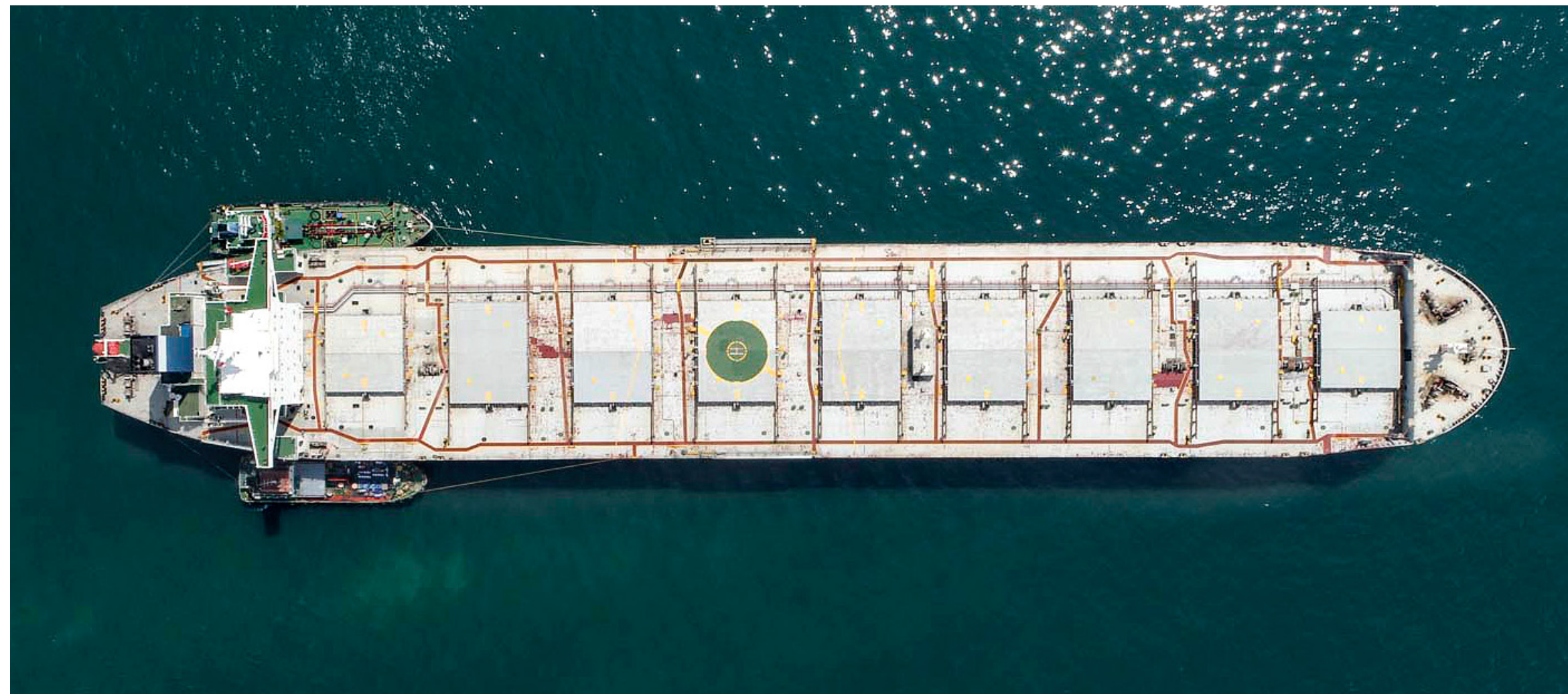
# OUR PSC PERFORMANCE HAS FURTHER IMPROVED IN 2022

## ON BOARD INSPECTIONS, AUDITS AND PORT STATE CONTROLS

- In order to ensure that our operations comply with all regulatory requirements related to safety and integrity, we carry out various internal and external audits on our processes and systems while we continuously enhance our on board presence.
- Star Bulk aims to implement a minimum of two inspections on each vessel per year - by Technical , Marine, Vetting superintendents and SQ Auditors. During the reporting year **232 inspections took place on board our ships.**
- Our Port State Controls (PSC) **deficiency ratio decreased by nearly 16%** compared to 2021, while the reported near misses increased by approximately 10%.
- A total of 81 RightShip inspections were performed on board our ships and all were successful with no outstanding items.



\*Excluding the vessels managed by our third-party managers



## DURING THE REPORTING PERIOD:

**232** total on board internal audits / inspections

**< 1** deficiency per PSC on average

**↑ 10%** in reported near misses

# WE PARTICIPATE IN LEADING INITIATIVES TO ENHANCE OUR PEOPLE'S HEALTH, SECURITY AND SAFETY



The United Nations Global Compact and the United Nations Global Compact Network Greece are voluntary initiatives, that encourage businesses worldwide to adopt sustainable and socially responsible policies, to align their strategies with universal principles on human rights, labor, environment and anti-corruption and take actions that advance societal goals. Since 2020, we are **signatories to the UN Global Compact and United Nations Global Compact Network Hellas, and we are committed to their principles.**



The International Association of Dry Cargo Shipowners (INTERCARGO) represents the interests of quality dry cargo shipowners, and works with Members, Regulators and other Shipping Associations to ensure that shipping operates safely. **Star Bulk is an active member of the association** and actively participates in the **Intercargo's EEXI Working Group** - IMO's Correspondence Group on the development of carbon intensity reduction issues.



Star Bulk has established a **long-standing relationship with RightShip**, the world's leading maritime risk management and environmental assessment organization, receiving vetting and inspections services for the purpose of verifying the standards of excellence and high-level performance that Star Bulk always adheres to.



Star Bulk is a **member of the Maritime Anti-Corruption Network (MACN)**. MACN works towards the elimination of all forms of maritime corruption.



We are a **signatory to the Neptune Declaration on Seafarer Wellbeing and Crew Change**, which targets the promotion and protection of the welfare of seafarers. The initiative was launched during the crew change crisis associated with COVID-19.



In 2021, we **signed the Gulf of Guinea Declaration on Suppression of Piracy**, aiming to reduce the number of piracy and kidnapping attacks through active anti-piracy operations, including law enforcement by non-regional naval forces.



# COMMUNITY EMPOWERMENT

## RELATED SDGS



# STAR BULK IS AN ACTIVE CONTRIBUTOR IN THE GREEK COMMUNITY



In 2016, members of the Union of Greek Shipowners established the Greek Shipowners' social welfare initiative **SYN-ENOSIS**. Its mission is to support the Greek society via social welfare programs and activities for vulnerable social groups through the provision of humanitarian and charitable aid. Star Bulk has been providing annual financial contributions to SYN-ENOSIS for the past years.



The UNICEF office in Greece in collaboration with the Melissa-Migrant Women Network and with support from Star Bulk, has provided assistance to more than 200 women and children from Ukraine. Through group psychotherapy sessions, structured activities and counseling, the program aims to strengthen their mental health, empower women to cope with the challenges they face and support their children's needs.



The **Stavros Niarchos Foundation Endowed Scholarship Fund** represents a fund at Anatolia College supporting the Center for Talented Youth ("CTY"). At Star Bulk, we are committed to supporting the CTY scholarships for a 5-year period (2018 - 2022).



AMVER is the Automated Mutual Assistance Vessel Rescue, an international computer-based and voluntary ship reporting system, applied across the world by search and rescue authorities, using commercial ships to rescue people at sea. Star Bulk has received AMVER awards for its contribution to rescue life at sea.



The **Friends Of Liberty Association's** purpose is the maintenance and management of a floating boat exhibit named HELLAS LIBERTY, which is one of the three remaining ships in its category and was offered to the Greek Republic by the United States Government. Star Bulk has provided funds to support the Association's efforts to maintain the exhibit.



The **Greek Shipping Miracle** is the first online maritime museum. The organization's purpose is to increase awareness about the Greek shipping sector and its long-lasting contribution to both the Greek and the international economy.



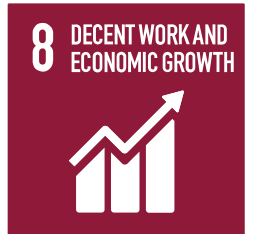
Project Connect is a Non-Profit Organization of professionals from the Shipping and HR industries who are offering practical solutions to the problem of youth employability. Star Bulk is a sponsor to the "**Adopt a Ship**" program, which connects primary and junior high school students with seafarers, aiming to educate youngsters about the seafaring profession and the maritime sector.



We actively support the **Athens College Scholarship program**, which provides scholarships to school students to attend the College. Star Bulk fully supported the studies of a student for the academic year 2021-2022.

# OPERATING WITH ETHICS AND INTEGRITY

## RELATED SDGS



8 DECENT WORK AND ECONOMIC GROWTH



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



# AN EXPERIENCED AND DIVERSE BoD AND MANAGEMENT TEAM OVERSEE THE COMPANY

## BOARD OF DIRECTORS

The Board, our senior decision-making body, sets the solid corporate code which is implemented by the Senior Management.

Our Board is composed of 1 executive director and 10 non-executive directors. The Chairman of the Board serves since July 2014 as a non-executive and as a director. 9 independent directors who bring diverse expertise and unbiased perspectives to the decision-making process, and 2 non-independent directors who provide valuable insights to the Board’s discussions.

## SENIOR MANAGEMENT

Our experienced Senior Management in collaboration with four BoD committees assume responsibility to underpin and endorse the Company’s purpose. 100% of the Senior Management team has been recruited in Athens, Greece.

Committee	Purpose	Members
Nomination and Corporate Governance	Proposes candidate directors to the BoD and directors to be assigned to the Committees, conducts an annual assessment of directors’ independence according to regulations set forth by Nasdaq and the SEC, and advises the Board on corporate governance practices.	Koert Erhardt Spyros Capralos Ryan Lee
Audit	Reviews the adequacy of the Company’s system for internal controls over financial reporting, offers suggestions to the BoD regarding the appointment of external auditors and analyzes all transactions involving related parties for potential conflicts of interest.	Nikolaos Karellis Koert Erhardt
Compensation	Makes suggestions to the Board for the remuneration and benefits of senior executive officers and upper level managers.	Spyros Capralos Mahesh Balakrishnan
ESG	Assists the Board in providing guidance on the Company’s environmental (including climate), social and governance matters.	Mahesh Balakrishnan Eleni Vrettou Nikolaos Karellis

\*Staggered three-year terms

**18%** Women in the BoD

**7.3** Years of average tenure of Directors at the release date of this report

**7** BoD Members with industry experience

The composition of our Board and our Management team, as at the issue date of this report:

Board Members*	Role	Tenure
Spyros Capralos	Independent Chairman of the BoD	12.7 years
Petros Pappas	CEO, Director	16.9 years
Mahesh Balakrishnan	Independent Director	8.4 years
Koert Erhardt	Independent Director	16.4 years
Nikolaos Karellis	Independent Director	7.2 years
Arne Blystad	Independent Director	5.0 years
Rafaelle Zagari	Director	5.0 years
Katherine Ralph	Independent Director	3.2 years
Eleni Vrettou	Independent Director	3.2 years
Sherman Lau	Independent Director	2.2 years
Ryan Lee	Independent Director	0.2 years

## Senior Management

Petros Pappas, CEO

Hamish Norton, President

Nicos Rescos, Chief Operating Officer

Christos Begleris, Co-Chief Financial Officer

Simos Spyrou, Co-Chief Financial Officer

Charis Plakantonaki, Chief Strategy Officer

# WE UPHOLD THE HIGHEST STANDARDS OF CORPORATE GOVERNANCE

At Star Bulk, we believe that strong corporate governance is the foundation for long-term success, stakeholder confidence, and sustainable growth. We have implemented robust and transparent procedures for the selection, evaluation, and compensation of our Board members.

## NOMINATION & SELECTION FRAMEWORK

Our nomination, selection and evaluation processes are designed to ensure that the composition of our BoD reflects a diverse range of skills, backgrounds and expertise that align with our strategic direction.

The Nomination and Corporate Governance Committee takes the lead in identifying potential candidates for a board membership, and may utilize external sources, such as advisors or consultants, to seek out qualified candidates.

Shareholders also have the privilege of proposing nominees for the Board of Directors. By exercising this right, shareholders have the opportunity to influence the composition of the Board and advocate for candidates who they believe would effectively represent their interests and contribute to the Company's prosperity.

Committee members thoroughly review nominee profiles by assessing their qualifications, experience, track record, affiliations and potential conflicts of interest to determine their independence status and ensure alignment with Company's bylaws, and make recommendations to the BoD for final selection.

Following the nomination, the existing Board members and the shareholders make the final selection through voting, which occurs at the annual meeting of shareholders.

In addition, the Committee consistently evaluates the composition and requirements of the BoD by reviewing its structure, size and diversity to ensure that it effectively contributes to the achievement of the Company's objectives. If any gaps or necessary changes are identified, Nomination and Corporate Governance Committee members have the authority to propose modifications to the Board's or Committees' size and composition to enhance their overall effectiveness.

## COMPENSATION PROCEDURES

Our compensation procedures aim to attract and retain highly qualified directors who can offer meaningful perspectives and lead our organization towards higher levels of success.

Our BoD has established the Compensation Committee to assist in carrying out its responsibilities related to executive compensation. The Committee is typically comprised of at least two independent directors to assure an objective and unbiased approach.

The primary objective of the Compensation Committee is to design, review and approve compensation packages that are fair and equitable for executives and key employees based on their contributions, responsibilities and performance.

Additionally, Committee members provide informed advice and guidance to the BoD through recommendations regarding the Company's general compensation philosophy, while the ultimate decision-making authority rests with the Board.

The Committee may also seek advice and expertise from external professionals or consulting firms to assist with its duties and ensure that the remuneration structure is in the best interest of the Company and its shareholders.



The Nomination and Corporate Governance Committee reviews the director independence standards under Nasdaq and SEC rules on a regular basis. It also conducts an annual evaluation of each director's independence status to assess any potential conflicts of interest or relationships that may compromise their objectivity, and reports the results to the BoD for their awareness and consideration. By implementing these measures, we maintain the integrity and credibility of the Board, ensuring that it operates in compliance with regulatory requirements.

# OUR CODE OF ETHICS SERVES AS A MORAL COMPASS FOR PROMOTING TRANSPARENCY AND ACCOUNTABILITY

## CODE OF ETHICS\*

Our Code of Ethics is the foundation of our business actions and is mandatory to the Directors, all Company's employees, onshore and offshore, to act according to its provisions.

The Senior Management oversees the daily operations of the company and is also responsible for ensuring compliance with the Code, policies and regulations by all Company staff.

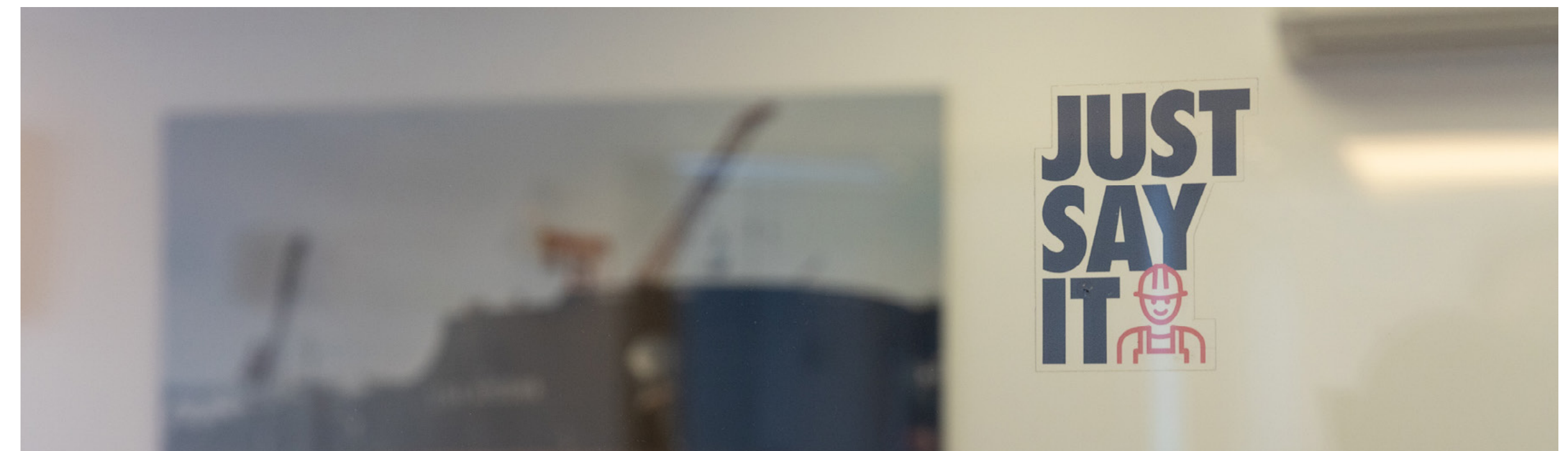
We have recently amended and restated our Code of Ethics and the BoD has given its official support and endorsement, reflecting our ongoing commitment to strengthen our corporate governance framework, enhance trust, and contribute to the sustainable growth and success of our organization.

We encourage all employees to familiarize themselves with the updated Code and actively embrace its principles in their day-to-day activities. We are dedicated to providing the necessary support through regular training and resources, aiming to cultivate a culture of ethical awareness, accountability, and continuous improvement.

A verification of receipt and understanding of the Code is signed by all Employees, and any questions about the Code or its meaning are addressed to the Company's Legal Department. In case of any non-compliance with the Code's principles, the incident is deemed as a severe violation and may lead to termination of contracts or even legal action.

The Code applies to all of the Company's employees, directors, officers, representatives and agents, and covers the following matters:

- Compliance with Laws, Rules & Regulations\*\*
- Conflicts of Interest
- Disclosure
- Human Rights and Labor Standards
- Discrimination and Harassment
- Whistleblowing Policy
- Corporate Opportunities
- Related Party Transactions
- Confidentiality and Privacy
- Honest and Fair Dealing
- Protection and Proper Use of Company Assets
- Company's Securities Trading
- Occupational Health and Safety
- Environmental Compliance



\*Our Code of Ethics is publicly available on our website. <https://www.starbulk.com/gr/en/code-of-ethics/>

\*\*We disclose our compliance with laws and regulations in our 20-F filings. [https://www.starbulk.com/media/uploads\\_file/2023/03/08/p1gr0o75ca7c5pejebj39b1t5f4.pdf](https://www.starbulk.com/media/uploads_file/2023/03/08/p1gr0o75ca7c5pejebj39b1t5f4.pdf)

# WE MAINTAIN ZERO ETHICS-RELATED VIOLATIONS AND COMMIT TO ACT WITH INTEGRITY

## REPORTING VIOLATIONS

We have developed a Whistleblowing Policy to address serious concerns that fall outside the scope of the Company’s procedures.

Employees and third parties shall report any known or suspected misconduct to the Head of HR, the Company’s General Counsel or the Chairman of the Audit Committee.

At Star Bulk, we encourage all our employees and third parties, to raise any issues regarding inter alia questionable accounting matters, audit practices, internal controls, conflicts of interest, fraud, or insider trading within the Company rather than overlooking a problem due to fear of harassment and victimization.

The Company’s employees and external parties are requested to communicate their complaints on a confidential and/or anonymous basis to the Company’s Head of HR (+306940774974), the Company’s General Counsels through the whistleblower hotline on +306976862707 by leaving a voice message on the answering machine, or the Company’s Audit Committee through the Company’s “P.O. Box 61323 15104 Maroussi”. The Company will not retaliate or allow retaliation for good faith reports.

A log of all complaints is maintained by the Audit Committee Chairman to track such complaints, their receipt, and any investigation and resolution thereof. The Audit Committee Chairman prepares a summary report. Copies of complaints and the resulting log of related information is preserved in accordance with the Company’s document retention policy.

## ANTI-CORRUPTION POLICY

We have established our Anti-Corruption Policy in accordance with the guidelines of the U.S. Foreign Corrupt Practices Act (FCPA) and UK Bribery Act – which allows us to prevent employees from promising, paying, providing or authorizing the promising, paying or providing of any amount of money or anything of value to a Public Official or Private Sector Counterparty Representative for the purpose of improperly obtaining, directing and retaining business or securing an inappropriate advantage for the Company.



As of 2022, we remain members of the Maritime Anti-Corruption Network (MACN)

**zero**

- violations of our Ethical principles
- whistleblowing incidents
- incidents of corruption
- public legal cases
- bribery and fraud incidents
- critical concerns
- incidents of discrimination
- political contributions
- legal actions for anti-competitive behavior and violations of anti-trust and monopoly legislation

## CORRUPTION PERCEPTION INDEX

Since our vessels operate globally, we aim to monitor the level of corruption in the countries and territories in which we operate. During 2022, the calls at ports in countries that have the 20 lowest rankings in the Transparency International’s Corruption Perception Index (CPI) for our entire fleet were 321.

**11%** port calls of the total port calls in countries with the 20 lowest rankings in CPI

## WE MAINTAIN A SYSTEMATIC INTERNAL CONTROL SYSTEM



In order to improve and evaluate the design and effectiveness of our Company's procedures and internal controls, an in-house, independent Internal Audit (IA) Department has been established.

This dedicated team provides recommendations to Management and reports directly to the Audit Committee.

One of its key responsibilities is to review the Company's compliance and adherence to Sarbanes - Oxley requirements (SOX) regarding significant business cycles and internal controls over financial reporting.

During the reporting year, no significant deficiencies or material weaknesses were reported in the internal audits (including SOX related audits) performed by our team.

In addition to the Company's Internal Audit team a control function is accountable for the evaluation of the processes in place and the operating expenses. The department assumes responsibility for streamlined operations across all of the Company's departments.

**0** significant deficiencies or material weaknesses identified in internal audits performed in 2022



# EVERY YEAR WE IDENTIFY THE RISKS TO OUR BUSINESS AND THE MEASURES TO MITIGATE THEM

Our Risk Management framework and procedures enable us to identify, assess, monitor and mitigate any potential risks that could affect our business activities. Within this framework, the Company has taken measures and established adequate mechanisms for the business continuity of our day-to-day operations, following the requirements of ISO 31000:2018 for Risk Management to which we are certified.

The major risks identified, fit into the broader areas listed below:

- |  |   |
|--|---|
|  Health and safety of our people on board and ashore  |  The availability of financing and refinancing                  |
|  General dry bulk shipping market conditions (Supply and Demand)                          |  Counterparty risk  |
|  Bunker quality, prices and availability  |  Weather related events                                       |
|  Changes in governmental rules and regulations or actions taken by regulatory authorities |  Cyber crime  |
|  Climate related risks  |  Disruption in exports of materials due to physical accidents |
|  General domestic and international political conditions                                  |  Managing planned growth properly                             |



# WE CLOSELY MONITOR OUR EXPOSURE TO CLIMATE-RELATED RISKS AND OPPORTUNITIES

The climate related risks detected through our engagement in the Carbon Disclosure Project (CDP) rating process and included in our ESG risk matrix, are presented below:



## Baseline calculation

Continuous tracking and analysis of the fleet performance for immediate feedback and insight into baseline estimation against which potential climate related risks and opportunities can be identified and assessed.



## Research and partnerships

Examination of past records, climate science policies and regulations and technological advancements through engagement with policy makers, business partners, academics and stakeholders.



## Scenario Analysis

Initiation of climate change scenario analysis based on those of the International Maritime Organization (IMO), to prioritize potential risks and opportunities on the appropriate time frame and determine the best alternative courses of action.



## Risk Assessment

Monitoring of regulatory updates and implementation of a climate-related physical and transition risk assessment to measure the impact on our activities (e.g. increase in energy prices, rising prices of commodities, higher demand for renewables and low carbon products, heat waves and sea level rise).



## Impact evaluation

Focus on overall changes in climate risks and impact evaluations on our business prospects and competitive position (i.e., business materiality) as well as on our main stakeholders.



### Carbon Disclosure Project (CDP) 2022

Received B under Climate Change for our voluntary disclosures, improving our 2021 performance from B- and positioning us above the industry average of C.

Time horizons for identifying, assessing and responding to climate-related risks and opportunities:



# WE HAVE A ROBUST CYBER SECURITY AND DATA PROTECTION FRAMEWORK IN PLACE

In order to safeguard our information assets and mitigate the cyber risks associated with our activities, we have developed a Cyber Security Plan and established controls that conform to the requirements set by the IMO Resolution MSC.428(98).

Our approach is to implement the right architecture, technology and policies to detect, prepare for and recover from any cyber attack promptly.

0 cyber security incidents

0 complaints concerning breaches of customer privacy and losses of customer data



**Endpoint protection system** includes:

- Monitoring capabilities (process, network, registry, memory, files)
- Detection capabilities (different types of malware)
- Response capabilities (blocking, host isolation, remote investigation)
- Coverage of all systems within IT environment
- Interoperability with other security solutions in-place
- Bandwidth requirements and potential impact on endpoints (CPU, RAM, hard disk)
- Security controls of the EDR solution itself
- Compatibility with existing or future SIEM solution



**Firewall upgrade** includes advanced features regarding inspection, prevention, monitoring and reporting.



**Hardware upgrade** includes the installation of a server on board to comply with cyber security regulations (user access management, security policies, Control Changes etc.).

We are accredited with ISO/IEC 27001:213 - Information Security Management System



We have set in place various policies that guides us on how we are expected to operate on a daily basis in order to protect the integrity of our data. The policies cover the following areas:

- Email and Internet Access
- Network Security
- Password Protection
- Personal Communication Devices
- Privacy
- Remote Access
- Removable Media
- Technological Equipment Disposal
- Workstation Security

**> 140,000 €**  
invested in cyber security in 2021

**> 205,700 €**  
invested during 2022

# WE DIGITIZE PROCESSES TO ACHIEVE OPERATIONAL EXCELLENCE

We believe that digitization and data analytics are critical in the maritime sector and a key to our long-term success.



Star Bulk’s operations are supported by a Microsoft based ERP system and a cloud-based commercial ERP system, that enable fully automated processes across all of the Company's functions.

The utilization of a high-end business intelligence tool helps us monitor our activities as well as the fleet performance via real-time data capturing and reporting. This tool interfaces with a data analytics and Business Intelligence platform, offering a variety of reporting options (including vessels’ historical data), through visual data tools and dashboards, and improves the decision-making process with complete, accurate and real-time data.

Through digitized processes, we maintain the accuracy of our data and information to secure optimal commercial decision-making. Additionally, we are better able to follow any new regulations and comply with existing ones.

Sophisticated IT infrastructure that supports operations and guarantees high levels of cyber security and data protection.



- Microsoft based ERP system
- Cloud based commercial ERP system
- End-to-end system integration
- Advanced Business Intelligence tool

## OUR SYSTEMS HELP US TO:

- ✓ Enhance the data collection process from multiple sources
- ✓ Improve operational and business efficiency
- ✓ Benchmark and increase transparency
- ✓ Optimize operations and predict potential risks
- ✓ Meet environmental regulations and goals
- ✓ Enhance information flow
- ✓ Access historical records for reference

# PROMOTING SUSTAINABLE PROCUREMENT PRACTICES



# OUR COMPANY'S SUPPLIERS ARE SCREENED AND EVALUATED BOTH BY SHORE TEAM AND CREWS ON BOARD

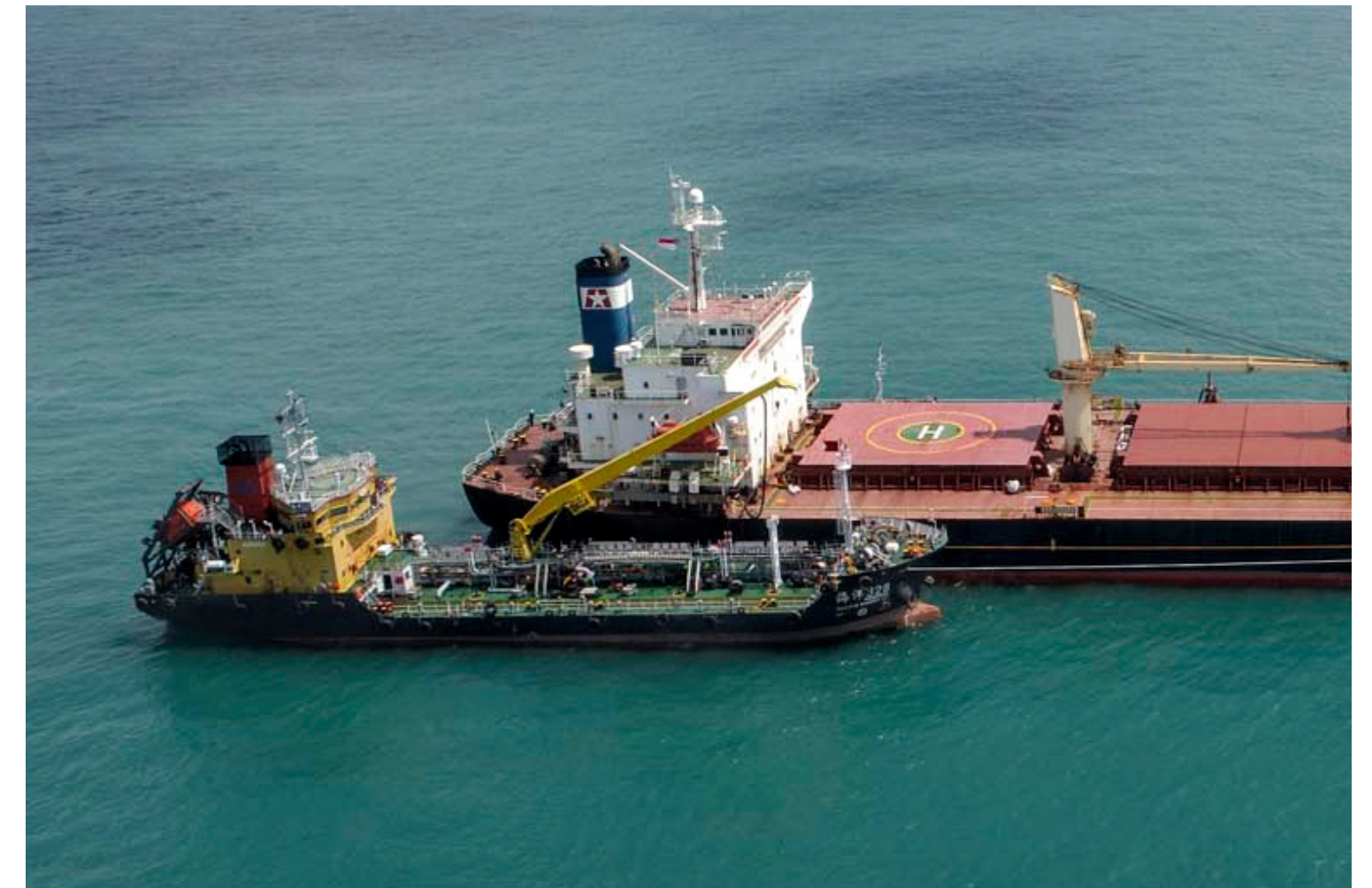
We continuously optimize our supply chain practices by fostering strong and reciprocal relationships with our suppliers, both domestic and international. We strive to promote a transparent and responsible supply chain that enables us to enhance our competitive advantage.

To achieve this, we have established an evaluation process for our suppliers, which allows us to assess their adherence to our quality standards. The evaluation is conducted on board and the suppliers' ratings are reviewed by responsible personnel ashore, who act accordingly if deemed necessary.

**In 2022, our crew evaluated 1,179 suppliers** of stores and provisions of our vessels, with 89% of them receiving a score above 70% and no score less than 50%. Moreover, we screened 41 new suppliers related to their ISO certifications and recycling facilities to ensure that they align with our **commitment to sustainable operations**.

To ensure that our suppliers operate in a socially responsible manner, we have established internal policies and procedures. We also require our suppliers to complete the Inventory of Hazardous Material (IHM) form, which provides comprehensive product and material information on hazardous materials, as a means of ensuring their compliance with regulations such as regulation 4 of the IMO Hong Kong Convention and the UN's " Globally Harmonized System of Classification and Labelling of Chemicals (GHS)".

**In 2022, we placed 17,981 purchase orders for stores, provisions, and spares, mostly sourced from Asia. The average number of purchase orders per shipment was 4.1, which remained at the same with the previous year.**



## 100%

of our suppliers passed our quality evaluation benchmark during 2022

## 4.1

purchase orders / shipment consolidation rate

## 225

suppliers evaluated in 2022

## 17,981

purchase orders during 2022

### PURCHASE ORDERS BY REGION

Asia	10,934
Africa	1,007
Europe	5,110
North America	507
Oceania	224
South America	199

# | APPENDIX



# APPENDIX A: STAKEHOLDERS' ENGAGEMENT PROCESS

Stakeholder group	Basis for engagement	Engagement methods	Frequency	Key areas of interest / concern	Our response
<b>Clients</b> <ul style="list-style-type: none"> <li>• Vessel owners</li> <li>• Charterers</li> <li>• Cargo Owners</li> </ul>	<p>Customers, including charterers, cargo owners etc. are vital to the organisation's success and have a direct interest in our market impact and sustainability performance.</p>	<ul style="list-style-type: none"> <li>• Charter Parties</li> <li>• Service feedbacks</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc</li> <li>• Strategic</li> </ul>	<ul style="list-style-type: none"> <li>• Service quality</li> <li>• Business ethics</li> <li>• Financial performance</li> <li>• Vessel condition</li> </ul>	<p>We constantly strive to increase our service quality in order to deliver sustainable and value adding services to all our clients.</p>
<b>Seafarers &amp; office employees</b> <ul style="list-style-type: none"> <li>• Crew on board</li> <li>• Employees ashore</li> <li>• (Affiliated) Manning agents</li> </ul>	<p>Our people are critical to our business, strategy and decision making. We therefore aim to maintain a safe and rewarding work environment whilst engaging and collaborating with them to achieve our goals.</p>	<ul style="list-style-type: none"> <li>• Performance feedback</li> <li>• Open communication channels</li> </ul>	<ul style="list-style-type: none"> <li>• Daily</li> <li>• Annually</li> </ul>	<ul style="list-style-type: none"> <li>• Financial performance</li> <li>• Work conditions</li> <li>• Health and safety</li> <li>• Remuneration and benefits</li> <li>• Career development</li> </ul>	<p>We put health and safety first and foster an open and inclusive work environment both on board and ashore. We fairly reward and offer career advancement opportunities to our people.</p>
<b>Shareholders / Investors</b> <ul style="list-style-type: none"> <li>• Natural persons</li> <li>• Institutional investors</li> <li>• Funds / Private Equities</li> </ul>	<p>Shareholders are elemental to the Company's operations and growth and have a direct interest in the company's performance.</p>	<ul style="list-style-type: none"> <li>• Annual General Meetings</li> <li>• Quarterly / Annual financial results</li> <li>• Investor briefings and roadshows</li> <li>• Web site / Press releases</li> </ul>	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Quarterly</li> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Financial performance</li> <li>• Business strategy</li> <li>• Governance</li> <li>• Regulatory compliance</li> </ul>	<p>We regularly inform our shareholders on the Company's development and strategy. We conduct our business and take actions with the goal of increasing the Company's value.</p>
<b>Financial institutions</b> <ul style="list-style-type: none"> <li>• Banks</li> <li>• Leasing financial institutions</li> <li>• Underwriting agents</li> <li>• Insurance companies</li> </ul>	<p>Financial institutions require information on the Company's performance with a rising interest in sustainability.</p>	<ul style="list-style-type: none"> <li>• Quarterly / Annual financial results</li> </ul>	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Quarterly</li> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Financial performance</li> <li>• Business strategy</li> <li>• Governance</li> <li>• Regulatory compliance</li> </ul>	<p>We provide transparent information about the performance, strategy and outlook of the Company.</p>



## APPENDIX A: STAKEHOLDERS' ENGAGEMENT PROCESS (cont'd)

Stakeholder group	Basis for engagement	Engagement methods	Frequency	Key areas of interest / concern	Our response
<b>Bunker traders and physical suppliers</b> <ul style="list-style-type: none"> <li>• Port Agents</li> </ul>	We aim to understand our suppliers' concerns and develop channels of mutual support that enhance the quality of our supply chain and foster long term collaboration and opportunities.	<ul style="list-style-type: none"> <li>• Supplier evaluations</li> <li>• Contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Financial performance</li> <li>• Business ethics</li> <li>• Evaluation criteria</li> <li>• Environmental performance</li> </ul>	We evaluate the performance of our suppliers and integrate sustainability related issues within the evaluation process.
<b>Industry organizations</b> <ul style="list-style-type: none"> <li>• Classification societies</li> <li>• Recognized organizations</li> <li>• P&amp;I clubs</li> <li>• Insurers</li> <li>• Vetting companies</li> </ul>	Industry standards and regulations set by maritime organizations play a major role in the manner we conduct our business.	<ul style="list-style-type: none"> <li>• Partnerships</li> <li>• Formal meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Business ethics</li> <li>• Environmental performance</li> <li>• Health and safety</li> </ul>	We participate and engage with all industry organizations regarding the various business issues that may arise.
<b>Community and society</b> <ul style="list-style-type: none"> <li>• Academic institutions</li> <li>• Local communities</li> <li>• Media</li> <li>• NGOs</li> </ul>	We aim to have a positive impact on society by creating strong partnerships with the communities in which we operate.	<ul style="list-style-type: none"> <li>• Conferences</li> <li>• Community engagement initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Support of People</li> <li>• Community support</li> <li>• Responsible business practices</li> <li>• Environmental Performance</li> </ul>	We support the local society with community-focused initiatives and take their needs into consideration to maximize shared value.
<b>Authorities</b> <ul style="list-style-type: none"> <li>• Governments / Local / Port authorities</li> <li>• IMO</li> <li>• Flag administration</li> </ul>	Active engagement with state and regulatory authorities ensures compliance with all applicable standards and regulation.	<ul style="list-style-type: none"> <li>• Audits</li> <li>• Public forums</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>• Regulatory compliance</li> <li>• Business ethics</li> <li>• Environmental performance</li> <li>• Health and safety</li> </ul>	We follow and comply with State and regulatory authority rules and regulations. We follow and implement all instructions and we aim for zero non-conformities.

## APPENDIX B: DESCRIPTIVE STATISTICS ON EMPLOYEES (GRI 2-7)

GRI 2-7 Employees*	Employment type	2022		
		Males	Females	Total
Greece	Permanent	200	146	346
	Temporary	6	2	8
	Non-Guaranteed Hours	N/A	N/A	N/A
	Full Time	205	148	353
	Part Time	1	0	1
	<b>Total</b>	206	148	354
Cyprus	Permanent	9	8	17
	Temporary	0	0	0
	Non-Guaranteed Hours	N/A	N/A	N/A
	Full Time	9	7	16
	Part Time	0	1	1
	<b>Total</b>	9	8	17
Singapore	Permanent	1	0	1
	Temporary	0	0	0
	Non-Guaranteed Hours	N/A	N/A	N/A
	Full Time	1	0	1
	Part Time	0	0	0
	<b>Total</b>	1	0	1

\*1. During 2022, we did not record any not disclosed or other genders.

2. Seafarers are not included in the number of employee reported under the 2-7 disclosure.

3. All the workers performing work for Star Bulk are employees and the organization does not have any workers who are not employees.

## APPENDIX C: UN GLOBAL COMPACT

	UNGC Principles	Section	Page(s)
Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights	People and culture / Operating with ethics and integrity	39, 54, 55
	Principle 2: Businesses should make sure that they are not complicit in human rights abuses	People and culture / Operating with ethics and integrity	39, 54, 55
Labour	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	People and culture	37, 41
	Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour	People and culture	39
	Principle 5: Businesses should uphold the effective abolition of child labour	People and culture	39
	Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation	People and culture / Operating with ethics and integrity	39, 54, 55
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges	Environmental protection	20-34
	Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility	Environmental protection	32
	Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies	Environmental protection	33-34
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery	Operating with ethics and integrity	55

# APPENDIX D: GRI CONTENT INDEX

<b>Statement of use</b>	Star Bulk Carriers Corp. has reported in accordance with the GRI Standards for the period 1 January 2022 to 31 December 2022.
<b>GRI 1 used</b>	GRI 1: Foundation 2021
<b>Applicable GRI Sector Standard(s)</b>	Not applicable

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance	
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation			
<b>GENERAL DISCLOSURES</b>									
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>1. The organization and its reporting practices</b>	2-1 Organizational details	About STAR BULK CARRIERS CORP.	6	A gray cell indicates something that does not apply. This only relates to the 'Omission' and 'GRI Sector Standard ref. no.' columns.				✓	
	2-2 Entities included in the organization's sustainability reporting	The entities are the same with those included in Star Bulk's financial statements: <a href="https://www.starbulk.com/gr/en/annual-reports/">https://www.starbulk.com/gr/en/annual-reports/</a>						✓	
	2-3 Reporting period, frequency and contact point	About the 2022 Environment, Social, Governance (ESG) Report / Contact	4, 81					✓	
	2-4 Restatements of information	No restatements of previous years' information	-					✓	
	2-5 External assurance	External Assurance Statement						✓	
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>2. Activities and workers</b>	2-6 Activities, value chain and other business relationships	About STAR BULK CARRIERS CORP.	6-8						
	2-7 Employees	People and culture / Appendix B	37, 41, 66						✓
	2-8 Workers who are not employees	-	-			Not applicable	All the workers performing work for Star Bulk are employees and the organization does not have any workers who are not employees.		
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>3. Governance</b>	2-9 Governance structure and composition	ESG at Star Bulk / Operating with ethics and integrity	13, 52						
	2-10 Nomination and selection of the highest governance body	Operating with ethics and integrity	53						

# APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GENERAL DISCLOSURES</b>								
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>3. Governance</b>	2-11 Chair of the highest governance body	Operating with ethics and integrity	52					
	2-12 Role of the highest governance body in overseeing the management of impacts	ESG at Star Bulk	13					
	2-13 Delegation of responsibility for managing impacts	ESG at Star Bulk	13					
	2-14 Role of the highest governance body in sustainability reporting	ESG at Star Bulk	13					✓
	2-15 Conflicts of interest	Operating with ethics and integrity	52-55					
	2-16 Communication of critical concerns	ESG at Star Bulk / Operating with ethics and integrity	13, 55					
	2-17 Collective knowledge of the highest governance body	ESG at Star Bulk	13					
	2-18 Evaluation of the performance of the highest governance body	ESG at Star Bulk	13					
	2-19 Remuneration policies	Refer to Star Bulk's financial statements for 2022 (pp. 45-46): <a href="https://www.starbulk.com/gr/en/annual-reports/">https://www.starbulk.com/gr/en/annual-reports/</a>	-					
	2-20 Process to determine remuneration	Operating with ethics and integrity / Also refer to Star Bulk's financial statements for 2022 (pp. 45-46): <a href="https://www.starbulk.com/gr/en/annual-reports/">https://www.starbulk.com/gr/en/annual-reports/</a>	53					
	2-21 Annual total compensation ratio	-	-	All	Information unavailable / incomplete	We do not currently monitor this KPI. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>4. Strategy, policies and practices</b>	2-22 Statement on sustainable development strategy	A message from our CEO / ESG at Star Bulk / Environmental Protection	2, 11-13, 20				✓	
	2-23 Policy commitments	People and culture / Operating with ethics and integrity	39, 54, 55					
	2-24 Embedding policy commitments	People and culture / Operating with ethics and integrity	39, 54, 55					

# APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GENERAL DISCLOSURES</b>								
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>4. Strategy, policies and practices</b>	2-25 Processes to remediate negative impacts	ESG at Star Bulk / Environmental protection / People and culture / Operating with ethics and integrity	11-13, 20-34, 37-50, 52-62					
	2-26 Mechanisms for seeking advice and raising concerns	Operating with ethics and integrity	55					
	2-27 Compliance with laws and regulations	Operating with ethics and integrity	54-55					✓
	2-28 Membership associations	Environmental protection / People and culture	32, 48					
<b>GRI 2</b> <b>General Disclosures 2021</b> <b>5. Stakeholder engagement</b>	2-29 Approach to stakeholder engagement	ESG at Star Bulk	14					✓
	2-30 Collective bargaining agreements	People and culture	37, 41					
<b>MATERIAL TOPICS</b>								
<b>GRI 3</b> <b>Material Topics 2021</b>	3-1 Process to determine material topics	ESG at Star Bulk	15					✓
	3-2 List of material topics	ESG at Star Bulk	16-17					✓
<b>TOPIC DISCLOSURES</b>								
<b>Water pollution prevention, control &amp; compliance with respective regulations</b>								
<b>GRI 3</b> <b>Material Topics 2021</b>	3-3 Management of material topics	Environmental protection	28-30					
<b>GRI 303:</b> <b>Water and Effluents 2018</b>	303-1 Interactions with water as a shared resource	Environmental protection	28-30					
	303-2 Management of water discharge-related impacts	Environmental protection	28-30					

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GRI 303: Water and Effluents 2018</b>	303-3 Water withdrawal	-	-	All	Information unavailable / incomplete	We do not currently monitor this KPI. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		
	303-4 Water discharge	-	-	All	Information unavailable / incomplete	We do not currently monitor this KPI. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		
	303-5 Water consumption	Environmental protection	28-29					
<b>GHG emission reduction and energy efficiency / Green technologies &amp; alternative fuels</b>								
<b>GRI 305: Emissions 2016</b>	3-3 Management of material topics	Environmental protection	20-26, 28-29, 31					✓
	305-1 Direct (Scope 1) GHG emissions	ESG at Star Bulk / Environmental protection	18, 24					✓
	305-2 Energy indirect (Scope 2) GHG emissions	ESG at Star Bulk / Environmental protection	18, 24					
	305-3 Other indirect (Scope 3) GHG emissions	ESG at Star Bulk / Environmental protection	18, 24					
	305-4 GHG emissions intensity	ESG at Star Bulk / Environmental protection	18, 20-21, 23-24, 31					
	305-5 Reduction of GHG emissions	ESG at Star Bulk / Environmental protection	18, 24-25					
	305-6 Emissions of ozone-depleting substances (ODS)	Environmental protection	30					
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	ESG at Star Bulk / Environmental protection	18, 26					✓

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GRI 302: Energy</b>	302-1 Energy consumption within the organization	ESG at Star Bulk / Environmental protection	18, 24, 29					✓
	302-2 Energy consumption outside of the organization	-	-	All	Information unavailable / incomplete	We have calculated our Scope 3 emissions, although do not possess detailed information with regards to this KPI. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		
	302-3 Energy intensity	ESG at Star Bulk / Environmental protection	18, 23					
	302-4 Reduction of energy consumption	Environmental protection	24					
	302-5 Reductions in energy requirements of products and services	Environmental protection	24					
<b>Responsible employment practices / Employee well-being / Respect of human rights</b>								
<b>GRI 3 Material Topics 2021</b>	3-3 Management of material topics	People and culture	37-39, 41-44, 54-55					
<b>GRI 202: Market Presence</b>	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	-	-	All	Information unavailable / incomplete	We do not currently monitor this KPI, although all our employees are paid above the local minimum wages. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		
	202-2 Proportion of senior management hired from the local community	Operating with ethics and integrity	52					
<b>GRI 401: Employment</b>	401-1 New employee hires and employee turnover	People and culture	44					
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	People and culture	38, 42-43					
	401-3 Parental leave	People and culture	42					
<b>GRI 402: Labor/Management Relations 2016</b>	402-1 Minimum notice periods regarding operational changes	People and culture	38					



# APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>Occupational health, safety &amp; security</b>								
<b>GRI 3 Material Topics 2021</b>	3-3 Management of material topics	People and culture / Safeguarding health and safety	38, 42, 46-48					✓
	<b>403-1</b> Occupational health and safety management system	Safeguarding health and safety	46					
<b>403-2</b> Hazard identification, risk assessment, and incident investigation	Safeguarding health and safety / Operating with ethics and integrity	46, 57						
<b>403-3</b> Occupational health services	People and culture / Safeguarding health and safety	38, 42, 46						
<b>403-4</b> Worker participation, consultation, and communication on	Safeguarding health and safety	46						
<b>GRI 403: Occupational Health and Safety 2018</b>	<b>403-5</b> Worker training on occupational health and safety	People and culture / Safeguarding health and safety	38, 43, 46					
	<b>403-6</b> Promotion of worker health	Safeguarding health and safety	46-48					
	<b>403-7</b> Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Safeguarding health and safety	46-48					
	<b>403-8</b> Workers covered by an occupational health and safety management system	Safeguarding health and safety	46	403-8 a. i 403-8 a. ii 403-8 a. iii	Not applicable	All the workers performing work for Star Bulk are employees and the organization does not have any workers who are not employees.		
	<b>403-9</b> Work-related injuries	Safeguarding health and safety	46	403-9 b.				
	<b>403-10</b> Work-related ill health	Safeguarding health and safety	46	403-10 b.				

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GRI 404: Training and Education 2016</b>	404-1 Average hours of training per year per employee	People and culture	43					
	404-2 Programs for upgrading employee skill and transition assistance programs	People and culture	38, 43					
	404-3 Percentage of employees receiving regular performance and career development reviews	People and culture	37, 43					
<b>GRI 406: Non-discrimination 2016</b>	406-1 Incidents of discrimination and corrective actions taken	Operating with ethics and integrity	55					✓
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	-	-	All	Information unavailable / incomplete	We follow the maritime collective bargaining standards, although do not currently monitor this KPI. Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.		

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>GRI 408: Child Labor 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	-	-	All	Information unavailable / incomplete	<p>Star Bulk is committed to support and promote human rights and has adopted a zero tolerance approach to any violation of human rights, including slavery, servitude, forced and compulsory labor, human trafficking or child labor. We have amended and restated our Code of Ethics and Conduct and further internal communication of relevant policies has been sent. Additionally, the Company will share the relevant policy with all suppliers, who must comply with it prior to conducting any business activity. The Company reserves the right to terminate suppliers at any time if instances of violation of the Modern Slavery policy occur.</p> <p>Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.</p>		
<b>GRI 409: Forced or Compulsory Labor 2016</b>	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	-	All	Information unavailable / incomplete	<p>Star Bulk is committed to support and promote human rights and has adopted a zero tolerance approach to any violation of human rights, including slavery, servitude, forced and compulsory labor, human trafficking or child labor. We have amended and restated our Code of Ethics and Conduct and further internal communication of relevant policies has been sent. Additionally, the Company will share the relevant policy with all suppliers, who must comply with it prior to conducting any business activity. The Company reserves the right to terminate suppliers at any time if instances of violation of the Modern Slavery policy occur.</p> <p>Our organization will start the data gathering process, in order to disclose the requested information in future reporting periods.</p>		
<b>GRI 411: Rights of Indigenous Peoples 2016</b>	411-1 Incidents of violations involving rights of indigenous peoples	People and culture	39					

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>Corporate governance, ethics and transparency</b>								
<b>GRI 3 Material Topics 2021</b>	3-3 Management of material topics	Operating with ethics and integrity	54-55, 57					✓
<b>GRI 205: Anti-corruption 2016</b>	205-1 Operations assessed for risks related to corruption	Operating with ethics and integrity	57					
	205-2 Communication and training about anti-corruption policies and procedures	Operating with ethics and integrity	55					
	205-3 Confirmed incidents of corruption and actions taken	Operating with ethics and integrity	55					✓
<b>GRI 415: Public Policy 2016</b>	415-1 Political contributions	Operating with ethics and integrity	55					
<b>Regulatory compliance and application</b>								
<b>GRI 3 Material Topics 2021</b>	3-3 Management of material topics	Operating with ethics and integrity	54-55					✓
<b>GRI 206: Anti-competitive Behavior 2016</b>	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Operating with ethics and integrity	55					✓

## APPENDIX D: GRI CONTENT INDEX (cont'd)

GRI Standard	Disclosure	Location		Omissions			GRI Sector Standard Ref. No.	External Assurance
		Section	Page(s)	Requirement(s) omitted	Reason	Explanation		
<b>Security of operations</b>								
<b>GRI 3 Material Topics 2021</b>	3-3 Management of material topics	Operating with ethics and integrity	59-60					✓
<b>GRI 418: Customer Privacy 2016</b>	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Operating with ethics and integrity	59					✓
<b>Other significant topics</b>								
<b>Economic performance</b>								
<b>GRI 201: Economic Performance</b>	201-1 Direct economic value generated and distributed	About STAR BULK CARRIERS CORP.	9					
<b>Waste and recycling</b>								
<b>GRI 306: Waste 2020</b>	306-1 Waste generation and significant waste-related impacts	Environmental protection	27					
	306-2 Management of significant waste-related impacts	Environmental protection	27					
	306-3 Waste generated	Environmental protection	27					
<b>Diversity and inclusion</b>								
<b>GRI 405: Diversity and Equal Opportunity 2016</b>	405-1 Diversity of governance bodies and employees	People and culture / Operating with ethics and integrity	41, 52					

# APPENDIX E: SASB MARINE TRANSPORTATION MATERIAL ISSUES

Category	Metric	Code	Location		External Assurance
			Section	Page(s)	
<b>Topic Disclosures</b>					
<b>Greenhouse Gas Emissions</b>	Gross global Scope 1 emissions	TR-MT-110a.1	ESG at Star Bulk / Environmental protection		18, 24
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	TR-MT-110a.2	Environmental protection		20
	(1) Total energy consumed, (2) percentage heavy fuel oil, (3) percentage renewable	TR-MT-110a.3	ESG at Star Bulk / Environmental protection		18, 24, 29
	Average Energy Efficiency Design Index (EEDI) for new ships	TR-MT-110a.4	-		-
<b>Air Quality</b>	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, and (3) particulate matter (PM10)	TR-MT-120a.1	Environmental protection		26
<b>Ecological impacts</b>	Shipping duration in marine protected areas and areas of protected conservation status	TR-MT-160a.1	-		-
	Percentage of fleet implementing (1) ballast water exchange and (2) ballast water treatment	TR-MT-160a.2	ESG at Star Bulk		12
	(1) Number and (2) aggregate volume of spills and releases to the environment	TR-MT-160a.3	ESG at Star Bulk / Environmental protection		18, 27
<b>Employee health &amp; safety</b>	Lost time injury rate (LTIR)	TR-MT-320a.1	ESG at Star Bulk / Safeguarding health and safety		18, 46
<b>Business ethics</b>	Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	TR-MT-510a.1	ESG at Star Bulk		18
	Amount of legal and regulatory fines and settlements associated with bribery or corruption	TR-MT-510a.2	ESG at Star Bulk		18

## APPENDIX E: SASB MARINE TRANSPORTATION MATERIAL ISSUES (cont'd)

Category	Metric	Code	Location		External Assurance
			Section	Page(s)	
Accident & safety management	Number of marine casualties, percentage classified as very serious	TR-MT-540a.1	ESG at Star Bulk	18	
	Number of Conditions of Class or Recommendations	TR-MT-540a.2	-	-	
	Number of port state control (1) deficiencies and (2) detentions	TR-MT-540a.3	ESG at Star Bulk	18	
Activity Metrics	Number of shipboard employees	TR-MT-000.A	ESG at Star Bulk / People and culture	18, 37	
	Total distance traveled by vessels	TR-MT-000.B	Environmental protection	24	
	Operating days	TR-MT-000.C	About STAR BULK CARRIERS CORP.	8	
	Deadweight tonnage	TR-MT-000.D	About STAR BULK CARRIERS CORP.	7	
	Number of vessels in total shipping fleet	TR-MT-000.E	About STAR BULK CARRIERS CORP.	7	
	Number of vessel port calls	TR-MT-000.F	About STAR BULK CARRIERS CORP.	8	

# APPENDIX F: NASDAQ ESG REPORTING GUIDE 2.0

	Disclosure	Section	Page number(s)
ENVIRONMENT (E)	E1. GHG Emissions	Environmental protection	24-25
	E2. Emissions Intensity	Environmental protection	23
	E3. Energy Usage	Environmental protection	24, 29
	E4. Energy Intensity	Environmental protection	23
	E5. Energy Mix	-	-
	E6. Water Usage	Environmental protection	28-29
	E7. Environmental Operations	Environmental protection	22-23
	E8. Climate Oversight / Board	Operating with ethics and integrity	52
	E9. Climate Oversight / Management	Operating with ethics and integrity	56-57
	E10. Climate Risk Mitigation	Operating with ethics and integrity	58
SOCIAL (S)	S1. CEO Pay Ratio	-	-
	S2. Gender Pay Ratio	-	-
	S3. Employee Turnover	People and culture	44
	S4. Gender Diversity	People and culture	41
	S5. Temporary Worker Ratio	-	-
	S6. Non-Discrimination	People and culture	39
	S7. Injury Rate	People and culture	46
	S8. Global Health & Safety	People and culture	46-48
	S9. Child & Forced Labor	People and culture	39
	S10. Human Rights	People and culture	39

	Disclosure	Section	Page number(s)
CORPORATE GOVERNANCE (G)	G1. Board Diversity	Operating with ethics and integrity	52
	G2. Board Independence	Operating with ethics and integrity	52-53
	G3. Incentivized Pay	-	-
	G4. Collective Bargaining	People and culture	37, 41
	G5. Supplier Code of Conduct	-	-
	G6. Ethics & Anti-Corruption	Operating with ethics and integrity	54-55
	G7. Data Privacy	Operating with ethics and integrity	59-60
	G8. ESG Reporting	<i>Our 2021 Environmental, Social, Governance (ESG) Report was published in November 2022</i>	
	G9. Disclosure Practices	About 2022 ESG Report	4
	G10. External Assurance	Independent Verification Statement	





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## Independent practitioner's assurance report

### To the management of Star Bulk Carriers Corp.

#### Scope

We have been engaged by Star Bulk Carriers Corp. (hereinafter "Star Bulk") to perform a "limited assurance engagement", as defined by International Standards on Assurance Engagements, hereafter referred to as the engagement, to report on the Subject Matter listed below, contained in Star Bulk's English version of the 2022 ESG Report (hereinafter the "Report") as of 02.10.2023 for the year ended 31.12.2022, for the period from 01.01.2022 to 31.12.2022:

1. Adherence of the Report against the criteria set in the GRI 1 2021 Foundation Standard for 'in-accordance' option.
2. Ten (10) General Disclosures of the GRI 2 2021 General Disclosures Standard, agreed between EY and Star Bulk (indicated in the "External Assurance" column of the GRI Content Index, pp. 68-77 of Appendix D).
3. Seven (7) GRI Topic Specific disclosures and their Management Approach (GRI 3 2021 Material Topics Standard), according to the results of Star Bulk Carriers Corp.'s materiality analysis and agreed between EY and Star Bulk Carriers Corp. (indicated in the "External Assurance" column of the GRI Content Index, pp. 68-77 of Appendix D).
4. Three (3) Sustainability Disclosure Topics & Accounting Metrics from the SASB Marine Transportation Industry Standard (indicated in the "External Assurance" column of the SASB Content Index, pp. 78 - 79 of Appendix E).

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining

information included in the Report, and accordingly, we do not express a conclusion on this information.

#### Criteria applied by Star Bulk

In preparing the Subject Matter, Star Bulk applied the GRI Standards (2021) including the GRI reporting principles for accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness, and verifiability, the criteria set in the GRI 1 2021 Foundation Standard for 'in-accordance' option, and the SASB Marine Transportation standard (2018).

#### Star Bulk's responsibilities

Star Bulk management is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

#### EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ("ISAE 3000" (revised)), and the terms of reference for this engagement as agreed with Star Bulk on 22 May 2023. Those standards require that we plan and perform our engagement to express a conclusion on

whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

#### Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits and Reviews of Financial Statements, or Other Assurance and Related Services Engagements, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. 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. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information and applying analytical and other appropriate procedures.

Our procedures included:

1. Reviewing information to substantiate data and statements regarding Star Bulk's sustainable development performance, under the scope of our assurance engagement, as these are presented in the Report.
2. Performing interviews with specialists responsible for managing, collating, reviewing and processing sustainability data reported for internal and public reporting purposes, linked to the GRI 2021 General Disclosures Standard (GRI 2), GRI 2021 Material Topics Standard (GRI 3), GRI 2016 Topic Specific Disclosures, and the SASB Marine Transportation Industry Standard metrics (2018), under the scope of our assurance engagement (as indicated in the column "External Assurance" of the GRI Content Index and SASB Content Index found on Appendices D and E of the Report).
3. Reviewing the Report for the appropriate transposition and presentation of the sustainability data linked to the GRI 2021 General Disclosures Standard (GRI 2), GRI 2021 Material Topics Standard (GRI 3), GRI 2016 Topic Specific

Disclosures, and the SASB Marine Transportation Industry Standard metrics (2018), under the scope of our assurance engagement (as indicated in the column "External Assurance" of the GRI Content Index and SASB Content Index found on Appendices D and E of the Report), including limitations and assumptions relating to how these data are presented within the Report.

4. Reading information or explanations to substantiate key data, statements and assertions regarding the sustainability disclosures under the scope of our assurance engagement.

We also performed such other procedures as we considered necessary in the circumstances.

#### Limitation of our Review

- Our review was limited to the English version of the Report for the year 2022. In the event on any inconsistency in translation between the English and other (if any) versions, as far as our conclusions are concerned, the English version of the Report prevails.
- Our work did not cover activities performed by third parties or the performance of any third parties, not our involvement in stakeholder engagement activities. In addition, it did not include any review of the accuracy of survey results assigned to third parties, nor Information Technology systems used by third parties, but was instead limited to the proper transposition of the final results -within the scope of our engagement- to the Report.
- Our review did not include financial data and the corresponding narrative text in the Report, nor the Information Technology systems used or upon which the collection and aggregation of data was based by the Company.
- We do not provide any assurance relating to future information such as estimates, expectations or targets, or their achievability.

#### Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matter as of 02.10.2023 for the year ended 31.12.2022, for the period from 01.01.2022 to 31.12.2022 in order for it to be in accordance with the Criteria.

#### Restricted use

This report is intended solely for the information and use of Star Bulk in accordance with the terms of reference agreed between us and is not intended to be and should not be used by anyone other than Star Bulk.

Athens, 02 October 2023

For and on behalf of

ERNST & YOUNG (HELLAS)  
Certified Auditors Accountants S.A.

Yannis Pierros

Legal Name: ERNST & YOUNG (HELLAS) Certified Auditors-Accountants S.A.  
Distinctive title: ERNST & YOUNG  
Legal form: Societe Anonyme  
Registered seat: Chimarras 8B, Maroussi, 15125  
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Matters discussed in this report may constitute forward looking statements. The Private Securities Litigation Reform Act of 1995 provides safe harbor protections for forward-looking statements in order to encourage companies to provide prospective information about their business. Forward-looking statements include statements concerning plans, objectives, goals, strategies, future events or performance, and underlying assumptions and other statements, which are other than statements of historical facts.

The Company desires to take advantage of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and is including this cautionary statement in connection with this safe harbor legislation. The words “believe,” “anticipate,” “intends,” “estimate,” “forecast,” “project,” “plan,” “potential,” “may,” “should,” “expect,” “pending” and similar expressions identify forward-looking statements.

The forward-looking statements in this report are based upon various assumptions, many of which are based, in turn, upon further assumptions, including without limitation, examination by the Company’s management of historical operating trends, data contained in its records and other data available from third parties. Although the Company believes that these assumptions were reasonable when made, because these assumptions are inherently subject to significant uncertainties and contingencies which are difficult or impossible to predict and are beyond the Company’s control, the Company cannot assure you that it will achieve or accomplish these expectations, beliefs or projections.

In addition to these important factors, other important factors that, in the Company’s view, could cause actual results to differ materially from those discussed in the forward-looking statements include general dry bulk shipping market conditions, including fluctuations in charter rates and vessel values; the strength of world economies; the stability of Europe and the Euro; fluctuations in interest rates and foreign exchange rates; changes in demand in the dry bulk shipping industry, including the market for our vessels; changes in our operating expenses, including bunker prices, dry docking and insurance costs; changes in governmental rules and regulations or actions taken by regulatory authorities; potential liability from pending or future litigation; general domestic and international political conditions; potential disruption of shipping routes due to accidents or political events; the availability of financing and refinancing; our ability to meet requirements for additional capital and financing to complete our newbuilding program and grow our business; the impact of the level of our indebtedness and the restrictions in our debt agreements; vessel breakdowns and instances of off hire; risks associated with vessel construction; potential exposure or loss from investment in derivative instruments; potential conflicts of interest involving our Chief Executive Officer, his family and other members of our senior management and our ability to complete acquisition transactions as planned. Please see our filings with the Securities and Exchange Commission for a more complete discussion of these and other risks and uncertainties. The information set forth herein speaks only as of the date hereof, and the Company disclaims any intention or obligation to update any forward looking statements as a result of developments occurring after the date of this communication.

