

The background of the entire page is a photograph taken from the deck of a ship, looking out towards the horizon. The sky is a vibrant mix of orange, red, and pink, indicating a sunset or sunrise. The sea is dark blue with white-capped waves. In the foreground, the ship's deck is visible, featuring several large, dark, vertical structures that appear to be part of the ship's equipment or cranes. The overall mood is serene and professional.

ESG 2022

LEMISSOLER NAVIGATION CO. LTD
SUSTAINABILITY REPORT



LEMISSOLER

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About this report

Published September 2023

This is our third Environmental, Social and Governance (“ESG”) report, which communicates our efforts in integrating sustainability into our broader business strategy, and long-term vision.

The main purpose of this report is to provide the key highlights of our business and sustainability progress on the ESG matters that are critical for us and our stakeholders. Through this report, we present the actions and initiatives we undertake to support our employees, business partners, and the community.

This report refers to the period 01.01.2022 – 31.12.2022 and is prepared in accordance with the **Global Reporting Initiatives (GRI) Standards** and the **Sustainability Accounting Standards Board (SASB) for Marine transportation**.

All the photos in this report come from seafarers on board LEMISSOLER vessels. The stories they tell are varied, thoughtful, colorful and poignant. We proudly reproduce them here to honor our seafarers for their professionalism, loyalty, strength, compassion, team spirit and good humor at sea during the year.

American Bureau of Shipping (ABS) has assured this report. Their statement is on page 50.

Message from our Chairman & CEO

2022 was yet another unpredictable year. While the pandemic is largely behind us, the war in Ukraine, the energy crisis and the ensuing recession have deeply impacted people and businesses around the world. However, amidst these challenges, we cannot forget the urgency of the global climate crisis.

LEMISOLER is determined to be proactive and contribute to a sustainable shipping industry through modernization and transparency. Sustainability is central to our business model, based on value creation over the long-term and being a responsible party in the global shipping market.

The Covid-19 pandemic continued to affect societies and economies. Russia's invasion of Ukraine is an ongoing tragedy and has elevated geo-political risks. It has also highlighted the importance of shipping and its seafarers, who are essential for global trade and the transportation of food, energy, and raw materials. Despite the challenges, we were able to operate our business and continue to expand.

The regulatory landscape related to sustainability is constantly evolving and the EU and IMO are increasingly committing to improved targets and policy actions. This relates not only to climate change, but to human rights and transparency in the supply chain. We welcome these regulations, and we believe we are well placed to comply with these changes, despite the compliance and implementation difficulties and the heavy administrative burden added to any shipping company.

The introduction of the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII) will

challenge the shipping industry, will result in progressively slower vessel speeds and, over time, accelerated scrapping as older and less-efficient ships become incapable of compliance.

For LEMISOLER this is considered a competitive advantage, as we will be compliant without additional investments, reaffirming our belief in operating our modern fleet.

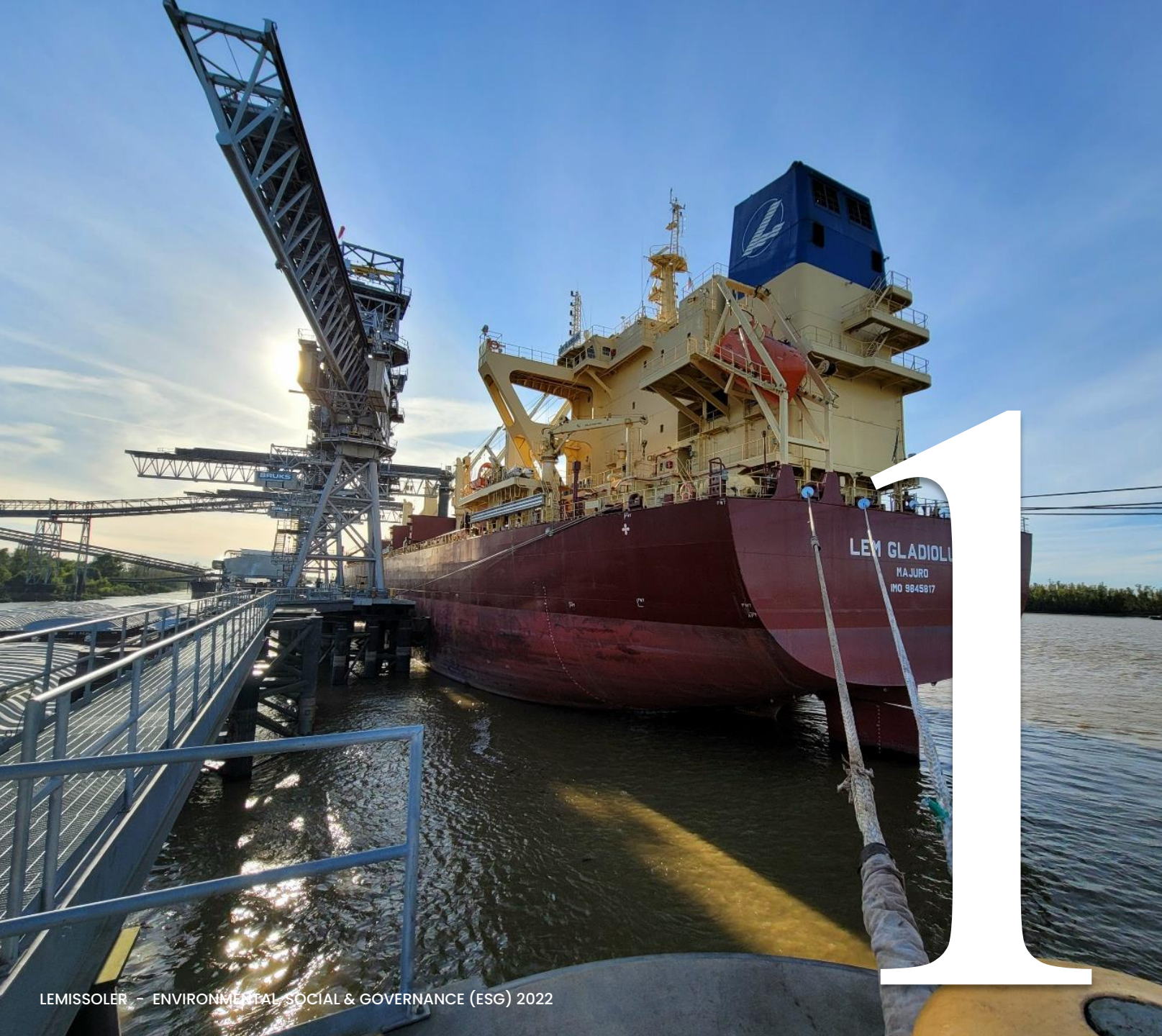
We have ambitions to grow our fleet in the years ahead and target to have a net zero-emission fleet by 2050 and so, we made an important step in that direction in 2022 when we commenced a collaboration with our partners to develop an efficient design for what we expect will be our first dual-fuel Ultramax ship able to run on methanol.

We should be ready to contract our first Methanol LEM 65e+ DF Ultramax Vessel for delivery in 2026, and we believe that our example will help accelerate the transition to net zero-emission shipping in our dry bulk sector.

To all our teams and stakeholders – everyone we have worked with in 2022, thank you! We know there is much more to do, but we have plans in place, a distinctive framework to support them with sustainability at its core.

We wish all our employees, onshore and aboard, safe operations in the coming year.





About LEMISSOLER

At a glance

LEMISSOLER is a vertically integrated shipping group, established in 1996 with 4 activities ranging from shipowning and shipmanagement to commercial operations and corporate management.

"Our purpose is to create value."

Philippos Philis, CEO

Our Values



Transparency



Integrity



Excellence



Respect



Shipmanagement

- Technical & Purchasing
- Crewing & Training
- Naval Architecture & Engineering
- Insurance and Claims



Commercial Operation

- Vessel Chartering
- Dry Cargo Operation
- Contracts of Affreightment



Corporate Management

- Project Origination
- Project Funding (Equity, Debt)
- Market Research & Analysis
- Full Reporting
- Risk Management



Research & Development

- LEM Bulkcarrier Designs
- Green Shipping Solutions
- Technology Projects
- Newbuilding Supervision

12 vessels

Owned as of Dec. 2022

492

Crew employed

>4.1 mil.

MTPA cargo carried

6 offices

Around the world

66

Office employees

>\$200 mil.

US\$ Net Assets Value as of
Sept. 2023

OUR GOALS



Zero Incidents



Superior service to
our charterers and
shippers



Environmental
protection



Maximum value for
our shareholders



Wellbeing of our
people



Transparency and
accountability

Our existing competitive advantage: a modern eco fleet promoting a greener future today

Our fleet contains modern, fuel-efficient and high-quality vessels, with a strong emphasis on our in-house technical expertise.

We design our vessels to be top of the line in their respective categories; this is an important step in our common pursuit to create a more sustainable shipping concept combined with a flexible design to offer our customers better business solutions at competitive freight per ton-mile.

As of December 2022, our company owns a fleet consisting of 12 vessels with a total carrying capacity of 727,760 DWT.

12 vessels

Designed in-house by LEMISSOLER and surpass regulatory requirements.

> 24.0%

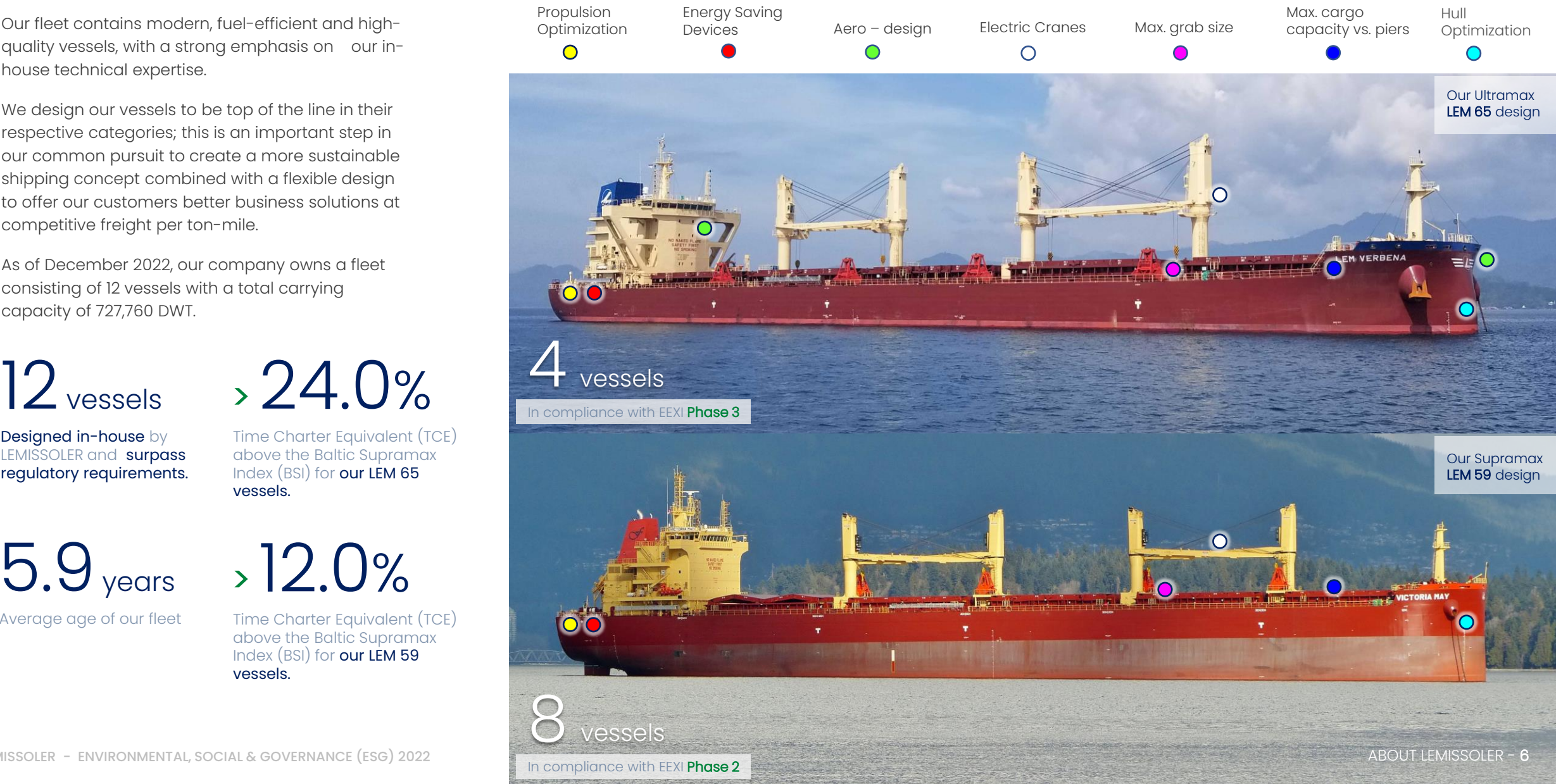
Time Charter Equivalent (TCE) above the Baltic Supramax Index (BSI) for our LEM 65 vessels.

5.9 years

Average age of our fleet

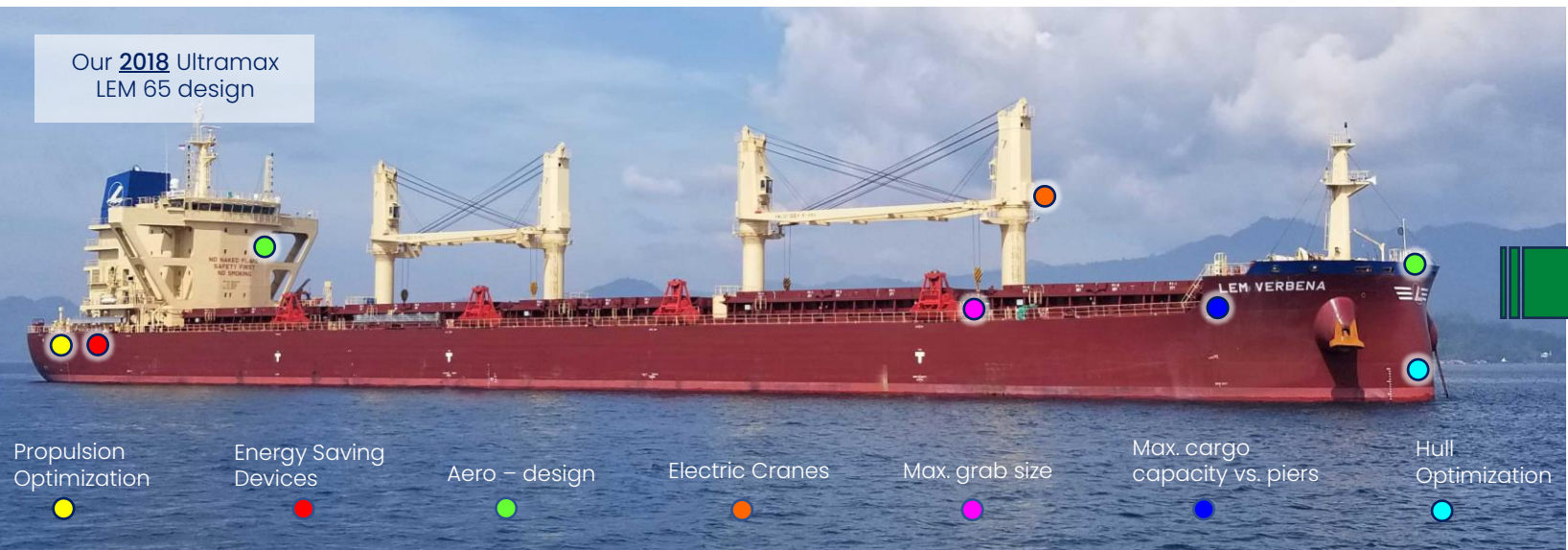
> 12.0%

Time Charter Equivalent (TCE) above the Baltic Supramax Index (BSI) for our LEM 59 vessels.



Our NEXT competitive advantage: reinventing our LEM 65 Ultramax to achieve the net zero by 2050

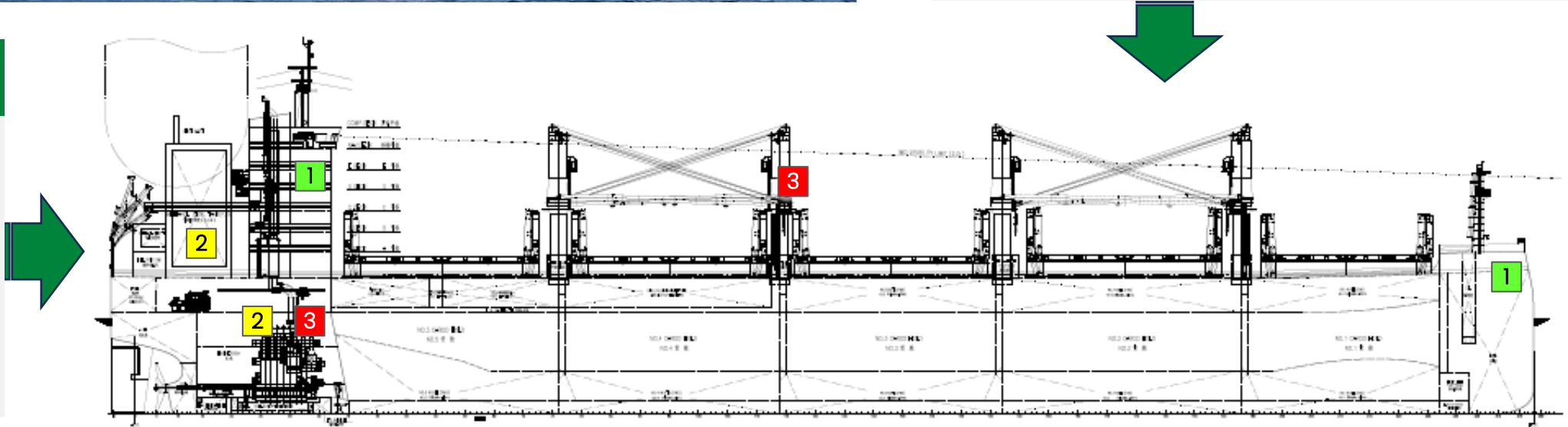
Our **2018** Ultramax LEM 65 design



NEW+ Upgrades		Description
Optimization	1	<ul style="list-style-type: none">➢ Optimized hull lines even more.➢ AERO accommodation front wall.
Propulsion	2	<ul style="list-style-type: none">➢ Dual Fuel (Methanol) Engine➢ Double wall Methanol fuel tanks. Capacity for a sailing range of 11.000 nautical miles.
Energy Saving	3	<ul style="list-style-type: none">➢ Shaft generator covering all the ship's electrical load at sea.➢ New generation electric cranes with 35 mt capacity.➢ Battery bank (ESS) covering all the accommodation lighting.

Our **NEW 2023 METHANOL** Ultramax LEM 65e+ DF design

- ✓ All previous LEM 65 enhancements; plus (+)
- ✓ (+) Upgrades on existing proven 2018 LEM 65 design
- ✓ (+) 8% more efficient than 2018 LEM65
- ✓ (+) Methanol Dual Fuel Engine
- ✓ (+) Complies with upcoming regulations
- ✓ Delivery 2026



Well diversified network of clients across geographies and commodities

We carefully select our business partners based on their beliefs, diligence, transparent business practices, operational conduct and long-term focus.

STRONG COMMERCIAL PERFORMANCE

- Our direct wide network limits our exposure to specific customers, geographies or commodities. It also provides a wide foundation for revenue generation and reduces cyclical and counterparty risk.
- Our close relations to such a wide range of top-rated cargo owners globally provides a high deal flow with opportunities to locate cargo that efficiently match our vessels' availability.
- Our long-lasting relationships with reputable and reliable brokers help us apply our robust commercial strategy and match every vessel when needed with the suitable cargo.

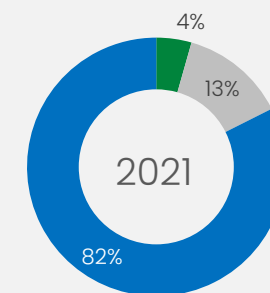
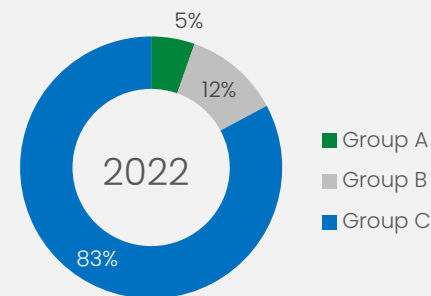
0 zero

Cargo complaints in 2022

100%

Of our charterers passed our quality evaluation benchmark

Cargo IMSBC Classification

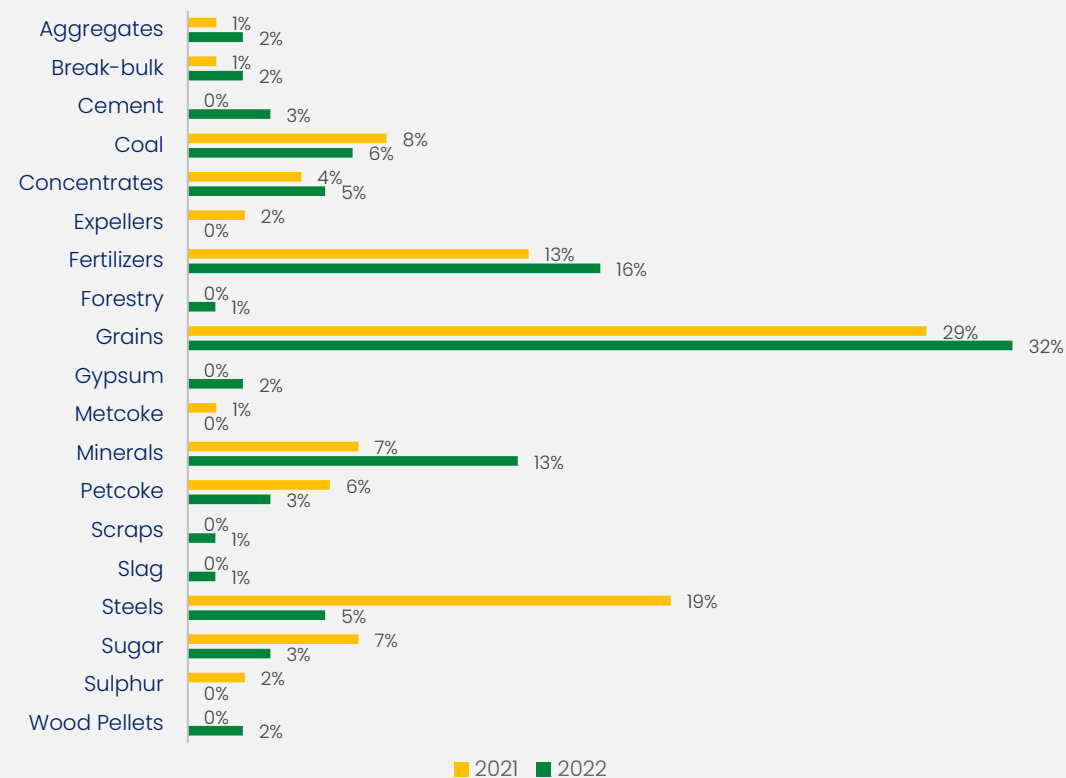


Group A: Cargoes which may liquify if shipped at a moisture content exceeding their transportable moisture limit.

Group B: Cargoes which possess a chemical hazard which could give rise to a dangerous situation on a ship.

Group C: Cargoes which are neither subject to liquify nor possess chemical hazards. Cargoes in this group can still be hazardous.

Cargo composition



High asset utilization with more than 4.1 million metric tons transported across the globe

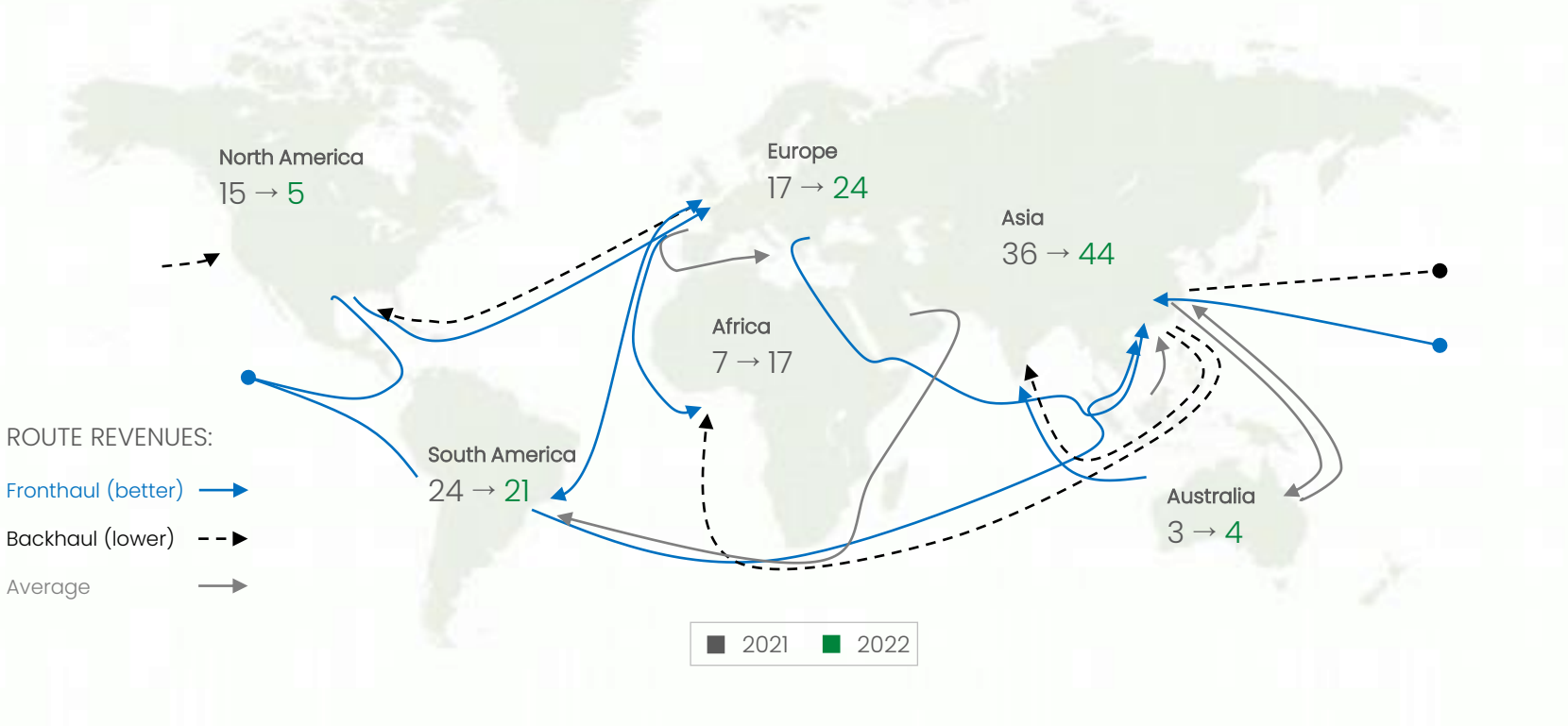
We calculate the fleet utilization by dividing available days (including charter-in days) by ownership days.

This measure demonstrates the percentage of time in the relevant period our vessels generate revenue.

During the three years ended December 31, 2021, our average annual fleet utilization days rate was 97.9%.

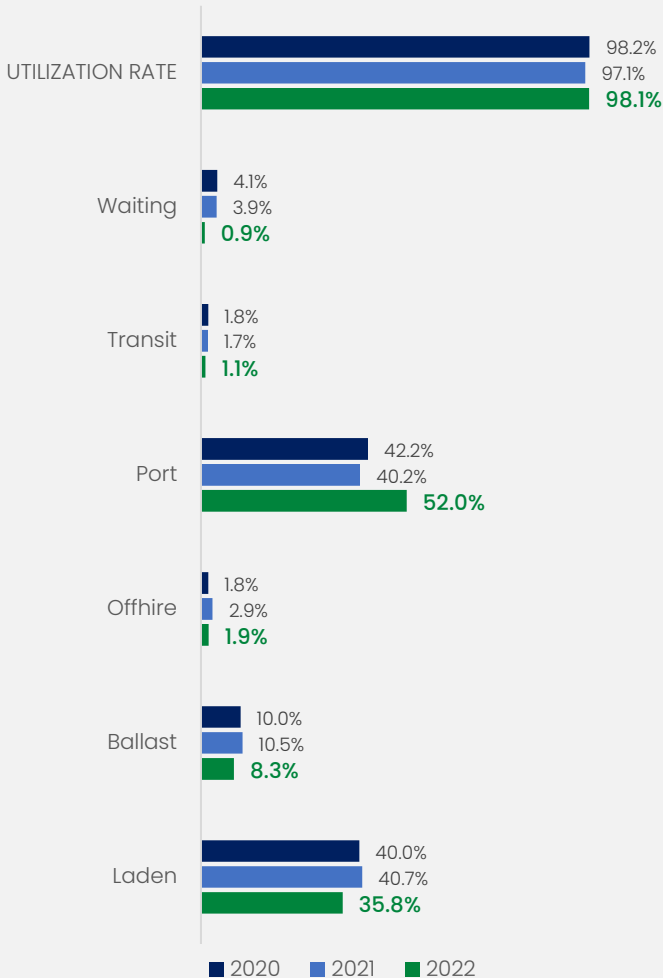
In 2022, we achieved a 98.1% utilization rate, which is slightly increased compared to 2021 despite 2 scheduled dry Docks (1/6 of our fleet).

NUMBER OF OUR PORT CALLS IN THESE REGIONS



98.1%

Vessel utilization rate in 2022



Key clients and their feedback

"Consistently deliver as promised."

Cargill

"Your flexibility and willingness to go the extra mile have made all the difference."

Bunge

"We look forward to continued collaboration."

Trafigura



Our partners for advancing sustainability

LEMISSOLER is continuously seeking ways to improve the operational efficiency of our vessels in the short-term, while investigating new technologies and entering strategic partnerships for the long-term.

In 2022 our Group was a member of – or partnered with – the following associations and organizations:





ESG at LEMISSOLER

Sustainability at LEMISSOLER

Our purpose is reimagining shipping for people and our planet. Our sustainability frame underpins our strategy to be an integrated shipping company and translate our purpose into action. It sets out aims in the areas where we believe we can make the biggest difference for LEMISSOLER, our stakeholders and society.

Our aims and objectives

Sustainability at LEMISSOLER is about creating value by connecting the business opportunities of the shipping transition with our aims and objectives for people, our planet and getting to net zero.

The aims are targeted but interconnected, so delivering one aim can help us deliver others.

Our foundations

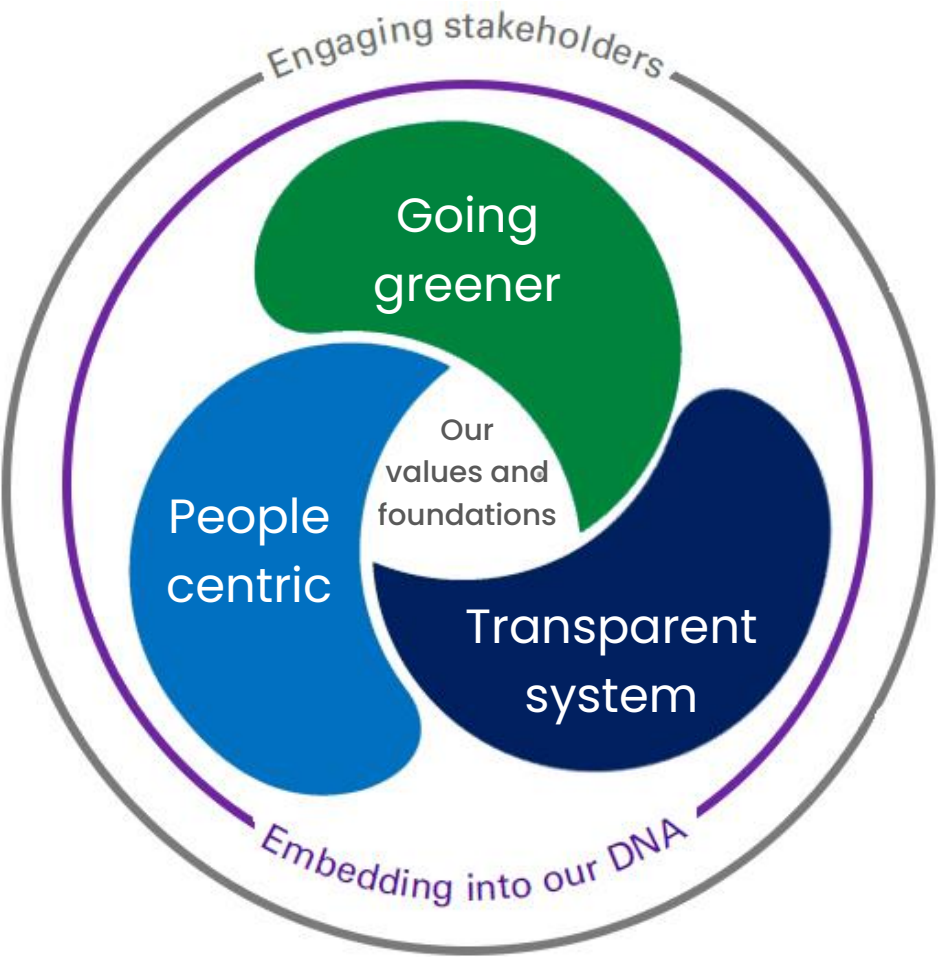
Sustainability is not new to LEMISSOLER. Over many decades we have built strong foundations to help us do the right thing on safety, greenhouse gas emissions, human rights, biodiversity, and other social and environmental factors. Delivering our aims requires us to build on and strengthen these foundations.

Engaging stakeholders

We learn through ongoing engagement with our many different stakeholders and collaborate with them to deliver our aims.

Embedding into our DNA

We are constantly working to embed sustainability more deeply into our culture and mindset, decision making, systems and processes, and governance.



ENVIRONMENT

Improving our fleet's consumption of fuel and other inputs and the resulting impacts of emissions, use of resources and climate change.

Focus areas - Greenhouse gas emissions, energy consumption, SOx, NOx, waste, biodiversity.

SOCIAL

Rewarding the skills, experience, behavior and loyalty of our staff and enhancing with fair remuneration and a commitment to health and safety, development and training, equal opportunity and a comfortable and fulfilling workplace.

Focus areas - Health & safety, human rights, diversity & equal opportunity, training & development.

GOVERNANCE

Evolving management and governance practices for best in-class risk management, transparency and stakeholder confidence.

Focus areas - Anti-corruption, Risk Management, Transparency, Cyber Security,

Materiality Analysis

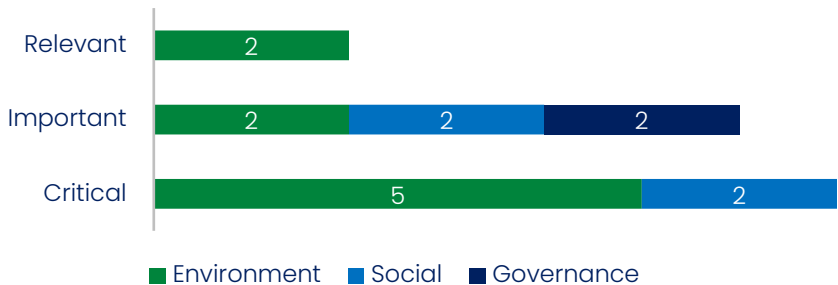
ENGAGING WITH OUR STAKEHOLDERS

Our goal is to embed sustainability into our business strategy and processes. To achieve this, we need to understand the most relevant and important sustainability issues for our business and our stakeholders. The ways in which we engage with our key stakeholders, the key issues and our response is described in Appendix A & B.

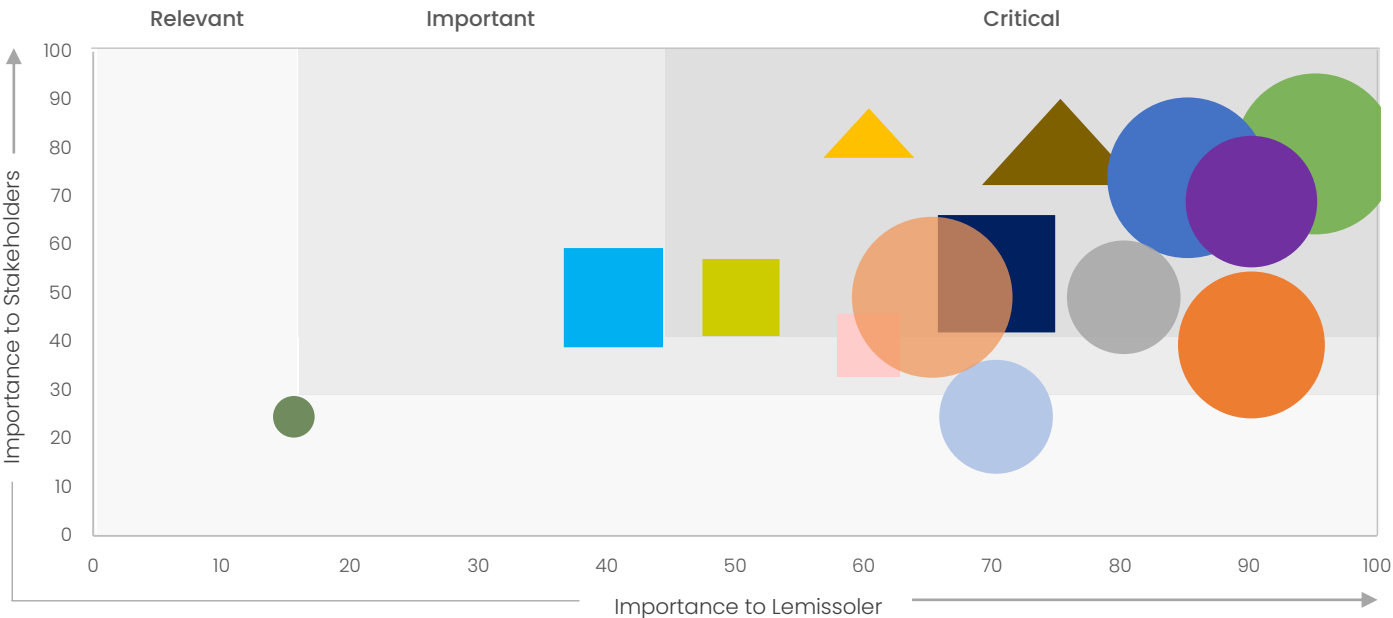
The topics for this report were selected through management prioritization by considering the importance to Stakeholders in the topic and the likelihood of the topic affecting our business objectives.

These 14 topics are ranked by importance in the three broad categories (E, S, G) as presented in the following graph:

NUMBER OF TOPICS PER MATERIALITY LEVEL



Our ambitions on all these material topics are outlined below our materiality matrix on the right, and actions and progress towards achieving our ambitions are described throughout the report.



Key topics:

- Accountability and Transparency
- Anti-Corruption
- Diversity and Inclusion
- Efficiency and Performance Monitoring
- Emissions and Energy Reduction
- Employees
- Labor and Human Rights
- Marine Environment Protection
- Partnerships
- Research and Innovation
- Safety
- Ship Recycling
- Transport work
- Waste

Note: Topics mapped on 5-dimensional graph and the size of the shapes indicates the ability of LEMISSOLER to control.

- Environment
- Social
- Governance

Sustainability strategy and focus areas

In developing our people and planet aims, we used the UN sustainable development goals (SDGs) to inform our thinking. Although our business activity touches most of the SDGs, we are focusing our efforts on those that align with our aims in order to make the most impactful contribution to sustainable development and for people over the next decade.

ENVIRONMENT



Focus area

Decarbonization

Decarbonization and energy efficiency are part of LEMISSOLER's agenda to curb emissions gradually, while working towards carbon neutrality in 2050. It is LEMISSOLER's responsibility to manage its vessels in the most energy efficient way possible.

Read more in the section
Environment on page 14

Targets

1. Carbon neutral by 2050.
2. Yearly improvements in CO₂.
3. Emissions per transport work for each vessel size, aligned to IMO CO₂ targets.
4. Elimination of food waste onboard.
5. Reduction of paper and electricity consumption annually.

SOCIAL



Focus area

Diversity, well-being & engagement

All our employees will be treated fairly in a safe and healthy working environment, and we are committed to creating a working environment where each employee feels valued and can prosper.

Read more in the section
People on page 31

Targets

1. Limit accidents onboard our fleet.
2. Maintain at least 35% female share of on-shore employees.
3. Maintain an average retention rate of min. 90%.

GOVERNANCE



Focus area

Bribery and facilitation payments

Corruption obstructs the development of fair market structures, distorts competition and threatens the normal development of societies. LEMISSOLER has zero tolerance towards bribery, and our policy is to refuse facilitation payments.

Read more in the section
Governance on page 22

Targets

1. Zero tolerance towards bribery and refusal of facilitation payments.
2. All employees to take and pass anti-corruption and data ethics training.
3. 100% of suppliers selected based on ESG criteria by 2026.



Addressing the United Nations Sustainable Development Goals

Our sustainability focus areas, strategy and targets are consistent with several of the United Nations Sustainable Development Goals (UN SDGs) designed to achieve a better and more sustainable future for all. As a responsible corporate citizen, we are committed to taking steps to tackle the environmental and social challenges we face in our industry.

Our sustainability initiatives and targets are aligned with the 2030 Agenda for Sustainable Development of the United Nations and with several UN SDGs as shown on the left.

LEMISSOLER contributes to certain aspects of all 17 SDGs. In this report, we feature twelve (12) SDGs to which we are making significant contributions.





ENVIRONMENT



We continuously strive to improve the energy efficiency of our fleet

We measure transport energy efficiency of our fleet using the two main *Carbon Intensity Indicators (CIIs):

1. ENERGY EFFICIENCY OPERATING INDEX (EEOI)

EEOI (also used for EU MRV reporting) is the ratio of annual total CO₂ emissions per transport work (actual cargo transported X distance sailed) in grams of CO₂/Transport ton-mile.

We apply an array of diverse operational measures, including the application of weather routing systems and speed management optimization practices for achieving in-time arrival at port and minimum time spent at anchorage.

In 2022 the average EEOI of our fleet decreased by 2.2% which shows an improvement when transport work is considered.



2. ANNUAL EFFICIENCY RATIO (AER)

AER (also used for IMO DCS reporting) is a metric used for the assessment of the energy performance of ships and has been adopted by the Poseidon Principles. AER is the ratio of annual total CO₂ emissions divided by the deadweight capacity X distance sailed, expressed in grams of CO₂/DWT ton-mile. In 2022, the average AER of our fleet increased by approximately 0.8%, due to charterers’ operating profile and more specifically due to longer port times.

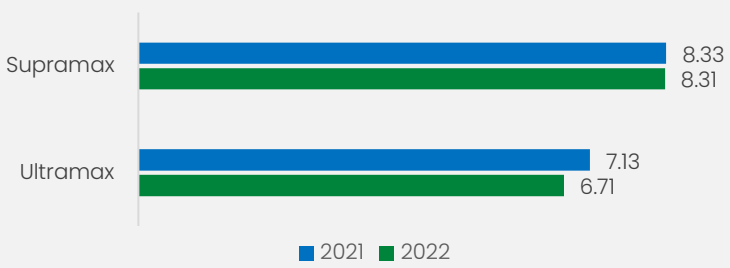
ENHANCING VOYAGE OPTIMIZATION

The below voyage optimization initiatives that we apply contribute to offset the increase in our Carbon Intensity metrics:

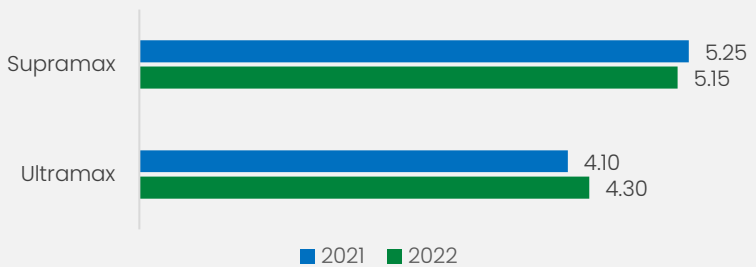
- Optimizing hull cleaning frequency (for reduced drag) using detailed analysis of vessels’ speed and fuel consumption performance over time.
- Weather routing guidance based on hourly updated weather forecasts.
- Real-time onboard system monitoring (KeelX Analytics systems).
- AI route optimization for ongoing route efficiency adjustments (KeelX Analytics systems).

Without these initiatives the knock-on effect on the metrics on this page would have been even larger.

Carbon Intensity Indicator (CII) per vessel size
EEOI method (EU MRV) (gr CO₂/Transport ton-mile)



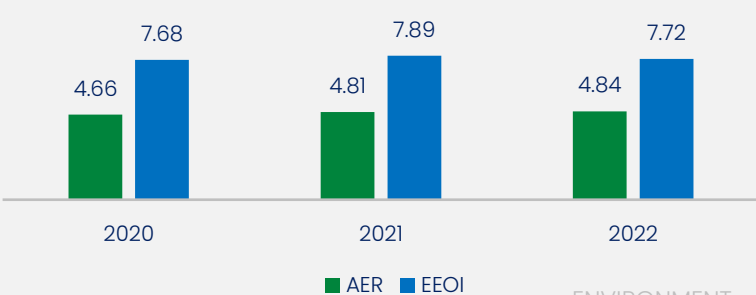
Carbon Intensity Indicator (CII) per vessel size
AER method (IMO DCS) (gr CO₂/DWT ton-mile)



* We report on Carbon Intensity Indicators using EEOI (Energy Efficiency Operational Indicator) and Annual Efficiency Rate (AER) methodologies. EEOI is defined by IMO in MEPC.1/Circ.684 and AER is defined by IMO MEPC. 336(76).

** Average EEOI and AER figures are calculated by the total fleet Ton - mile or DWT - mile respectively and divided by total fleet CO₂ emissions.

Carbon Intensity Indicators (CIIs) – Our fleet



Continuous monitoring and transparent reporting of our fleet's emissions

We are focused on improving our carbon footprint. We monitor our CO2 emissions carefully. From their construction phase we have implemented on board our vessels a variety of energy efficiency measures, initiatives and systems to accurately monitor fuel consumption and CO₂ emissions.

- In 2022, our vessels travelled **547,041 nautical miles**, emitted **160,757 tons of CO₂ (Scope 1)**, and consumed **51,526 tons of fuel**.
- The total fleet CO₂ emissions decreased by 15.3% in 2022.
- The average fuel consumption per day per vessel (sailing days only) totaled 22.43 mt/day, decreased by 7.1% compared to the 2021 levels (from 24.15 mt/day in 2021).
- The total fleet's fuel consumption by fuel type breaks down to **48,228 mt of LSFO, and 3,299 mt of MGO**.
- The total energy consumption of our fleet which is directly related to the fuel consumption on board, was 2,205 TJ in 2022, a decrease of approximately 15.3% compared to 2021, when the total energy consumption was 2,604 TJ.
- Our Scope 2 CO₂e indirect emission for 2022 were **53.28 mt**, including the electricity consumption of our main office in Cyprus and the electricity purchased by our ships during drydocks. CO₂e per kWh is not specific to supplier, thus, we are using location-based emission factors in our calculations*. For Scope 2 CO₂e, a 10% reduction was observed, compared to 2021.
- The CO₂e due to electrical power purchased during ships' repairs and retrofitting in 2022, were 12.22 mt, while the CO₂e due to electrical power purchased for office use were 41.06 mt.

*The location-based carbon footprint is based on March 2022 report "Carbon Footprint Country Specific Electricity Grid Greenhouse Gas Emission Factors" at www.carbonfootprint.com

161k tons

Total Scope 1 direct emissions (CO₂) of our fleet in 2022

53 tons

Total Scope 2 indirect emissions (CO₂e) in 2022

↓ 15.3%

Total CO₂ emissions decrease of our fleet in 2022

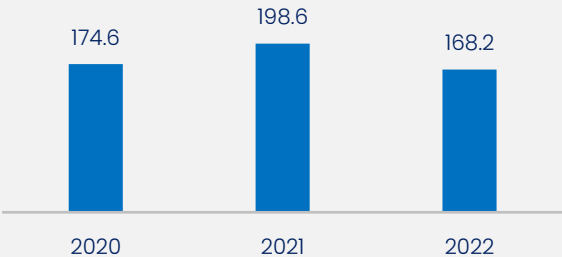
↓ 7.1%

Decrease in 2022, of our average fuel consumption per day per vessel

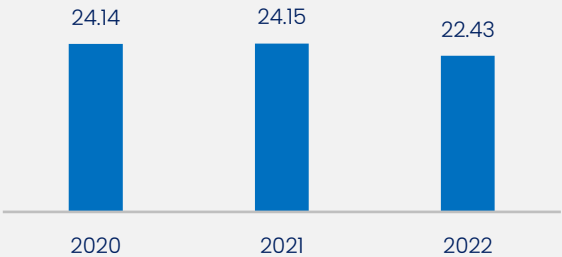
2,205 TJ

Energy consumption in 2022 of our fleet

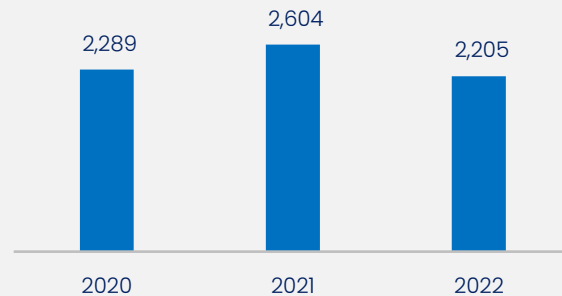
Scope 1 GHG emissions ('000 tons CO₂e)**



Average fuel consumption per day (mt) ***



Total energy consumption (TJ)



** The GWPs used for CH₄ and N₂O are 25 and 298 times respectively of the CO₂ GWP in 100 years period, also reported by European Commission on Eurostat. For CH₄ and N₂O fuel emission factors we have used EPA's 2014 paper "Emission Factors for Greenhouse Gas Inventories and used MDO/MGO density at 900kg/m³ and HFO density at 991kg/m³ as per MEPC.365(79).

*** Sailing days are derived from the total hours where the Vessel is underway, with Main Engine running.

We reduced our air pollutants due to emissions by 14.7% compared to 2021

At Lemissoler we aim to minimize the negative environmental impacts related to our operations. This commitment includes a reduction of Nitrogen Oxides (NOx) and Sulfur Oxides (SOx) to the atmosphere which represent our fleet's primary pollutants.

SULPHUR EMISSIONS (SOx)

- On January 1st, 2020, the IMO introduced regulations to reduce the sulfur limit in the fuels used by ships from 3.50% to 0.50%. The amount of sulfur oxides emitted to the atmosphere is almost directly proportional to the amount of sulfur in the fuel (% m/m) burnt and the total amount of fuel used in vessel engines.
- In 2022, total *Sulphur Oxides (SOx) emissions of our fleet were 396 tons, decreased by 13.3% in relation to 2021, which is inline with the fuel consumption reduction.

NITROXIDE EMISSIONS (NOx)

- The combustion of marine fuels generates **Nitrogen Oxides (NOx) emissions which are harmful to the environment, health, and closely correlate with CO₂ emissions and fuel consumption. The higher the combustion temperature, the greater the NOx formation.
- Control of NOx emissions is mainly achieved by reducing fuel consumption and equipping vessels with latest generation engines certified for lower NOx emissions. Our vessels are all equipped with NOx-controlled engines (Tier II) that meet the relevant IMO standards.
- In 2022 our fleet emitted 3,848 tons of NOx, a decrease of 14.9% in relation to 2021, which is as expected and inline with the fuel consumption reduction.

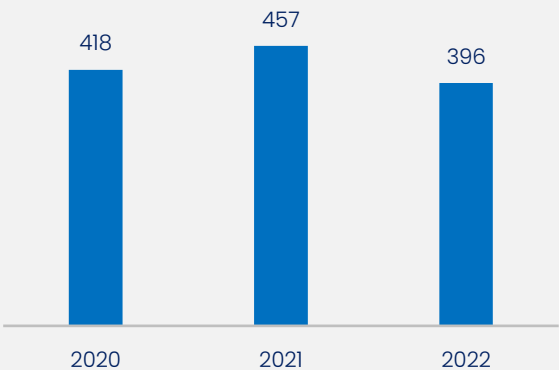
↓ 13.3%

In total SOx emissions decrease of our fleet in 2022

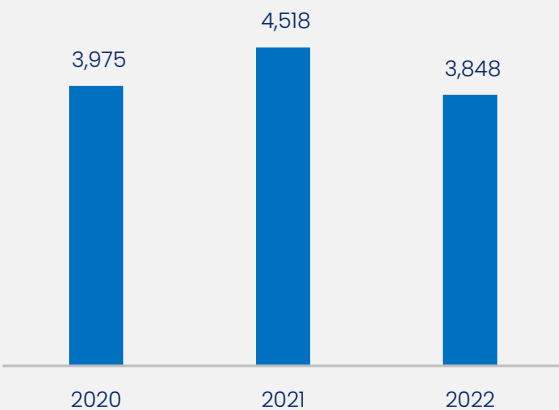
↓ 14.9%

In total NOx emissions decrease of our fleet in 2022

SOx emissions (tons)



NOx emissions (tons)



* SOx emissions are calculated using the average Sulphur content in the Bunker Delivery Notes (BDNs) for HFO and 0.1% for MDO/MGO. For scrubber fitted Vessels, this figure is assumed as 0.1% for all fuel types, although scrubber operational logs indicate 0% for all times and modes of operation.

** NOx emissions are calculated using a value of 75.9kg/ton for HFO fuel and 56.7kg/ton for MGO/DO fuel and derived Fourth IMO GHG Study - July 2020.

We continuously improve our on-board practices, to reduce our environmental impact

WATER MANAGEMENT

Fresh consumable water on board is either produced on board by the freshwater generator (sea water desalination process) or supplied from the shore. Being a precious resource for our on-board operations, we are committed to using it efficiently through continuous monitoring and consumption control.

For drinking water, specifically, after testing and receiving positive feedback at the end of 2020 on one of our vessels, within 2021 and 2022 we proceeded and installed on the whole fleet an enhanced Drinking Water Filtration System. It is estimated that over 70,000 plastic bottles per year have been eliminated.

WASTE MANAGEMENT

In addition to complying with MARPOL Annex V requirements, we also take the following extra steps across our fleet to reduce the amount of garbage generated:

- 1) In addition to normal segregation for disposal ashore, our Vessels are fitted with processing equipment for almost all types of garbage generated onboard to allow reduction and ease the recycling process once ashore.
- 2) Steps have been taken to reduce single-use plastics onboard, such as supply of biodegradable equivalents, advising suppliers to retrieve wrapping material and

reduce their use on packaging, improve the onboard filtration systems to allow us to replace single used plastic bottles with reusable containers.

Our estimates indicate 5,800 single-use plastic bottles can be saved, per vessel per year. Another area we have focused on, is the reduction of single-use cleaning chemicals for domestic use, by utilizing a chemical mixing unit which uses large chemical drums to produce and fill reusable bottles instead.

- 3) All our fleet is fitted with Incinerators complying with latest requirements of MEPC.244(66) which allow for a more environmentally friendly operation and for a greater range of garbage types.

LED-LAMP RETROFIT

In 2020 we have initiated the installation of LED lights on board to reduce emission and fuel oil consumption and improve our Carbon Intensity Indicator (CII), bunker cost and OPEX. Within 2021 we have installed LED lamps in all areas where technically applicable (not possible for some systems).

100%

Of fleet equipped with
WATER FILTRATION SYSTEMS

100%

Of fleet equipped with
LED-LAMP RETROFIT

We act proactively to ensure timely and efficient compliance with all applicable regulations

BALLAST WATER TREATMENT

Following the requirement of the IMO Ballast Water Management Convention, that entered into force on September 8th, 2017, we have fitted 100% of our fleet with Ballast Water Treatment Systems (BWTS).

ENERGY EFFICIENCY EXISTING SHIP INDEX (EEXI)

We have proactively calculated the EEXI values for our vessels, based on the guidelines by IMO that were adopted in June 2021 (MEPC 76), and in cooperation with each respective classification society have received verification of the EEXI value per vessel.

MRV (EU & UK) and IMO DCS

We are fully compliant with the MRV (EU & UK) and IMO DCS regulations. We have established a standardized and structured process to ensure completeness, consistency and accuracy in our emissions monitoring and reporting process.

Emissions reporting for both MRV and IMO DCS purposes are audited and verified by an independent recognized organization.

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 our vessels hold a valid IHM certificate.

SPILLS AND RELEASES TO THE ENVIRONMENT

We follow strict operating procedures, conduct regular risk assessments and apply high level safety standards in compliance with the current relevant legislation and our strong Health, Safety and Environmental management system in order to ensure that no harmful substances are disposed to the marine environment as a result of our operations.

100%

Of fleet equipped with BWTSs as of 31st Dec 2022

0 zero

Spills to the marine environment

0 zero

Non-compliance incidents

0 zero

Class conditions / recommendations

REFRIGERANTS AND STERN TUBE SEALS

Our fleet consists of new modern vessels equipped with approved refrigerants with reduced Global Warming Potential (GWP). Additionally, during maintenance activities both in offices and on vessels, eco-friendly refrigerants that do not affect the ozone layer are being used.

Our vessels are equipped with eco-friendly stern tube seal systems of air seal design, which eliminate the risk of oil leaking into the sea.

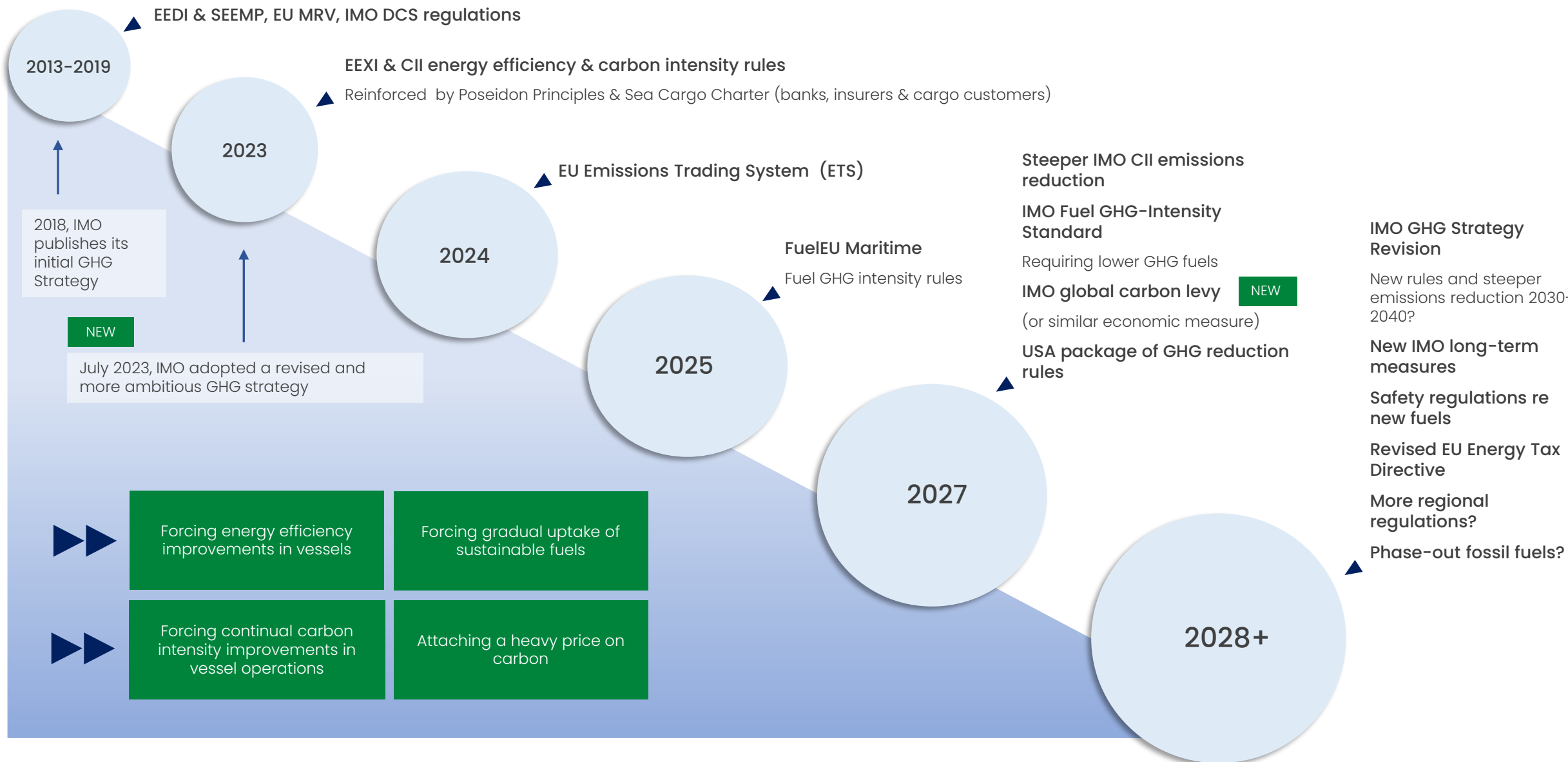
ENVIRONMENTAL COMPLIANCE

Compliance with all applicable environmental laws and regulations is foundational to how we do business. During 2022, there were no incidents of noncompliance and no class recommendations related to environmental pollution incidents.

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.

New regulations will put significant pressure on less efficient vessels



New regulations leading to lower speeds and more scrapping from 2024

- From January 2023, IMO’s global EEXI and CII regulations require vessels to combine technical and operational measures to improve their carbon intensity
- Shipping included in European Union Emissions Trading System (EU ETS) from January 2024

New Regulation	Requirement & Timing	Impact on the Industry
EEXI Energy Efficiency Existing Ship Index	<ul style="list-style-type: none">▪ Technical design criteria▪ Vessels maximum engine power will be capped▪ Annual survey	<ul style="list-style-type: none">• No impact on Lemissoler vessels• Larger impact on poorly designed vessels• Reduction of maximum operating speeds
CII Carbon Intensity Indicator	<ul style="list-style-type: none">▪ Operational criteria▪ Vessels will be rated A-E on actual fuel consumption and distance travelled▪ 2023 us the first year of measurement and 2024 first year of ratings	<ul style="list-style-type: none">• To retain same rating, 2% per year improvement required in 2024-2026• Vessels rated D (repeatedly) and E will need to submit plans for improvement• Will have larger impact than EEXI and can reduce speeds across dry bulk fleet by an average of 3 knots by 2030• No impact on Lemissoler vessels (<i>more on next slide</i>)
EU ETS European Union Emissions Trading System	<ul style="list-style-type: none">• Shipping companies required to buy and surrender EU Allowance for CO2 emission in/out of the EU• Obligation phased in: 40% for 2024; 70% for 2025; 100% for 2026• Current EU carbon price €100/ton of CO2 and is expected to increase to €170/ton by 2026• Penalty now fixed at €100 for every ton of CO2 unaccounted for	<ul style="list-style-type: none">• May drive faster pace of decarbonization:• Near-term impact – reduction in speed• Accelerate scrapping of older, less efficient vessels



Our strategic decisions and milestones ahead of the CII and EU ETS regulations

1. Fleet Performance Department was officially formed

- Daily interaction with vessels, collecting/monitoring/analyzing commercial, technical and emissions performance data.

- Proactively taking action to assist fleet to comply with emission related regulations and reporting.

2. Two-way Performance Monitoring started in 2022

- Combined real time auto-log digital monitoring and manual daily noon report monitoring, to cross check data validity with the target of achieving full automation.

- This was achieved by investing heavily in real time CII monitoring, CII simulation, CII optimization via **KeelX Analytics**; while in parallel monitoring emission performance using manual daily reports submitted from vessels.

- Both real time auto-log digital monitoring and manual daily noon report monitoring was introduced, to cross check data validity with the target of achieving full automation

3. Adapted our Chartering Operations Strategy

- Constantly simulating the expected CII impact of chartering decisions; e.g., simulating the expected CII of a vessel at next TCT, voyage, period and adapting the fixtures accordingly if necessary

- Started and maintained an open dialogue with charterers to ensure compliance and to avoid bad CII performance in a timely manner.

4. Deep dived into Data Analysis

Analyzed CII performance and patterns to understand the Carbon Intensity Indicator's behavior, to know which factors affect it the most, what to monitor more extensively and what measures to take to ensure compliance e.g., speed, idle time, critical months of calendar year.

Vessel	AER	2022					
		Scores 2023-2026	Total CO2 (mt)	Total Distance (nm)	Total Sailing Time	Speed (Calculated)	CO2 / Distance
Anya	4.954	C	14,698	50,638	4,330	11.70	0.290
		C					
		C					
		D					
Brigitte	6.413	E	9,645	25,652	2,334	10.99	0.376
		E					
		E					
		E					
Elisa	4.884	C	13,700	47,845	4,258	11.24	0.286
		C					
		C					
		D					
Elsabeth C	5.072	C	14,442	48,546	4,321	11.23	0.297
		D					
		D					
		D					
Menomonee	5.330	D	11,096	35,530	3,294	10.79	0.312
		D					
		D					
		D					
Mirela	5.044	C	14,858	50,163	4,272	11.74	0.296
		C					
		D					
		D					
Sheila	4.990	C	15,857	54,216	4,632	11.71	0.292
		C					
		D					
		D					
Victoria May	5.169	C	14,933	49,271	4,233	11.64	0.303
		D					
		D					
		D					
Lem Geranium	3.899	A	13,771	54,582	4,531	12.05	0.252
		B					
		B					
		B					
Lem Gladiolus	4.543	C	11,958	40,714	3,844	10.59	0.294
		C					
		C					
		C					
Lem Marigold	4.489	C	14,521	50,026	4,394	11.39	0.290
		C					
		C					
		C					
Lem Verbena	4.374	C	11,279	39,859	3,498	11.40	0.283
		C					
		C					
		C					

Increased our 2022 funding and active participation in green tech programs under development by KeelX

01.2022

Lemissoler to support and guide the development of new and existing innovative digital solutions, test them, and officially adopt them for operational use both at the office and onboard vessels.



02.2022

KeelX went live in 2022 with KeelX Analytics and KeelX Education.



11.2022

In 2022 started business analysis and software development of KeelX Talk, a revolutionary messenger app to enable all seafarers to get in touch in a few clicks with the ship management office to seek help, report incidents (with optional anonymity), and even use this communication channel to secure their reemployment/next contract.



12.2022

2022 was a milestone year with Lemissoler and KeelX: completed KeelX spinoff (27/12/2022) and paved the way to independence and additionally Lemissoler officially became the anchor client of KeelX.



SOCIAL



We seek to and evidently do effectively manage the risks inherent to our operations

On Board Supt. Inspections, Audits and Port State Control Inspections

- Internal and external audits take place in order to ensure that we comply with all international and legal requirements related to the safety and integrity of our operations.
- We aim to physically inspect each vessel at least 2 times a year, once per year by our Technical Department and once per year by our Marine & Safety Departments.
- Our onboard inspections and attendances increased by 40% compared to 2021 as COVID-19 pandemic has subsided and there are minimal travel restrictions.
- *Port State Controls (PSC) deficiency ratio increased to 0.44 compared to 0.20 in 2021.
- Our zero detentions performance continues into 2022.

Quality Recognitions



We maintain ISO 9001 quality certification and all our Vessels have received a quality accreditation through the Qualship21 program by USCG (for applicable Flags).

Incidents within our Fleet

All related incidents are documented and taken into consideration when reassessing our safety management system.

In 2022, 23 incidents were reported, an increase of ~~23~~ 28% in relation to 2021. From those, 15 were deemed as significant, which is an increase of 6.8% compared to 2021, where 14 significant incidents have been reported.

Mental stress of our Ukrainian crew due to the ongoing war in Ukraine, reporting of frequent minor incidents, such as Ballast Treatment technical issues, all contributed to the large increase noticed from 2021 report.

0.44

PSC deficiency ratio in 2022 (2021: 0.20)

0 zero

PSC Detentions in 2022

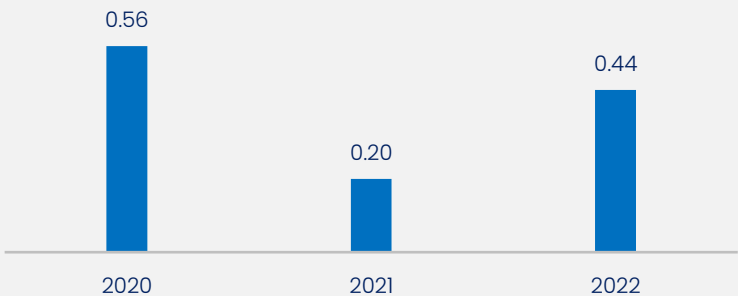
↑ 40.0%

On board attendances Increase in 2022

1.92

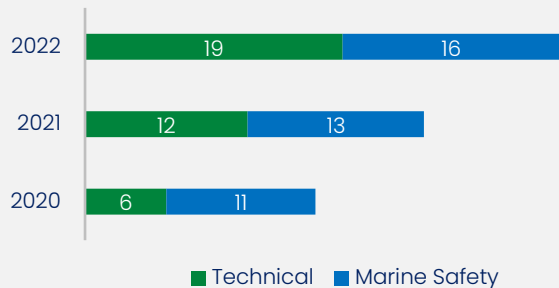
Incidents per ship in 2022 (2021: 1.50)

Port State Control Deficiency Ratio

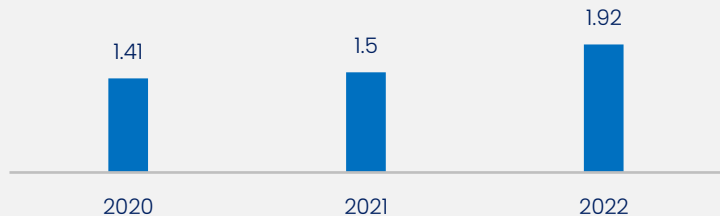


*PSC Deficiency ratio is derived by dividing total deficiencies with the total PSC inspections for the whole fleet each year.

On Board Inspections



Incidents per ship



4. SOCIAL

Our Crew



We maintain a unique mix of experienced and skilled seafarers

Our pool of seafarers:

- We have a pool of about 492 seafarers out of which around 228 are on board our vessels at any given time.
- Approximately 73% of our seafarers are manned by our exclusive Ukrainian manning agent, LEMISSOLER Ukraine SC, which supply our vessels with high-skilled crew. The remaining are sourced by other third-party manning agents.
- The agency is dedicated to recruiting, selecting, training and developing seafarers, and fostering positive crew relations.

Crew demographics:

Some of the key characteristics of our seafarer pool are the following:

- We employ seafarers from eleven (11) different countries.
- Most of our seafarers are from the Ukraine (73%).
- The average age of our seafarers is 38.7 years old, which is increased by 0.6 years compared to 2021.

↑ 0.6 years

Increase in average crew age in 2022

38.7 years old

Average age of our crew in 2022

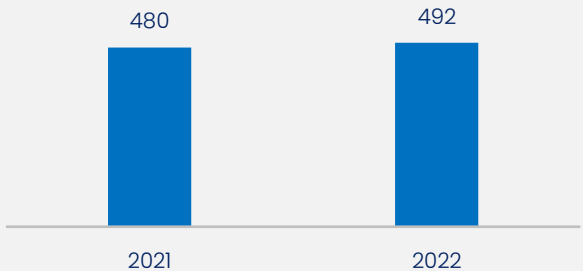
492

Pool of seafarers

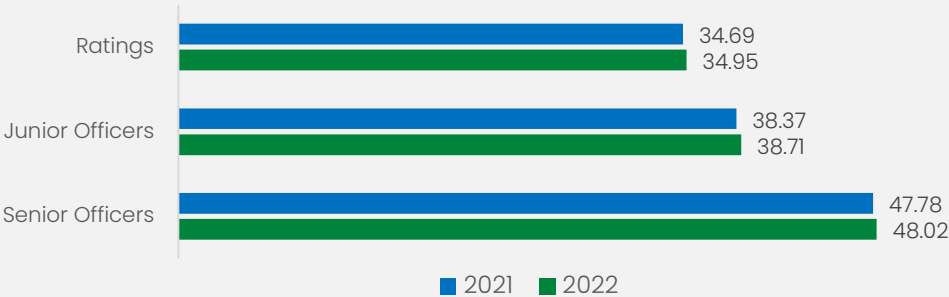
228

Seafarers on board

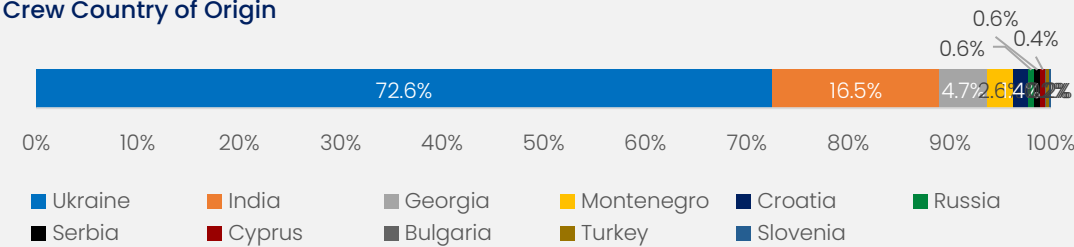
Number of seafarers in our available seafarers pool



Crew Average Age



Crew Country of Origin



Seafarers' well-being is one of the Company's top priorities

Health and safety of our people is of key importance and essential for the efficient operation of our activities. In 2022 we:

- Our total accidents increased 42.9% compared to 2021, of which 5 Lost Workday Cases (LWC), and 5 cases of lesser severity including first aid, restricted work and medical treatment cases.
- We believe a major factor is the ongoing war in Ukraine and COVID19 restrictions still in place, together contributing to a heavy mental toll for most of our crew. The physical and mental health of our people is of utmost importance to us. A psychological support line and medical consultancy are available for all our crew members in English and Ukrainian.
- During the humanitarian crisis that occurred in 2022, due to the war in Ukraine, we took immediate measures to actively help our crew. Specifically, a direct communication line -via emails and phone calls- was initiated between the Ukrainian seafarers and their families. In addition, we supported 60 evacuated people from the war zone and their repatriation as refugees to other countries.
- During 2022 we had zero (0) permanent disability cases and zero (0) fatalities.

Seafarers' remuneration is essential to the welfare of our crew:

- We remunerate and provide benefits to our crew fairly, based on the competency requirements of each position.
- In 2022, we paid our seafarers more than \$9.9 million in wages, remittances, bonuses, social security payments and cash advances.
- The average salary of our crew is approximately 21.5 times higher than the local GDP per capita (considering Ukraine where most of our crew is coming from).

5 five

Lost workday cases in 2022

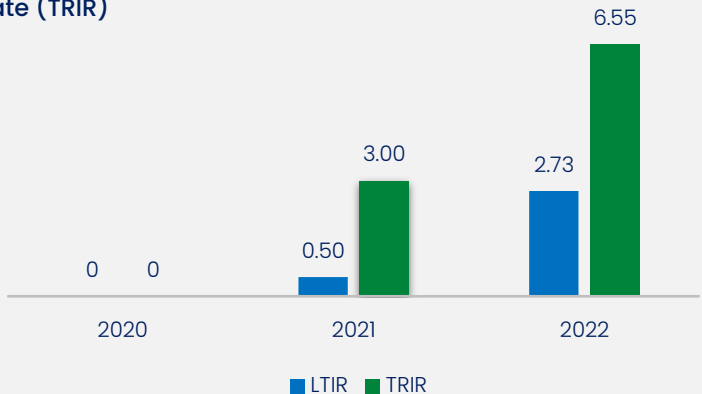
0 zero

Permanent disability cases in 2022

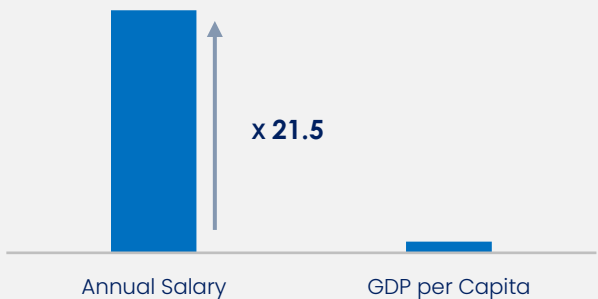
21.5 times

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

Lost Time Incident Rate (LTIR) and Total Recordable Incident Rate (TRIR)



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



> \$9.9mil.

In crew salaries and bonuses in 2022

We attract and retain the right talents with career development opportunities

Retention and Career Development

We are passionate about our people and do what we can to provide a safe, supportive, enjoyable and fulfilling working environment:

- We provide long-term career development prospects to our crew. We have in place internal promotion programs through which position demands are covered internally by our crew members. In 2022 promotions decreased by 15.4% compared to 2021 due to the war in Ukraine (e.g., joined army, could not leave Ukraine).
- We managed, despite the war in Ukraine, to maintain high retention rates across all crew rankings, with an average * of 90.5%, approximately at the same level in comparison with 2021 (when the average retention rate was ~ 91.0%).

Crew Familiarization and Training

We appreciate the significance of investing in the development of the skills of our people and we maintain an ongoing development program:

- Prior to embarkation seafarers acquire detailed familiarization through in-house training sessions.
- Our seafarers periodically participate in seminars and forums, where a wide range of issues are presented and discussed.
- On board training sessions are organized through the collaboration of our Technical Department and Marine Safety Department (MSD).
- We continuously develop online training courses via KeelX Education that promote safety, efficient operations, claims mitigation, and career advancement
- The amount spent on trainings decreased by 36.5% in 2022 compared to 2021 due to the war in Ukraine.

90.5%

*Average crew retention rate in 2022

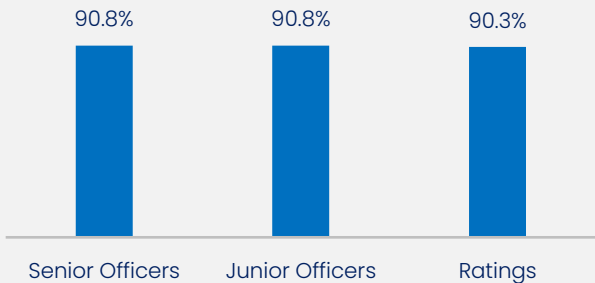
↓ 15.4%

Crew promotions' decrease in 2022

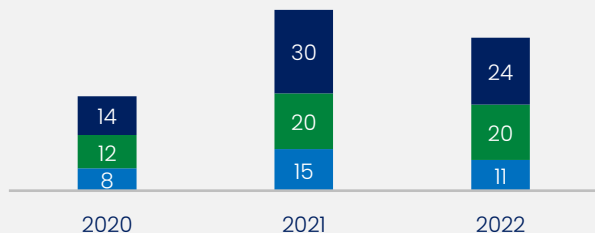
↓ 36.5%

Crew training spending reduction in 2022

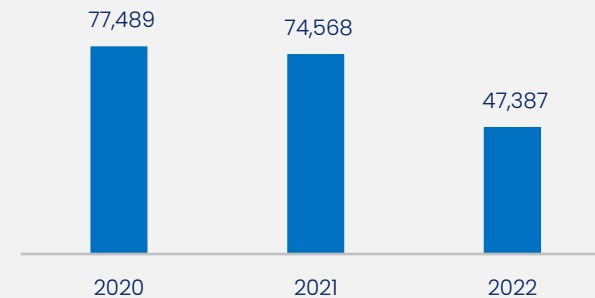
2022 Crew Retention Rates



Crew Promotions



Amount Spend on Crew Training (US \$)



* The average crew retention rate has been calculated based on retention rate for the entire pool of seafarers (including 27 ranks). The unavoidable and beneficial terminations have been excluded.

4. SOCIAL

Our Onshore Employees



Driven professionals with different backgrounds and shared goals

Our on-shore employees are key to all our endeavors. They keep our vessels and our business sailing ahead. Because of their dedication, responsiveness, accountability, professionalism, and reliability, we have been able to meet our business objectives and achieve client satisfaction.

As a global company, one of our strategic advantages is the diversity of our employees. We are proud of our diversity, and we seek to provide an inclusive environment for all our employees.

We strive to offer all employees a workplace in where every great idea can be heard, and everybody belongs. More specifically:

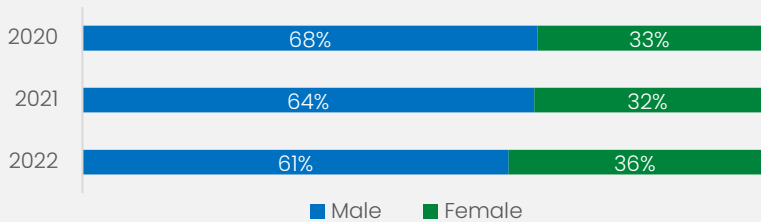
- The total headcount for 2022 is 66 on-shore employees under full-time contracts, an 3.1% increase in relation to 2021.
- Our on-shore team comes from a diverse cultural, age, educational and professional background.
- We maintain a 5.5 employee / vessel ratio to better support our vertically integrated Business Units from ashore.
- We promote equal opportunities between men and women employees – Around 39.4% of our employees are women and 18.5% of our management and senior management positions are held by women.
- We offer equal career advancement opportunities, tangible benefits and bonus schemes that motivate and reward high performance.
- The Ukraine-Russia war and COVID-19 pandemic did not lead to any LEMISSOLER employees becoming redundant.

↑ 3.1%
Shore employees' increase in 2022

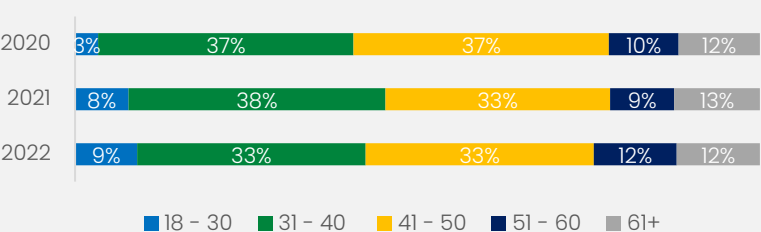
18.5%
Women in management and senior management positions

0 zero
Redundancies in 2022

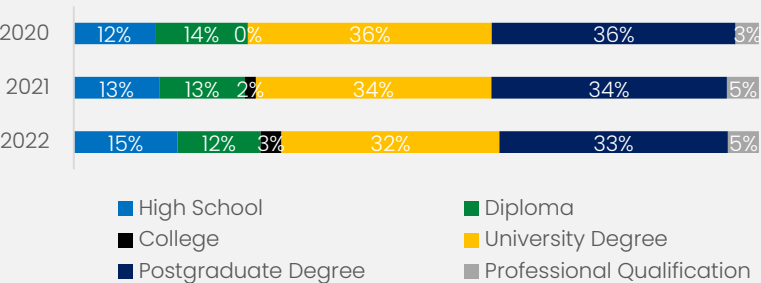
On Shore Employee Gender Composition



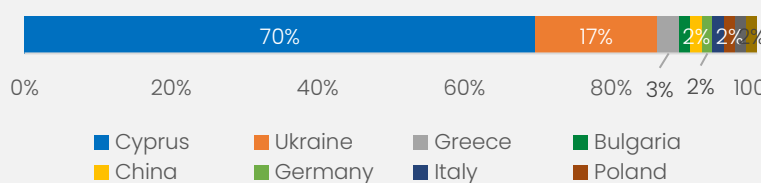
On Shore Employee Age Composition



On Shore Employee Educational Background



On Shore Employee Country of Origin



We are committed to retaining and on advancing the career of our on-shore employees

Retaining and attracting top talent

LEMISSOLER continues to ensure that employee competencies support our long-term strategy. We count on them, and they count on us.

As part of this, LEMISSOLER increasingly focuses on providing employees with the opportunity for continuous development in their work. All employees are appraised for their annual performance by their managers and improvement objectives are set. The annual evaluations start as a self-assessment process and ultimately are linked to the compensation and benefits of each employee.

The work environment, career prospects and benefits we offer to our employees result in high employee satisfaction, which translates into high retention rates – 98.4% in 2022.

Opportunities while studying

We maintain a strong focus on our strategic partnerships with relevant local academic institutions, and over the years we have been consistently offering internship opportunities to students, many of which have resulted in permanent hires. Throughout the years, we have been consistently increasing our intern intakes and aim to maintain a steady intern hiring rate of 1 intern per 20 headquarter employees.

98.4%

Retention rate of shore employees in 2022

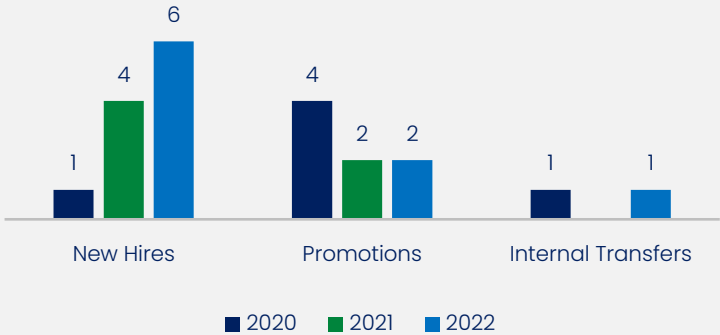
100%

Of our shore employees receive annual performance feedback

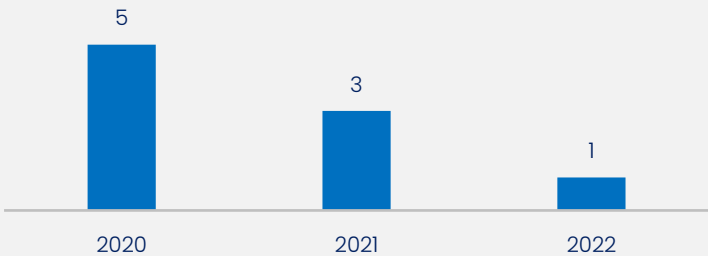
1

Internship in 2022

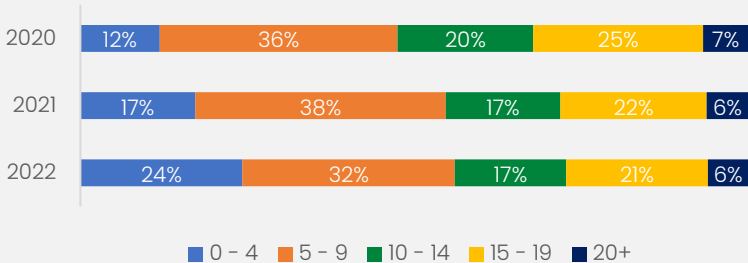
New Hires, Promotions and Internal Job Transfers



Internships



On Shore Employee Years at Lemissoler



Strengthening our community with tangible contributions



Pan-Cypriot Interdepartmental Competition at MIEEK.

Money donation for the winners of the MIEEK competition with the topic: 'Optimization of supplier evaluation and selection criteria.'



Ukraine – Humanitarian Aid from Cyprus to Ukraine

Financial Contribution to the affected Ukraine citizens of the war



"Christmas Packages of Love" of Limassol's Chamber of Commerce and Industry

Collection of basic goods for the "Christmas Packages of Love" for the 'Social Grocery Store' a voluntary social program which is a part of Limassol municipality.



Radiomathon

Financial Contribution to the NGO for the welfare of their beneficiaries, mostly children with special needs.



Charity to "Limassol Child Welfare Association"

Donation for baby items, milk, baby food and equipment as well as financial sponsorships.



Migrant Information Center – Pournara Asylum Service

Donation in goods for the refugees at Pournara Asylum Service in Kokkinotrimithia, Nicosia. The goods were delivered at the miHUB Migrant Information Center in Limassol in December 2021.



Breast Cancer Guide

Money donation to support the publication of the Breast Cancer guide book.



TEPAK Postgraduate Students Award

Financial prize award to three top performing TEPAK postgraduate students of the Department of Commerce, Finance and Shipping.



Charity to "Popular Social Solidarity Network"

Financial support to "Popular Social Solidarity Network" that operates all year-round providing support to families who have great difficulty in meeting their elementary needs, mainly through the provision of food packages.



Voice of Autism Charity Foundation

Financial Contribution to the foundation that focuses on supporting young adults with disabilities.



GOVERNANCE



Management oversight and risk management

Board Diversity and Experience

The foundations for structuring our strong corporate code are set by the Board of Directors through the Senior Management. Both are involved in the daily operation of the company and committed to the implementation of the code and policies from all company staff.

The Board oversees and assesses all risks related to the business.

	Philippos Philis CEO/Chairman	Petros Monogios COO	Stelios Adoni CFO	Aristos Philis Strategic Development
EXPERIENCE				
Resources	●	●	●	●
Executive directorship	●	●	●	●
C-suite	●	●	●	●
Global transactions	●	●	●	●
TECHNICAL SKILLS				
Leadership & Strategy	●			●
Financial Expertise	●		●	●
Ethics & Governance	●	●	●	●
Health & Safety		●		
Investor Relations	●		●	●
Communications & Reputation	●	●	●	●
Risk Management	●	●	●	●

RISK MANAGEMENT

Within the scope of our Risk Management procedures, we continuously monitor, assess and evaluate the risks that can affect our business operations and adopt all the necessary measures for the continuity of our business activities:

KEY RISK AREAS:

- 1 Health and safety of our people on board and ashore due to the COVID-19 pandemic.
- 2 General dry bulk shipping market conditions (Supply & Demand).
- 3 Bunker prices and availability.
- 4 Changes in international and regional rules and regulations.
- 5 General domestic and international political conditions.
- 6 The availability of financing and refinancing.
- 7 Counterparty risk.
- 8 Market disruptive events (i.e., weather, bans, protectionism, sanctions, natural disasters, health crisis etc.).
- 9 Cyber security.
- 10 Interest rate fluctuations.

Ethics and integrity are at the heart of our business

OUR CODE OF BUSINESS

All our onshore and offshore employees, as well as all employees of our subsidiaries are informed of the Code of Business.

Our Code of Business underlies our business actions and must be followed by all employees. The Senior Management handles the day-to-day operations of the company and is also responsible for the application of the Code and policies by all LEMISSOLER staff.

Any non-compliance with the Code's principles is considered a serious infringement and may lead to termination of contracts or even legal sanctions.

ANTI-CORRUPTION

LEMISSOLER is committed to act in an honest, ethical and professional manner in all its business dealings and relationships. It is our responsibility to implement and enforce effective systems to counter bribery and corruption in all the places we currently operate in or propose to develop within. We commit to upholding all anticorruption and anti-bribery laws enforced by various jurisdictions. We abide by the Anti-Corruption Legislation, comprised of the UK Bribery Act 2010 (Bribery Act) and the United States Foreign Corrupt Practices Act of 1977 (FCPA).

REPORTING VIOLATIONS OF THE CODE

Our personnel should take all necessary steps to prohibit any form of misconduct by other employees or other Company personnel that violate the Code. Employees shall report any known or suspected misconduct to the Chairman of the Audit Committee or the Company's General Counsel. At Star Bulk, we encourage all our employees and third parties, to raise any issues regarding among others suspicious accounting matters, audit practices, internal controls, conflicts of interest, or fraud within the Company.

Employees have access to raise workplace and operational concerns directly with their manager or with the HR Department. If the matter cannot be managed effectively through these channels, employees may use LEMISSOLER's whistleblower scheme to report anonymously via KeelX Talk. The reports are directed to the Chairman and Head of Human Resources as well as the Head of Legal. In 2021, no reports were received.

0 zero

Violations of our Ethical principles & Anti Corruption Policy

0 zero

Whistleblowing incidents

0 zero

Incidents of corrupt practices

0 zero

Of harassment or bullying

OUR WHISTLEBLOWING POLICY

Our staff is required to comply with all applicable laws and regulations, as well as our internal policies and procedures. We have established a whistleblowing mechanism via KeelX Talk, that allows our employees to report any violation, concealment, crime committed or likely to be committed, non-compliance incidents, actions damaging the environment, illegitimacy practices, malpractice or unethical conduct incidents, misrepresentation of material facts, breaches of legal obligation or regulatory requirements, and finally, miscarriages of justice. All complaints can be filed anonymously at any time.

PREVENTING HARASSMENT AND BULLYING

Incidences of harassment, discrimination, hostile, insulting or degrading behavior are contrary to our values and are clear violation of our Ethics Policy. Our policy on harassment and bullying stipulates that any employee or subcontractor that experiences or witnesses such an incident (both onboard and ashore), regardless of whether it takes place within or outside the workplace (including social functions, team away days, work trips, etc.), should be reported immediately.

We operate ethically and transparently

TRANSPARENCY INTERNATIONAL CORRUPTION PERCEPTION INDEX

Our vessels operate globally and thus, geography plays a highly significant role to our exposure to corruption risks.

We closely monitor the degree of corruption in the countries and territories we operate in.

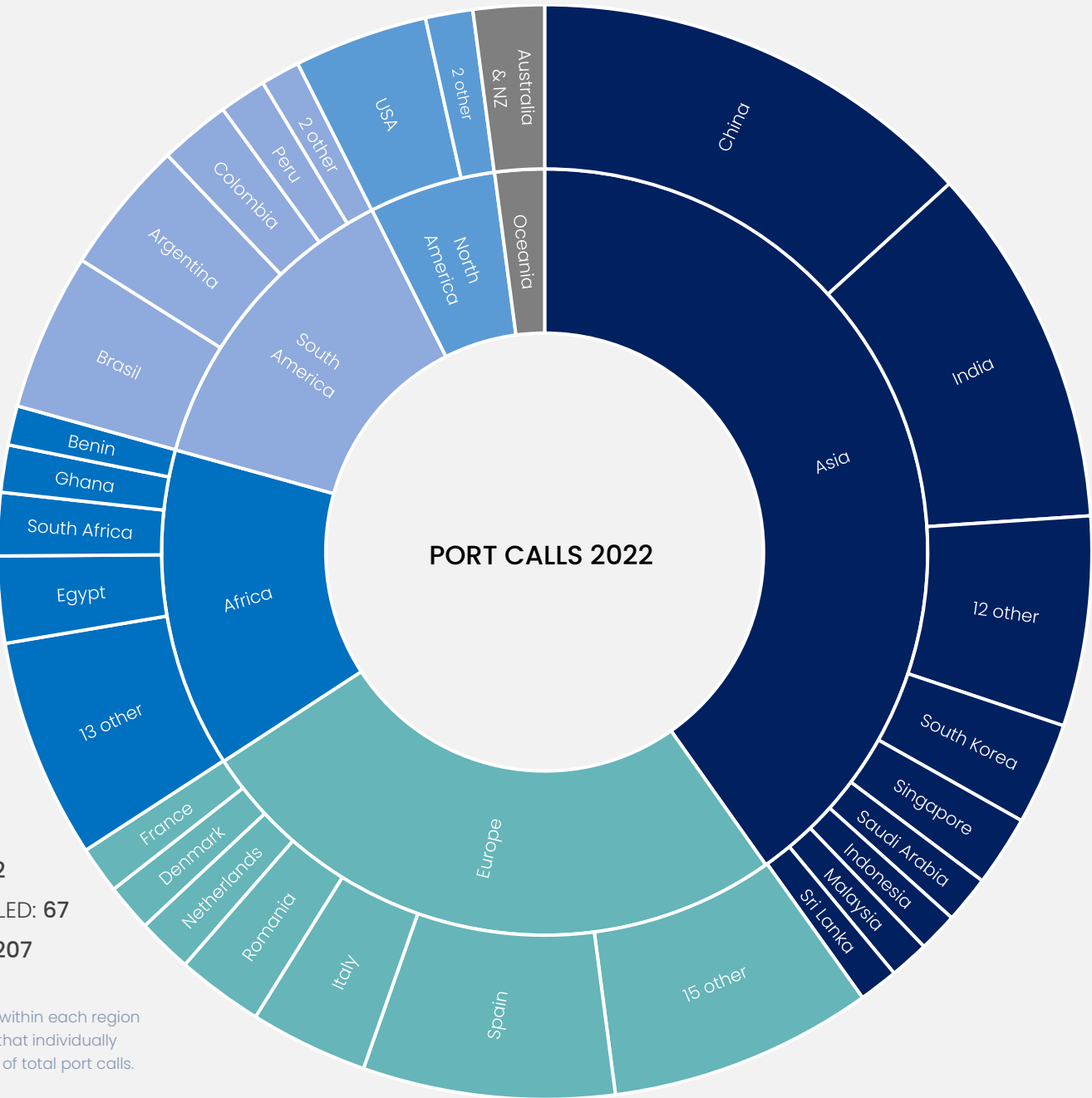
In 2022, the calls at ports in countries that have the 20 lowest rankings in the Transparency International’s Corruption Perception Index (CPI) for our entire fleet were zero.

0 zero

Port calls in countries with the 20 lowest rankings in Transparency International’s Corruption Perception Index

PORT CALLS: 432
COUNTRIES CALLED: 67
UNIQUE PORTS: 207

*The "Other" category within each region includes all countries that individually represent less than 1% of total port calls.



We use high-end digital technology and advanced cyber security systems

Protection

The International Maritime Organization (IMO) adopted a resolution on Maritime Cyber Risk Management, that requires ship owners and managers to assess cyber risk and implement relevant measures across all functions of their safety management system, until the first Document of Compliance, effective as of 1st January 2021.

We implement an appropriate scheme of cyber security governance and controls, to protect our information assets. Our method is to ensure that we apply the right architecture, technology and policies to inhibit, identify, prepare for and recover from any cyber-attacks promptly.

Recovery

We have a formal Business Continuity Plan (BCP) in place that sets out fallback arrangements in the event of a communications or IT systems blackout. Company-wide BCP drills are carried out regularly to ensure that our teams are familiar with the relevant procedures and to seek improvements in our contingency plans and processes. We select reputable IT service providers and regularly evaluate our cloud-service providers' internal controls and independent assurance reports.

0_{zero}

Cyber Security Incidents
in 2022

>\$103k

Invested in Cyber Security
in 2022

>\$450k

Invested in Information and
Communication Technology
in 2022

Our Cybersecurity Program

We implement a robust scheme of cyber security governance and controls to protect our information assets. We apply the right architecture, technology and policies to inhibit, identify, prepare for and recover from any cyber attacks promptly.

Our **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 End Point Detection and Response (EDR) solution itself.
- Compatibility with existing or future Security Information and Event.
- Management (SIEM) solution.

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

Our **Hardware upgrade** on board include the installation of a server onboard to comply with Cyber Security regulation (user access management, security policies, Control Changes etc.).

Appendix A – ESG Performance Data





	2020	2021	2022
ENVIRONMENTAL PERFORMANCE			
Energy efficiency			
AER (gr CO ₂ / DWT – nautical mile)	4.66	4.81	4.84
EEOI (gr CO ₂ /ton – nautical mile)	7.68	7.89	7.72
Energy consumption			
Heavy fuel oils (1,000 tons)	49.23	55.83	48.23
Marine gas oils (1,000 tons)	4.21	4.95	3.30
Energy consumption (total, GJ)	2,289	2,604	2,205
Transport work (million ton miles)			
Owned and operated vessels	21,724	24,041	20,817
CO₂ emissions (tons)			
Scope 1 GHG emissions (CO ₂ e)	166,803	189,734	160,757
Scope 2 GHG emissions (CO ₂ e)		59	53
Other emissions (tons)			
SOx emissions	418	457	396
NOx emissions	3,975	4,518	3,848
Spills			
Spills > 1 barrel	0	0	0





	2020	2021	2022
SOCIAL PERFORMANCE			
Employees (on shore)			
Employees (average FTE)	59	64	66
Nationalities represented (of total workforce)	9	9	10
Women in managerial positions (%)	21	19	19
Gender split			
– gender with the lowest representation ♀ (%)	32	36	39
Safety (at sea)			
Fatalities	0	1	0
Lost time injury ratio (million working hours)	0.00	0.50	2.73
Port state control deficiency ratio	0.56	0.20	0.44
Port state control detentions	0	0	0
GOVERNANCE PERFORMANCE			
Business ethics			
Port calls in 20 lowest ranking countries in Corruption Perception Index	0	0	0
Monetary losses as a result of legal proceedings			

Appendix B – Our stakeholders

At LEMISSOLER we appreciate the role and significance of our stakeholders when it comes to defining our sustainability strategy.

Their insight enriches our understanding of their needs which assists our decision-making process and ensures that our sustainability actions and reporting is relevant and responsive to their expectations and concerns.

Stakeholder Group	Stakeholder Type
 Customers	<ul style="list-style-type: none"> • Vessel Owners • Charterers • Cargo Owners
 Seafarers & Office employees	<ul style="list-style-type: none"> • Crew on board • Office Employees • Manning Agents
 Shareholders / Investors	<ul style="list-style-type: none"> • Private Educated Investors • Institutional investors • Funds / Private Equities
 Financial Institutions	<ul style="list-style-type: none"> • Banks • Leasing Financial Institutions

Stakeholder Group	Stakeholder Type
 Authorities	<ul style="list-style-type: none"> • IMO • EU • Governments • Flag Administrations • Port Authorities
 Suppliers	<ul style="list-style-type: none"> • Manufacturers • Ship-Yards • General Suppliers • Port Agents • Bunker Suppliers
 Community & Society	<ul style="list-style-type: none"> • Academic Institutions • Local Communities • NGO's • Media
 Industry Organizations	<ul style="list-style-type: none"> • Classification Societies • P&I Clubs • Insurers/Underwriters • Vetting Companies • Industry Associations

For more details regarding the engagement process followed for each stakeholder group, please refer to "Appendix A – Stakeholder's engagement" on page 47

Appendix B – Stakeholders' engagement

Stakeholder Group	Basis for engagement	Engagement methods	Frequency	Key areas of interest	Our Response
Clients <ul style="list-style-type: none"> • Vessel Owners • Charterers • Cargo Owners 	Customers, including charterers, cargo owners etc. are vital to the organization's success and have a direct interest in our market impact and sustainability performance.	<ul style="list-style-type: none"> • Charter Parties • Feedback 	<ul style="list-style-type: none"> • Strategic • Spot 	<ul style="list-style-type: none"> • Service quality • Business ethics • Financial performance • Vessel condition 	We constantly strive to increase our service quality in order to deliver sustainable and value adding services to all our clients. We provide and exchange a full set of voyage related data via KeelX.
Seafarers & Office Employees <ul style="list-style-type: none"> • Crew on board • Employees ashore • Manning agents 	Our people are critical to our business, strategy and decision making. We therefore aim to maintain a safe and rewarding work environment to achieve our goals.	<ul style="list-style-type: none"> • Performance evaluation • Open communication channels • Newsletters • Social Media Platforms 	<ul style="list-style-type: none"> • Annually • Daily 	<ul style="list-style-type: none"> • Financial performance • Work conditions • Health and safety • Remuneration and benefits • Career development • Promotional Opportunities 	We put health and safety first and aim for an open and inclusive work environment both on board and ashore. We fairly reward and offer career advancement opportunities to our people.
Shareholders/Investors <ul style="list-style-type: none"> • Private Educated Investors • Institutional investors • Funds/Private Equities 	Shareholders are essential to the company's operations and growth and have a direct interest in the company's performance.	<ul style="list-style-type: none"> • BoD/AGM • Quarterly Financial, Market and Technical Reporting • Bi-Annual Risk Reporting • Monthly Operational Reporting • Investor briefings • Investor Roadshows • Web site/Press releases 	<ul style="list-style-type: none"> • Annually • Quarterly • Extraordinary 	<ul style="list-style-type: none"> • Financial performance • Business strategy • Governance • Regulatory compliance • Environmental compliance 	We regularly inform our shareholders on the company's development and strategy. We conduct our business and take actions with the ultimate goal of increasing the Shareholders' value.
Financial institutions <ul style="list-style-type: none"> • Banks • Leasing financial institutions 	Financial institutions require information on the company's performance with a rising interest in sustainability.	<ul style="list-style-type: none"> • Quarterly/Annual financial reporting • Liquidity Reports • Financial Covenants Reports 	<ul style="list-style-type: none"> • Annually • Quarterly 	<ul style="list-style-type: none"> • Financial performance • Business strategy • Governance • Reporting framework 	We provide transparent information about the performance, strategy and outlook of the company.

Appendix B – Stakeholders' engagement (cont'd)

Stakeholder Group	Basis for engagement	Engagement methods	Frequency	Key areas of interest	Our Response
Authorities <ul style="list-style-type: none"> • IMO • EU • Governments • Flag Administrations • Port Authorities 	Active engagement with state and regulatory authorities to ensure compliance with all applicable standards and regulations.	<ul style="list-style-type: none"> • External Audits • DCS • MRV 	<ul style="list-style-type: none"> • Periodical 	<ul style="list-style-type: none"> • Regulatory compliance • Health and safety • Environmental performance • Statutory 	We follow and comply with State and regulatory authorities' rules and regulations. We follow and implement all instructions and aim for zero non-conformities.
Suppliers <ul style="list-style-type: none"> • Manufacturers • Ship-Yards • General Suppliers • Port Agents • Bunker Suppliers 	We aim to understand our suppliers' concerns and develop channels of mutual support that enhance the quality of our supply chain and focus to develop long term collaboration and exploit opportunities.	<ul style="list-style-type: none"> • Supplier evaluations • Agreements • Joint development contracts 	<ul style="list-style-type: none"> • On going 	<ul style="list-style-type: none"> • Financial performance • Business ethics • Evaluation criteria • Environmental performance 	We evaluate the performance of our suppliers and integrate sustainability related issues within the evaluation process.
Community & society <ul style="list-style-type: none"> • Academic Institutions • Local Communities • NGO's • Media 	We aim to have a positive impact on society by creating strong partnerships within the communities in which we operate.	<ul style="list-style-type: none"> • Financing R&D programs • Conferences • Community engagement initiatives 	<ul style="list-style-type: none"> • On going 	<ul style="list-style-type: none"> • Support of People • Community support • Responsible business practices • Social Responsibility 	We support the local society with community-focused initiatives and take their needs into consideration to maximize shared value.
Industry organizations <ul style="list-style-type: none"> • Classification Societies • P&I Clubs • Insurers/Underwriters • Vetting Companies • Industry Associations 	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"> • Agreements • Partnerships • Formal meetings • Memberships 	<ul style="list-style-type: none"> • Strategic 	<ul style="list-style-type: none"> • Prudence of conducting our business • Regulatory compliance • Sanctions compliance • Environmental performance • Health and safety 	We participate and engage with all industry organizations regarding the various business issues that may arise.

Appendix C – SASB Marine Transportation Material Issues

Category	Disclosure topic	Code	Page Reference
GHG emissions	Gross global Scope 1 emissions	TR-MT-110a.1	18
	Description 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	-
	(1) Total energy consumed, (2) percentage from heavy fuel oil, (3) percentage from renewables	TR-MT-110a.3	18
	Energy Efficiency Design Index (EEDI) for new ships	TR-MT-110a.4	-
Air Quality	Air emissions for the following pollutants: NOx, SOx, and particulate matter (PM)	TR-MT-120a.1	19
Ecological Impacts	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	20
	(1) Number and (2) aggregate volume of spills and releases to the environment	TR-MT-160a.3	21
Employee Health and Safety	Lost time injury rate (LTIR)	TR-MT-320a.1	30
Business ethics	Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	TR-MT-510a.1	39
	Amount of legal and regulatory fines and settlements associated with bribery or corruption	TR-MT-510a.2	38
Accident & safety management	Number of serious marine incidents	TR-MT-540a.1	41
	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	27

Appendix D – GRI STANDARDS CONTENT INDEX

GRI Indicator	Description	Section References and Comments	Page
GRI 2 General Disclosures 2021			
Organizational Profile			
2-1	Organizational details	About Lemissoler	5
2-6	Activities, value chain and other business relationships	About Lemissoler	5
2-1	Organizational details	Limassol, Cyprus	5
2-1	Organizational details	About Lemissoler	5
2-1	Organizational details	About Lemissoler	5
2-6	Activities, value chain and other business relationships	About Lemissoler	5-9
2-6	Activities, value chain and other business relationships	About Lemissoler	5
2-7	Employees	About Lemissoler	5, 26-34
2-6	Activities, value chain and other business relationships	About Lemissoler	5-9
2-6	Activities, value chain and other business relationships	No Significant changes to the organization's size, structure, ownership, or occurred in 2021.	
2-23	Policy commitments	Environment	16-25
2-28	Membership of associations	Environment	11
Strategy			
2-22	Statement on sustainable development strategy	Message from our CEO/Chairman	3
Ethics and Integrity			
2-23	Policy commitments	Governance	38
2-26	Mechanisms for seeking advice and raising concerns	Governance	38

Appendix D – GRI STANDARDS CONTENT INDEX (cont'd)

GRI Indicator	Description	Section References and Comments	Page
GRI 2 General Disclosures 2021			
Governance			
2-9	Governance structure and composition	Governance	37
Stakeholder Engagement			
2-29	Approach to stakeholder engagement	Appendix B	42-44
2-30	Collective bargaining agreements	Our employees are not covered by collective bargaining agreements.	
2-29	Approach to stakeholder engagement	Appendix B	42-44
2-29	Approach to stakeholder engagement	ESG at Lemissoler	13-15 42-44
Reporting practice			
2-2	Entities included in the organization's sustainability reporting	About Lemissoler	5
3-1	Process to determine material topics	ESG at Lemissoler, Appendix B	13-15 42-44
3-2	List of material topics	ESG at Lemissoler, Appendix B	13-15 42-44
2-4	Restatements of information	Environment	17-19
3-2	List of material topics	Environment	13
2-3	Reporting period, frequency and contact point	About this Report	2
2-3	Reporting period, frequency and contact point	About this Report	2
2-3	Reporting period, frequency and contact point	About this Report	2
2-5	External assurance	Independent Assurance Statement	50

Appendix D – GRI STANDARDS CONTENT INDEX (cont'd)

GRI Indicator	Description	Section References and Comments	Page
GRI 3 Material Topics 2021			
3-3	Management of material topics	ESG at Lemissoler, Appendix B	13-15 42-44
3-3	Management of material topics	ESG at Lemissoler, Appendix B	13-15 42-44
3-3	Management of material topics	ESG at Lemissoler, Appendix B	13-15 42-44
GRI 200 Economic			
GRI 201 Economic Performance			
201-1	Direct economic value generated and distributed	About Lemissoler	5
GRI 205 Anti-corruption			
205-3	Confirmed incidents of corruption and actions taken	Governance	38
GRI 300 Economic			
GRI 302 Energy			
302-1	Energy consumption within the organisation	Environment	18
GRI 305 Emissions			
305-1	Direct (Scope 1) GHG emissions	Environment	18-19
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Environment	19
GRI 306 Effluents and waste			
306-3	Significant spills	Environment	21
GRI 307 Environment compliance			
307-1	"Non-compliance with environmental laws and regulations	ESG at Lemissoler, Environment	21-25

Appendix D – GRI STANDARDS CONTENT INDEX (cont'd)

GRI Indicator	Description	Section References and Comments	Page
GRI 400 Social			
GRI 401 Employment			
401-1	New employee hires and employee turnover	Social	34
GRI 403 Occupational health and safety			
403-1	Occupational health and safety management system	Social	27
403-2	Hazard identification, risk assessment, and incident investigation	Social	27
403-3	Occupational health services	Social	27
403-4	Worker participation, consultation, and communication on occupational health and safety	Social	27
403-5	Worker training on occupational health and safety	Social	27
403-6	Promotion of worker health	Social	27
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Social	27
403-8	Work-related injuries	Social	27
GRI 404 Training and education			
404-3	Percentage of employees receiving regular performance and career development reviews	Social	31, 34
GRI 405 Diversity and equal opportunities			
405-1	Diversity of governance bodies and employees	Social	29-35
GRI 406 Nondiscrimination			
406-1	Incidents of discrimination and corrective actions taken	We had no incidents of discrimination in 2022	

Independent Assurance Statement (currently under audit)

Independent limited assurance report of American Bureau of Shipping to LEMISSOLER NAVIGATION CO. LTD

To the stakeholders of Lemissoler Navigation

American Bureau of Shipping was engaged by Lemissoler Navigation Co. Ltd to report on the ESG data & metrics ("the Metrics") of Lemissoler Navigation Co. Ltd 's Sustainability Report ("the Report") for the year ended 31 December 2022 in the form of a limited assurance conclusion about proper preparation of the metrics, in all material respects, in accordance with Lemissoler Navigation Co. Ltd's own methodology for sustainability report development ("the Methodology").

This independent limited assurance report is made solely to Lemissoler Navigation Co. Ltd in accordance with the terms of our engagement as mentioned in the signed Agreement (Document number: QUO-16155-PIYID, signed on 15th October 2022). Our work has been undertaken so that we might provide limited assurance to Lemissoler Navigation Co. Ltd. on those matters that we have been engaged to consider in this report only and for no other purpose. To the fullest extent permitted by law, we do not accept or assume any responsibility to anyone other than Lemissoler Navigation Co. Ltd for our work, for this independent limited assurance report, or for the conclusions we have reached.

Responsibilities of the directors

The directors of Lemissoler Navigation Co. Ltd are responsible for the proper preparation of the Report, and the Metrics, information and statements contained therein, in accordance with the Methodology.

It is the directors' responsibility to develop, operate and maintain internal systems and processes relevant to the proper preparation of a Report that is free from material misstatement, whether due to fraud or error.

Responsibilities of American Bureau of Shipping

Our responsibility is to independently express a limited assurance conclusion to Lemissoler Navigation Co. Ltd, based on the procedures performed and evidence obtained, as to the preparation of the Report, in all material respects, in accordance with the Methodology and reference to the standards outlined in the Scope of work. We conducted our work in accordance with International Standard on Assurance Engagements 3000: Assurance Engagements other than Audits or Reviews of Historical Financial Information ("Standard"), issued by the International Auditing and Assurance Standards Board. The Standard requires that we obtain sufficient and appropriate evidence related to the Metrics that is free of material misstatement on which to base our conclusion.

Scope of work

A limited assurance engagement involves planning and performing procedures to obtain sufficient appropriate evidence to obtain a meaningful level of assurance over the Metrics as a basis for our limited assurance conclusion. The procedures selected depend on our judgment, on our understanding of the Report and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise.

The procedures performed included:

- Reviewing the Lemissoler Navigation Co. Ltd.'s Sustainability Report for the year ending on 31st December 2022 and identifying key metrics for review.
- Investigating, observing, inspecting, and reporting on the processes and documents, and agreeing or reconciling with the underlying records to check errors or omissions in data analysis, consistency, and reasonableness of reporting.
- Data collection, including limited substantive testing, on a selective basis to verify the Metrics stated in the report. Recalculations were done as required to verify the data.

The procedures performed in a limited assurance engagement vary in nature and timing from and are not as extensive as 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.

Inherent limitations

In providing our limited assurance conclusion, we relied on the information and documents provided to us by Lemissoler Navigation Co. Ltd. To the best of our knowledge, there are no circumstances which would render such information or documents unreliable. Because of such reliance, there may be errors or irregularities which may not be detected.

Limited assurance engagements are based on selective testing of the information and data being examined, and there is possibility that fraud, error, discrepancy or non – compliance may occur and not be detected. An assurance engagement is not designed to detect all instances of non – adherence to the reporting standards GRI Sustainability Reporting Standards (GRI Standards) and Sustainability Accounting Standards Board (SASB), as the assurance engagement is not performed continuously throughout the year and the procedures performed are on a test basis.

The conclusion expressed on in this report has to be read in conjunction with the inherent limitations stated as above.

Conclusion

Based on the procedures performed and evidence obtained, and subject to the key assumptions and inherent limitations set out above, nothing has come to our attention that causes us to believe that the Metrics presented in Lemissoler Navigation Co. Ltd. Sustainability Report for the year ended 31 December 2022 is not prepared, in any material respects, in accordance with the Methodology.

American Bureau of Shipping

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Thank you and please feel free to send us your feedback

We value your feedback

We welcome your feedback on this Sustainability Report and our approach to sustainability. Scan this QR code for easy access to our [Stakeholder Feedback Form](#) feedback form:



Alternatively, you can direct your questions, comments or suggestions about this report, our sustainability program or our performance to our Sustainability Team at E-mail: corporate@lemissoler.com.

Contact us

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