

# NAVIGATING A SUSTAINABLE FUTURE TOGETHER

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Sustainability Report 2023



# NAVIGATING A SUSTAINABLE FUTURE TOGETHER

## THEME RATIONALE

Navigating a Sustainable Future Together, reflects our belief that building a better world is not just a goal but a journey we embark on collectively with stakeholders, employees and the communities we operate in. It harmoniously intertwines our 55-year legacy as a global maritime conglomerate with a visionary roadmap to foster a just energy transition and shape a sustainable world for the next generation.

In the next chapter of our journey, we aim to embrace and lead transformative changes that will propel us toward a more sustainable and responsible future. To us, success is not merely measured by cargo tonnage but by the profound impact on people, the environment and society at large.



Sustainability Report 2023  
or via <https://www.miscgroup.com/>

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## NAVIGATION ICONS

### Key Capitals

- F** Financial Capital
- I** Intellectual Capital
- SR** Social & Relationship Capital
- P** Physical Capital
- H** Human Capital
- N** Natural Capital

### Material Matters

- Health and Safety
- Human Rights
- Waste Management
- Values, Governance and Business Ethics
- Sustainable Supply Chain
- Diversity and Inclusion
- Climate Change
- Ocean Health
- Digitalisation
- Energy Management
- Security
- Cybersecurity
- Financial Performance
- Talent Development and Retention
- Community Investment

### SDGs



### Risks

- Increasing Climate-Related Regulations and Requirements
- Shift in Stakeholders' Preference Towards New Energy and Low-Carbon Solutions
- Technology Developments
- Geopolitical Instability
- Project Management
- Asset Availability, Utilisation and Marketability
- Governance and Integrity
- Health and Safety
- Cybersecurity
- Talent Development and Retention

### Stakeholders

- Government/Regulators
- Shareholders/Investors/Financial Services Providers
- Customers
- Employees
- Business Partners/Suppliers & Vendors
- Communities
- Industry Peers
- Academic Organisations
- Trade Associations/NGOs
- Media



# About This Report

Welcome to MISC Berhad’s (MISC or the Group) Sustainability Report 2023. This report provides details on the Group’s sustainability performance and forward-looking commitments, initiatives and strategies about matters that are deemed most material to the business and stakeholders according to our materiality analysis.

This Sustainability Report 2023 complements the disclosures in MISC’s Integrated Annual Report (IAR) 2023 and Climate-related Financial Disclosures Report 2023 and vice versa. While our IAR delivers a clear and concise story, the Sustainability Report supplements the IAR by providing more detailed information about the Company’s sustainability performance. The Climate-related Financial Disclosures Report provides further in-depth details about how we identify and manage our climate risks and opportunities.

### Reporting Scope, Boundary And Period

The information and data presented in this report cover the entire MISC Group’s business activities and operations including Gas Assets & Solutions, Petroleum & Product Shipping, Offshore Business, Marine & Heavy Engineering, Marine Services and Maritime Education & Training. It also covers the material business activities of our joint ventures (JVs) and associates.

The publication of this Sustainability Report occurs annually and covers information for the period of 1 January to 31 December 2023, as well as any material events that occurred after this date, up to the date of publication of this report.

Please refer to the Sustainability Reporting Standards & Disclosures section for a full list of disclosures on the Global Reporting Initiative (GRI) Standards and Sustainability Accounting Standards Board (SASB). The reporting approach and framework are also detailed in the Reporting Principles & Data Assumptions section of this report.

### Independent Assurance

Each of our vessels’ fuel consumption and relevant activity data have been verified by a third-party namely the American Bureau of Shipping (ABS). ABS has confirmed that all data collected and reported follows the methodology and processes set out in the Ship Energy Efficiency Management Plan (SEEMP) as required by Regulation 22A of Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL).

In 2023, MISC’s Group Internal Audit (GIA) also audited MISC’s implementation of sustainability initiatives, covering governance processes, materiality assessment and plan and implementation control

and reporting. The necessary controls were found to be in place to manage the risks to meet business objectives. Opportunities for improvement from the audit exercise have been rectified and incorporated into the relevant procedures.

Furthermore, MISC’s internal team has been constantly monitoring reporting processes and any changes or updates required are made promptly to maintain continuous veracity.

### Data Measurement Techniques And Assumptions

Our statements on future developments and past occurrences are based on information and assumptions available at the time of publication of this report. However, certain information in this sustainability report comes from third-party sources and operations outside of our control. Nevertheless, internal due diligence has been carried out to guarantee that the information gathered is accurate and published using a reliable methodology.

Please refer to the Reporting Principles & Data Assumptions section for our data accounting principles, measurement techniques and assumptions.

### Engaging With Stakeholders For A Greater Impact

Consulting with stakeholders throughout the preparation of this sustainability report has deepened our understanding of important issues in producing a holistic report. We have incorporated the perspectives of our internal stakeholders, which comprise all business segments, subsidiaries and key internal departments. Feedback from external stakeholders was also compiled during engagement sessions in the past year and considered during the preparation of this report.

### Responsibility Statement

MISC’s Board of Directors acknowledges its responsibility to ensure the integrity of this sustainability report. The Board, via the Board Sustainability and Risk Committee (BSRC) also resolves risk management and sustainability-related matters such as establishing a sustainability strategy, target setting, reviewing the adequacy of sustainability processes, effectively identifying, managing and reporting the Group’s material sustainability matters and monitoring and overseeing all sustainability performance and initiatives across the Group.

The Board will continue to ensure that the Group’s sustainability strategies, priorities and targets as well as performance against these targets are communicated to both internal and external stakeholders.

Approved by the Board of Directors on 26 February 2024 and signed on behalf the Board:

**DATUK ABU HURAIRA ABU YAZID**  
Chairman

**CAPTAIN RAJALINGAM SUBRAMANIAM**  
President/Group Chief Executive Officer

### Feedback

We are fully committed to listening to our stakeholders and we welcome feedback on our sustainability disclosures. Please send your feedback to:

Contact Us: [misc.sustainability@miscbhd.com](mailto:misc.sustainability@miscbhd.com)

### Sustainability

#### Corporate Planning

MISC Berhad  
Level 25, Menara Dayabumi,  
Jalan Sultan Hushamuddin,  
50050 Kuala Lumpur.

# MISC’s 2023 Integrated Reporting Suite

For 2023, we have provided disclosures based on the following reporting frameworks:



### INTEGRATED ANNUAL REPORT (IAR) 2023

Offers shareholders and stakeholders a balanced and comprehensive overview of our financial and non-financial performance. It includes insights into the external environment, our business model, strategy, achievements, financial statements, material matters, corporate governance and risk management.



### SUSTAINABILITY REPORT (SR) 2023

Details our initiatives, outcomes and performance in key Environmental, Social and Governance (ESG) areas, enhancing transparency in our ESG efforts. This report also encompasses our Task Force on Climate-related Financial Disclosures Report.



### FINANCIAL REPORT (FR) 2023

Provides detailed financial disclosures, including the Directors’ Report, Audited Financial Statements and Independent Auditors’ Report, catering to shareholders, investors, analysts and other interested parties.

Key Frameworks Applied	IAR	SR	FR
International <IR> Framework issued by the IFRS Foundation in 2021	√		
Main Market Listing Requirements (MMLR) issued by Bursa Malaysia	√		√
Companies Act 2016 (CA 2016)	√		√
Malaysian Code on Corporate Governance 2021	√		√
Corporate Governance Guide (4 <sup>th</sup> Edition) issued by Bursa Malaysia	√		
Malaysian Financial Reporting Standards (MFRS)	√		√
International Financial Reporting Standards (IFRS)	√		√
Bursa Malaysia Sustainability Reporting Guide		√	
Global Reporting Initiative (GRI) Standards		√	
Sustainability Accounting Standards Board (SASB) Standards		√	
Dow Jones Sustainability Indices (DJSI)		√	
Carbon Disclosure Project (CDP)		√	
FTSE4Good Bursa Malaysia Index		√	
Task Force on Climate-related Financial Disclosures (TCFD)		√	
AA1000 Stakeholder Engagement Standard		√	
United Nations Global Compact Guiding Principles		√	
United Nations Guiding Principles on Business and Human Rights		√	
Principles of Climate Governance by World Economic Forum		√	
United Nations Sustainable Development Goals (UNSDGs)		√	
Morningstar Sustainability ESG Risk Ratings		√	
MSCI ESG ratings		√	



Section 2

# INTRODUCTION

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# Who We Are

# Who We Are

## Our Vision

To consistently provide better energy-related maritime solutions and services

## Our Mission

To be consistently better, we strive to:

- Exceed the expectations of our customers
- Promote individual and team excellence of our employees
- Create a positive difference to the lives of communities
- Care for the environment and operate responsibly
- Drive sustainable value for our shareholders



MISC Berhad is a world leading provider of international energy-related maritime solutions and services. The Group's principal businesses comprise energy shipping and its related activities, owning and operating offshore floating solutions, marine repair and conversion, engineering and construction works, integrated marine services, port management and maritime services, as well as maritime education and training.

Our extensive global footprint allows us to deliver a wide range of solutions that cater to various areas within the maritime-related energy value chain. At the heart of MISC Group's success is our modern and diversified fleet of vessels and floating assets, complemented by the expertise of our diverse global workforce at sea and shore.

## Our Shared Values

### Loyalty



Loyal to corporation

### Integrity



Honest and upright

### Professionalism



Strive for excellence

### Cohesiveness



United, trust and respect for each other

## Our Key Highlights

### Strong Track Record

**55** years of sterling track record in delivering energy-related maritime solutions and services

### Global Operations\*

Operating presence in **11 countries** globally, moving energy across **6 continents**

### Market Strength

Among the world's leading shipping conglomerates



Market Capitalisation: **RM32.8 billion**

### Fleet Strength



Modern fleet of **104** LNG, Petroleum and Product vessels

Reputable Floating Production System Owner-Operator with **13** assets



**Over 10,000** sea and shore employees from **over 40 diverse nationalities**

### Strong Credit Ratings in the marine transport sector

**MOODY'S**

Moody's Ratings **Baa2 (Stable)**

**S&P Global Ratings**

S&P Global Ratings **BBB+ (Stable)**

\* For more information on where we operate, please refer to MISC's corporate website at <https://www.miscgroup.com/about-us/where-we-operate>

## Our Strengths

Diversified business portfolio and track record of operational excellence

Sustainable partnerships with key industry players

Stable cash flow with strong discipline in risk and financial management

Integrated commercial viability and ESG priorities in our business operations

Highly experienced leaders, operating within a strong governance framework



# What We Do

# What We Do

## 01

### Gas Assets & Solutions

Our Gas Assets & Solutions (GAS) segment specialises in transporting liquefied natural gas (LNG) and ethane while continuously looking into new opportunities for gas asset-based solutions. We prioritise operational excellence, backed by strong track record of timely deliveries. Our continuous investments in modern, fuel-efficient LNG carrier (LNGC) vessels and new technologies reinforce our competitive edge.

#### Fleet Strength

- 40 vessels



26 vessels

**Membrane-type LNGC**  
The membrane-type system has a higher capacity than Moss-type vessel with space efficient containment systems.



5 vessels

**Moss-type LNGC**  
The moss-type vessel has self-supporting spherical tanks that is robust and reduces sloshing.



1 vessel

**LNG Bunker Vessel (LBV)**  
An LBV supplies LNG as marine fuel (bunker) to LNG-fuelled vessels via ship-to-ship transfer operations.



2 vessels

**Floating Storage Unit (FSU)**  
An FSU is a flexible LNG storage solution and an alternative to land-based facilities.



6 vessels

**Very Large Ethane Carrier (VLEC)**  
A VLEC is a specialised gas carrier that transports liquefied ethane at -94° celsius in membrane tanks for over long distances. The vessel is equipped with dual-fuel propulsion and reliquefaction systems.

- 14 vessels under construction

#### Fleet Strength

- 64 vessels



13 vessels

**Very Large Crude Carrier (VLCC)**  
A VLCC has the capacity to transport approximately two million barrels of crude oil over long distances to facilitate inter-regional trades.



6 vessels

**Suezmax Tanker**  
A suezmax tanker has a capacity of shipping approximately one million barrels of crude oil, with the flexibility to do longer-haul cargo as well as shorter, regional trades.



18 vessels\*

**Aframax Tanker**  
An aframax tanker has the capacity to transport approximately 0.7 million barrels of crude oil. Used to carry crude oil or dirty products such as fuel oil in mainly regional trades.

\* Includes 2 modular capture vessels (MCVs).



17 vessels

**Dynamic Positioning Shuttle Tanker (DPST)**  
A DPST utilises dynamic positioning technology to load crude from remote offshore production facilities and transports it to the shore for storage or distribution.



8 vessels

**Lightering Support Vessel (LSV)**  
An LSV transports equipment and crew to conduct ship-to-ship cargo transfer operations.



2 vessels

**Long Range 2 (LR2) Tanker**  
An LR2 tanker is a coated tanker with the capacity to transport approximately 0.7 million barrels and able to carry both clean and dirty products in regional trades.

As at 1 March 2024

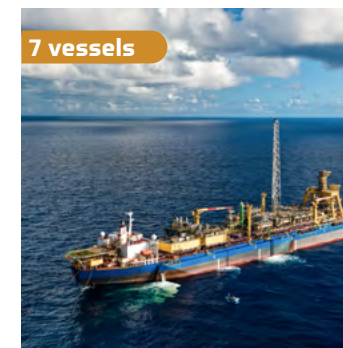
#### Fleet Strength

- 13 offshore floating solutions



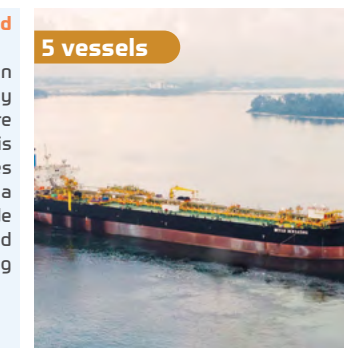
1 Unit

**Semi-Submersible Floating Production System (Semi-FPS)**  
A Semi-FPS is equipped with a production facility that separates fluids received from a subsea reservoir through risers into crude oil, natural gas, water and impurities. The extracted oil is exported via a pipeline to an oil and gas terminal, operating at a depth of approximately 1,400 meters.



7 vessels

**Floating Production, Storage And Offloading (FPSO)**  
An FPSO is a vessel-type production system that is designed to stay on location for 20 years or more of continuous operations. It is equipped with production facilities that separate fluids received from a subsea reservoir. Processed crude oil is stored in tanks and offloaded onto tankers for further refining onshore.



5 vessels

**Floating Storage And Offloading (FSO)**  
Simpler than an FPSO, an FSO unit does not have production processing capabilities. It is normally integrated with other production systems such as fixed platforms, mobile offshore production units and tension leg platforms. An FSO is also equipped to store and offload crude oil to a tanker.

As at 1 March 2024

## 03

### Offshore Business

We rank among the top five owners and operators of floating production systems globally, offering a comprehensive suite of services tailored to meet the dynamic floating solutions needs of the offshore business landscape from shallow to ultra-deepwater field developments.



## What We Do

## What We Do

### 04

#### Marine & Heavy Engineering

Our Marine & Heavy Engineering segment operates one of the largest fabrication yards in Southeast Asia. We specialise in energy offshore construction including deepwater facilities, marine repair, conversion services and marine refurbishment, with a niche focus on LNGCs. Leveraging our expertise, we construct carbon capture facilities, advanced offshore wind farm substations and provide fabrication services for green hydrogen facilities.

#### Key Assets



Heavy Engineering Assets



Marine Business Assets

#### Heavy Engineering Assets

- We have the largest fabrication area by tonnage capacity in Malaysia, to provide engineering, procurement, construction, installation and commissioning (EPCIC) of complex structures for offshore and onshore facilities

#### Marine Business Assets

- Our well-equipped yard includes three drydocks, land berths, quays and a shiplift. These facilities enable us to perform repair works, maintenance, marine conversion and refurbishment for a wide range of vessels

### 05

#### Marine Services

We provide a comprehensive range of solutions including ship management, technical advisory services and various maritime services such as port and terminal management, maintenance, ship vetting, vessel inspection, marine assurance and consultancy. Our services are designed to cater to the evolving needs of our diverse clientele and anticipated shifts in the industry.

#### Services Performed



Integrated Marine Services



Port Management & Maritime Services

#### Integrated Marine Services

- Ship management, engineering and procurement
- Project management: Supervision and consultancy service for dry docking and new building of vessels

#### Port Management & Maritime Services

- Port and Terminal Management: Port and terminal operations, pilotage, mooring master, loading master and marine controller, jetty maintenance and single point mooring maintenance
- Marine Services: Ship vetting, offshore vessel inspection, marine assurance and consultancy (ship screening, Tanker Management Self-Assessment, Offshore Vessel Management and Self-Assessment and Roving Marine Marshall Services)

### 06

#### Maritime Education & Training

Maritime education and training are a priority for us. As one of the leading maritime education and training institutions in the region, Akademi Laut Malaysia (ALAM) offers the full spectrum of maritime courses including nautical and marine engineering programmes, maritime and offshore safety courses, simulator-based courses and maritime management programmes, as well as research and consultancy services.

#### Services Performed



Pre-Sea Diploma, Post-Sea, Ratings and Modular Programmes



Research & Consultancy Services

#### Pre-Sea Diploma, Post-Sea, Ratings and Modular Programmes

- We provide a broad spectrum of maritime education and training, beyond Standards of Training, Certification and Watchkeeping (STCW)

#### Research and Consultancy Services

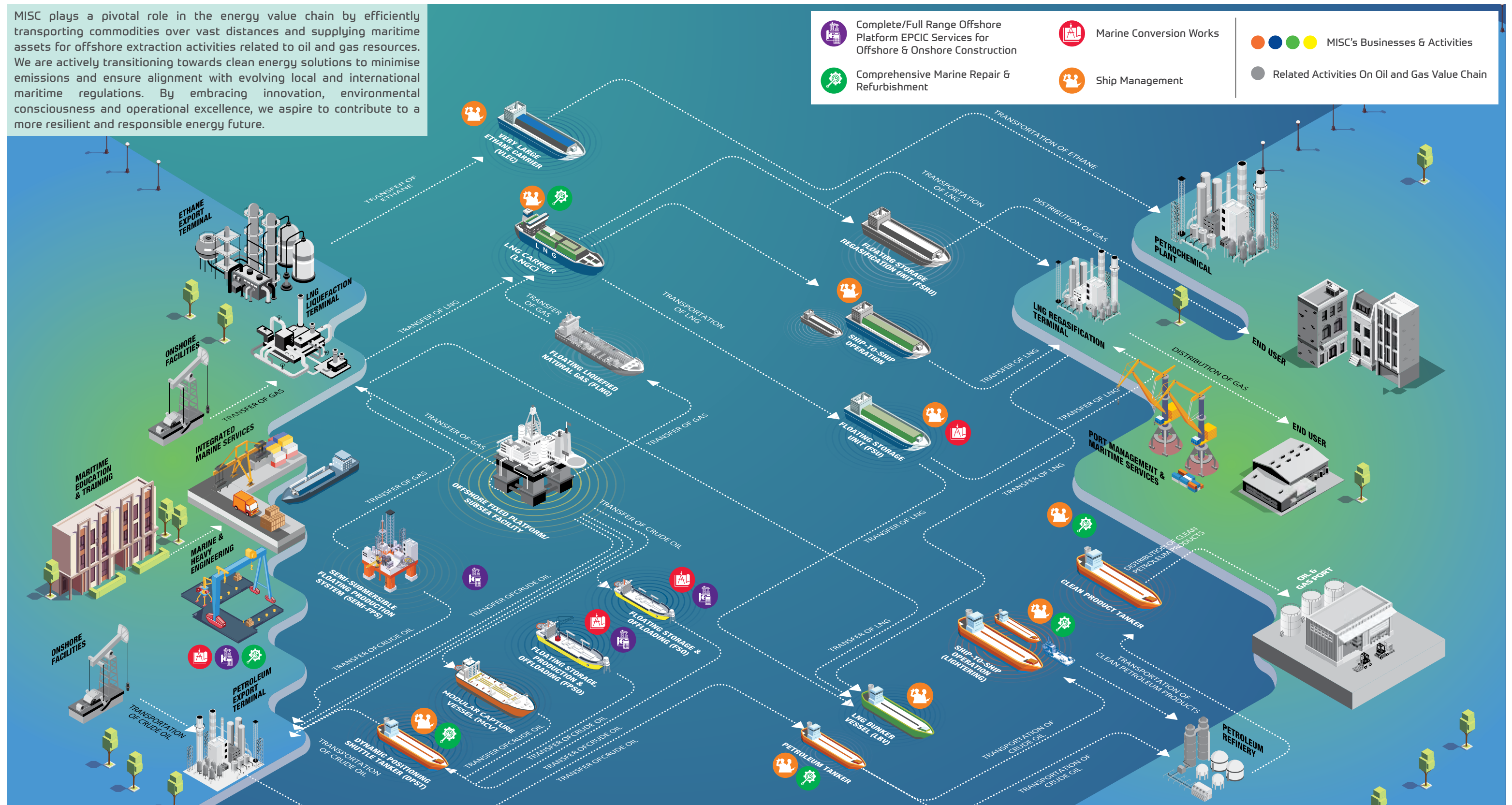
- Through our research and consultancy experts we provide flexible solutions encompassing the total lifecycle of port development



# How We Move Energy

# How We Move Energy

MISC plays a pivotal role in the energy value chain by efficiently transporting commodities over vast distances and supplying maritime assets for offshore extraction activities related to oil and gas resources. We are actively transitioning towards clean energy solutions to minimise emissions and ensure alignment with evolving local and international maritime regulations. By embracing innovation, environmental consciousness and operational excellence, we aspire to contribute to a more resilient and responsible energy future.





## Chairman's Message



**DATUK ABU HURAIRA ABU YAZID**  
Chairman

### Dear Stakeholders,

**This year presented a spectrum of sustainability challenges, from climate change and the energy transition to pressing social issues within our industry, including health, safety and human rights – all demanding innovative solutions and swift action.**

**At MISC, our approach transcends traditional sustainability and goes beyond compliance. We strive to lead our business with advanced sustainability practices, staying committed to enhancing our decarbonisation efforts and maintaining financial stability amidst maritime industry shifts.**

**Central to our strategy is the commitment to a Just Transition. We believe that the path to a sustainable future must be equitable, taking into account the well-being of our workforce, communities and the environment. As we embrace new technologies and adapt to changing market dynamics, we aim to lead a transition that is both responsible and inclusive.**

#### Embracing a Cleaner Horizon

In 2023, the global maritime industry took significant strides to address sustainability. The International Maritime Organisation (IMO) set new targets, aiming for a 20% to 30% reduction in greenhouse gas (GHG) emissions by 2030 and moving higher to 70% to 80% by 2040, compared to 2008. Following this, the IMO also enforced regulations such as the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII), which focused on curbing carbon emissions.

Effective January 2024, the EU's Emissions Trading System (EU ETS) will extend to cover greenhouse gas (GHG) emissions from all large ships entering EU ports, initially addressing carbon dioxide (CO<sub>2</sub>) emissions and expanding to include methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from 2026.

From 1 May 2024, the Mediterranean Sea will be designated as an Emission Control Area (ECA) for sulphur oxides (SO<sub>x</sub>) and particulate matter (PM), with mandatory requirements for ships to use low sulphur fuels or exhaust gas cleaning systems starting from May 2025.

Additionally, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) will come into force on 6 June 2025.

Obviously, the journey to a sustainable maritime sector is not without its challenges. The path is steep and paved with economic trade-offs. The infrastructure for low-or zero-carbon fuels is still emerging, demanding a significant scale-up to meet the industry's burgeoning needs. Nevertheless, MISC remains resolute in our efforts as we aim to actively shape the industry's energy transition.

#### Strengthening Sustainability Governance

In the face of an evolving landscape, our governance structure remained robust, aimed at improving sustainability performance and leveraging the opportunities from the global energy transition. We are on track with most of our medium-and long-term targets outlined in our Sustainability Strategy, a clear indication of our dedication and strategic foresight.

In 2023, we strengthened our sustainability governance with the MISC Climate Framework, based on the Task Force on Climate-related Financial Disclosures (TCFD) principles, integrating climate response throughout our operations. We also

introduced the MISC Internal Carbon Pricing (ICP) Framework, establishing a shadow carbon price for informed asset investment decisions and supporting our ambition for Net-Zero emissions by 2050.

We also aligned MISC's sustainability transformation with its digital transformation. Recognising that digitalisation is a critical enabler in achieving our sustainability objectives, we embarked on projects such as the Smart Port project to digitalise operations at Sg Udang Port, enhancing operational efficiency.

Our rigorous ESG-related policies, including Health, Safety and Environment (HSE), Anti-bribery and Corruption, Code of Conduct and Business Ethics (CoBE) Corporate Privacy and Modern Slavery, underline our dedication to ethical business practices. These policies are not just guidelines but the backbone of our operations, ensuring we consistently exceed stakeholder expectations.

Unfortunately, I would like to address a significant setback in our sustainability journey this year where we experienced three fatalities. These incidences deeply affected us all at MISC, reminding us that behind every policy and procedure are the lives and well-being of individuals. It is a stark reminder that, despite robust health and safety systems, we must continually strive for improvement.

In response, we are redoubling our efforts to reinforce our safety culture and governance. We are committed to learning from these mishaps and ensuring such tragedies are never repeated, as we continue to safeguard the well-being of every member of our MISC family.

#### Celebrating Sustainability Excellence

2023 marked a year of significant achievements for MISC. Our USD527 million Sustainability-Linked Loan for six ethane carriers was named Deal of the Year for Asia by Marine Money, reflecting our strategic alignment with long-term sustainability objectives through key environmental and governance metrics.

We also debuted the design for the world's first newbuild FPSO vessel with mega-module topside technology at the Offshore Technology Conference (OTC) 2023. This FPSO, known as the Mega-Module Engineering and Green Architecture (MMEGA), advances sustainable maritime technology by enhancing efficiency and reducing EPCIC timelines and costs.

Our commitment to sustainability was further recognised with the Star ESG Positive Impact Award, highlighting our efforts toward environmental stewardship and community engagement. Additionally, the Marine Fuels 360 Awards acknowledged our advancements in alternative fuel vessel designs, supporting our ambition to reduce GHG emissions intensity by 50% in our shipping operations by 2030.

#### Charting a Sustainable Path Forward

I am cautiously optimistic about the years ahead. As the global energy transition continues to accelerate, it will bring forth new policies and open opportunities for MISC to capitalise on long-term investments in clean energy technologies and solutions. Our commitment to decarbonisation and significant emissions reductions is unwavering. We understand that the challenges are substantial, but so are the opportunities. The steps we take today are crucial in ensuring a healthier, more sustainable world for future generations.

In this transformative era, we are committed to accelerating our decarbonisation and sustainability efforts. Working alongside like-minded clients and partners who share our aspirations, we will prioritise responsible investments in traditional assets while placing sustainability at the forefront of all our operations by leveraging new market opportunities.

As we move forward, we do so with the confidence that our collective efforts will yield a more sustainable and prosperous future for all. MISC is more than ready to meet these challenges head-on, with the spirit of resilience, innovation and responsibility that has always defined us.

I extend my heartfelt gratitude to our stakeholders, employees and partners for their steadfast support and commitment to our sustainability journey. We recognise that the path to a sustainable future is not one we walk alone. MISC has embraced and will continue to actively promote a collaborative approach to sustainability. We understand that true progress is achieved through partnerships, shared knowledge and collective action.

**DATUK ABU HURAIRA ABU YAZID**  
Chairman

## Board Sustainability & Risk Committee (BSRC) Chairperson's Message

## Board Sustainability & Risk Committee (BSRC) Chairperson's Message



**DATIN NORAZAH MOHAMED RAZALI**  
Chairperson  
BRSC

### Dear Stakeholders,

**Celebrating twelve years of MISC's sustainability journey, we take pride in our significant strides since 2012. Our journey, driven by commitment and evolution, consistently aligns with the evolving expectations of our stakeholders.**

**The BSRC embraces sustainability as a core element of business strategy, not merely for compliance or reporting but as a fundamental driver of business objectives. More recent impetus from our stakeholders including our shareholders, financial institutions and regulators has further amplified our focus, integrating sustainability into our strategic framework.**

**This year signifies a key milestone as we begin implementing our sustainability plans that have been in development. We recognise that this transformation is a mid-to long-term journey, not a change that can happen overnight. It's a path of progressive evolution and forward-thinking, where every step we take is guided by our commitment to a sustainable future.**

### The Sustainability Landscape

In 2023, we faced a dynamic sustainability landscape, shaped by rising environmental and carbon regulations. The call at the 2023 UN Climate Change Conference (COP28) for an end date for fossil-only powered newbuilds, new regulatory conditions to accelerate the transition to green fuels and the use of renewable hydrogen-derived shipping fuel, highlighted the urgent need for decarbonisation in maritime operations.

This evolving landscape introduces heightened transitional risks, spanning regulatory, technological and market facets, particularly driven by investors, regulators and various international organisations. Such changes necessitate a proactive stance in enhancing our sustainability practices and disclosures to address stakeholder expectations comprehensively.

The experience gained in navigating these emerging risks has been invaluable, underscoring the necessity of an integrated approach that aligns economic, environmental and social factors. These insights will be pivotal in devising robust strategies to manage transitional risks effectively, ensuring our operations are resilient and aligned with emerging sustainability standards.

### Ensuring a Balanced and Just Transition

As the industry transitions, it is crucial to responsibly consider the energy needs of different regions, especially emerging markets. This approach ensures that our transition strategies are environmentally sound while delivering on the diverse energy requirements and economic realities across the globe. By doing so, we make the transition truly 'just', balancing environmental imperatives with the developmental needs of various communities and economies.

With this balanced approach in mind, MISC's response to the energy transition is multifaceted, aligning our business practices with these new standards while ensuring sustainable growth. We are committed to a gradual but definitive transition towards low-, ultra-low and zero-emission vessels. This includes fleet renewal, operational and technological improvements for our existing fleet, innovating low-and zero-emissions solutions for our offshore assets and investing in carbon removal technologies.

Integrating this shift with robust risk management is paramount. The financial and operational implications of adhering to stringent environmental and carbon regulations necessitate an increase in operational costs and capital investments. Nevertheless, addressing the challenges of modernising our fleet and integrating sustainable technologies is a commitment we proudly uphold.

Furthermore, managing transition risks is central to our strategy, encompassing market volatility, technological uncertainties, regulatory compliance and geopolitical dynamics. As one of the early adopters in this transition, MISC is proactive in identifying, evaluating and mitigating these risks, ensuring resilience and strategic foresight in our transition plans. Effective talent management underscores this approach, focusing on retaining and nurturing skilled personnel, providing them with specialised training in managing new sustainable technologies and fostering a culture valuing low-carbon expertise.

### Accelerating Decarbonisation Through Partnerships

MISC's commitment to sustainability was further galvanised in 2023 through strategic partnerships and collaborations, united in the pursuit of developing zero-emission solutions. This commitment is evident through our various initiatives, including partnerships for Oxy-Fuel technology, Floating CO<sub>2</sub> Storage and Injection and the development of ultra-low emissions Aframax vessels powered by green ammonia. Additionally, we are actively engaged in developing ammonia dual-fuel deep-sea vessels and other innovative projects. These efforts underscore our proactive efforts to pioneer environmentally conscious maritime solutions and contribute to a sustainable future.

By joining forces with like-minded entities, we are not only amplifying our impact but also setting new benchmarks in the maritime industry. These partnerships are pivotal in transforming traditional business models and embedding sustainability at the core of everything we do.

### Strengthening Sustainability Governance

MISC's incorporation of Climate-related Financial Disclosures underlines our progress towards greater transparency and resilience against climate-related risks. Integrating these climate assessments into our annual strategic portfolio reviews has been a transformative step. It ensures that each business unit within MISC not only understands the implications of climate-related risks on their operations but also incorporates this understanding into their strategic planning and decision-making processes.

The identification of Key Risk Indicators (KRIs) and their integration into our Group's risk register marks a significant advancement in our climate risk management. As we progress, our focus will be on embedding these practices more deeply

within our operations and identifying the financial impacts of climate risks on our business.

Additionally, our proactive approach to managing emissions through the implementation of ICP is a testament to our commitment to being ahead of the curve. Despite carbon pricing not being mandatory yet in Malaysia, we have chosen to adopt this measure to better understand the economic returns of investing in sustainable practices. This initiative allows us to gauge the financial viability of our sustainability investments and align them with our long-term strategic goals.

### Towards a More Sustainable Future

The path ahead will be marked by continued challenges and opportunities. With the global shift towards decarbonisation and sustainable practices, we find ourselves at a pivotal point. Having established our sustainability targets and laid out comprehensive plans, the true excitement begins as we step into 2024 and beyond. This phase is not just about putting our plans into action; it's about bringing our vision to life, marking a significant milestone in our sustainability journey.

In the face of emerging challenges, MISC remains committed to delivering value to all our stakeholders. We will continue to invest in sustainable technologies and practices, ensuring that our growth is not only financially sound but also environmentally responsible and socially equitable. Our efforts will be geared towards maintaining a balance between achieving our financial goals and fulfilling our environmental and social responsibilities.

As we move forward, our journey will be guided by the principles of innovation, collaboration and resilience. The BSRC will continue to play a crucial role in this journey, ensuring that our sustainability efforts are aligned with the expectations and needs of our stakeholders.

With that, I extend my sincere gratitude to our stakeholders for their continued support and trust in MISC. Your belief in our vision and commitment to sustainability fuels our drive to excel and innovate. Together, we will navigate the challenges ahead and seize the opportunities that arise, steering MISC towards a brighter, more sustainable future.

Thank you for joining us on this journey.

**DATIN NORAZAH MOHAMED RAZALI**  
Chairperson  
BRSC



## President/Group Chief Executive Officer's Message

## President/Group Chief Executive Officer's Message



**CAPTAIN RAJALINGAM SUBRAMANIAM**  
President/Group Chief Executive Officer

### Dear Stakeholders,

In November 2023, COP 28 brought the need for decisive action on sustainability into sharp focus. The global consensus on the challenges ahead is clear and while commitments abound, meaningful progress hinges on the purposeful participation of all. MISC has been at the vanguard of these efforts since commencing our sustainability journey in 2012 and sustainability is now embedded at the heart of our business strategy.

Our Sustainability Strategy is aligned with the UN Sustainable Development Goals and guided by our 2050 Net-Zero targets and our MISC 2030 Aspiration. We adopt a holistic approach built on four pillars: financial prudence, environmental stewardship, social responsibility and exemplary governance. These pillars are supported by our active stakeholder engagement, which places collaboration at the core.

We believe this holistic approach, combined with our values, heritage and financial strength gives us a unique opportunity to confront the challenges of achieving a just transition and capture new opportunities in a changing world. I am pleased to present a snapshot of MISC's substantive progress over the past year and offer a glimpse into the path ahead.

#### Financial Prudence: Investing in a Better Tomorrow

A just and resilient transition requires balancing society's immediate energy requirements with long-term environmental goals. We must continue to transport the energy the world needs today responsibly while developing new, sustainable business models to create a greener tomorrow. Managing capital allocation effectively remains paramount and we recognise the need to add and create value for all stakeholders and balance short-term costs and long-term sustainability. This approach is inextricably linked to the financial strategies we employ.

Our healthy financial standing and stable business model allow us to make strategic investments for the future. This is evidenced by our continued investments in eco-efficient dual-fuel tankers and our continued development, in collaboration with like-minded strategic partners, of carbon capture technology and ammonia zero-emission vessels (ZEVs).

To fund these investments, we prioritise sustainability-linked instruments that support projects with a positive environmental and social impact. In this vein, we were honoured that our USD527 million Senior Secured Term Loan for six VLECs was recognised in 2023 by Marine Money as "The Sustainability-Linked Deal of the Year for Asia."

We continue to engage the financial sector to do more. The technology risks involved in advancing the energy transition should not be borne by asset owners alone. Combating societal emissions necessitates a holistic response from society and we encourage these important stakeholders to partner with us on this journey.

#### Environmental Stewardship: Navigating a Greener Tomorrow

MISC is at the forefront of our industry's efforts to move to a sustainable footing, providing thought leadership while adopting progressive policies and implementing practical solutions.

We proactively participate in international efforts to drive collective progress, such as the Shaping the Future of Shipping, the flagship shipping event at COP28 in Dubai, the Clean Energy Marine Hubs (a cross-sectoral public-private platform aiming to de-risk investments needed to produce low- and zero-emission fuels to be transported by the maritime sector) and other project specific collaborations such as the Castor Initiative to develop ammonia ZEVs.

As we advocate for global action, we also press on with our decarbonisation plan: to reduce emissions intensity from shipping operations by 50% by 2030 (versus 2008 levels) and achieve net zero emissions by 2050. These ambitious targets exceed those of the IMO. We have also gone further, developing aspirational targets – our MISC 2030 Aspiration – which include achieving a 50% reduction in total GHG emissions (versus 2008 levels) and deriving 25% of our cash flows from operations from Clean Energy Solutions by 2030.

To achieve these ambitions, we adopt several short-, medium- and long-term measures. We continue to pioneer the use of dual-fuel vessels and the adoption of LNG as a transitional fuel through our fleet renewal programme. Our Petroleum & Product Shipping segment has shown real leadership here in moving away from conventionally fuelled vessels - all new assets must be dual fuel. In our LNG fleet, we evaluate the best propulsion and power generation technology to reduce our GHG emissions. These efforts are reflected in our 2023 deliveries, which are among the world's most environmentally friendly vessels. We are also making great strides in adopting other near-zero emission fuels on our future newbuildings.



Installed ShaPoLi system across 55 vessels.

In 2023 we implemented the Shaft Power Limitation (ShaPoLi) system across 55 vessels to align with the IMO's CII targets. Active engagement with our clients has led to greater operational efficiencies, further helping to lower emissions. We are also trialling Internal Carbon Pricing (ICP) in our new investment decisions to ensure our new investments remain financially sustainable throughout their commercial profile.

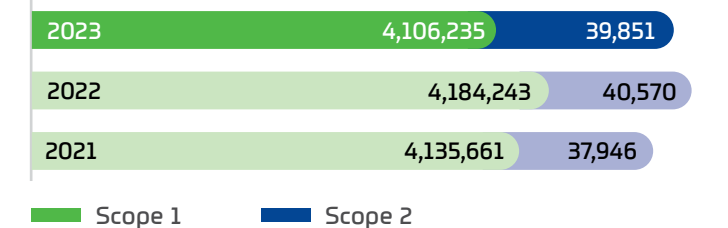
Our Offshore Business is focused on minimising the GHG emissions per barrel extracted and in 2023 we unveiled our groundbreaking concept design for a Newbuild Floating

Production Storage & Offloading Unit capable of achieving a 40% reduction in GHG emissions. It is also developing designs for an Ammonia FPSO and collaborating to develop Oxy-Fuel technology.

In our business pivot, we are seeking opportunities in the carbon capture, utilisation and storage (CCUS) and renewables value chains. In 2023 we received Approval in Principle for a Floating Carbon Storage and Utilisation (FCSU) unit with Samsung Heavy Industries (SHI), while our Marine & Heavy Engineering segment was awarded the construction contract for an offshore wind substation for a High Voltage Direct Current platform.

As a result of these efforts, in 2023 we were able to achieve a significant 24% reduction in GHG intensity and a 17% reduction in total emissions (both from 2008 levels). We have made tangible progress in our endeavours, but there is plenty more to do.

#### Scope 1 and 2 GHG Emissions (tonnes CO<sub>2</sub>e)



MISC Group achieved a 7% reduction in GHG intensity in 2023.

#### Social Responsibility: Empowering People for Tomorrow

For over five decades, people have been the cornerstone of MISC's success.

In 2023, we adopted the International Association of Oil & Gas Producers (IOGP) Life-Saving Rules and introduced the new MISC Life-Saving Rules and Commitments, enhancing safety awareness and striving for accident prevention. Our improving HSSE Culture Maturity Survey results indicate that our proactive approach towards health, safety, security and the environment is on the right track. These efforts have led to industry recognition, with 48 of our vessels being acknowledged with the Jones F. Devlin Award for Safety from the Chamber of Shipping of America and MISC receiving one grand and 5 gold awards at the 41<sup>st</sup> Malaysian Society for Occupational Safety and Health Awards.

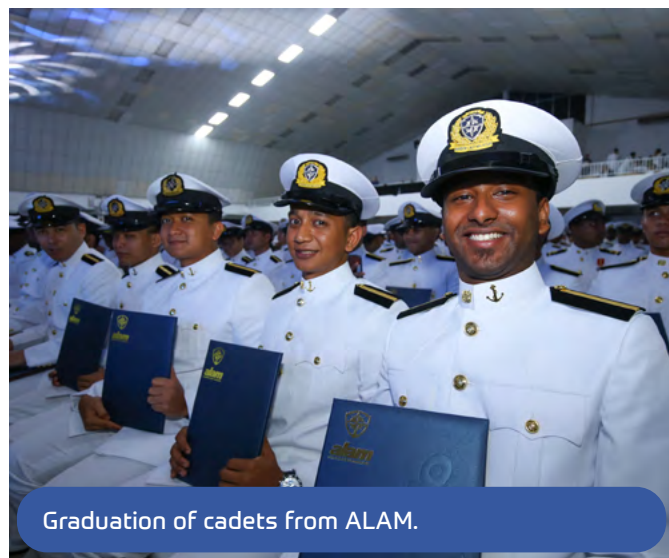
## President/Group Chief Executive Officer's Message

## President/Group Chief Executive Officer's Message

We were also proud that the construction of our flagship offshore floater project, the *FPSO Marechal Duque de Caxias*, was completed safely with 28 million man-hours logged as Lost Time Injury free.

However, elsewhere we suffered unfortunate events and we must recognise our safety performance overall in 2023 was not acceptable. We have conducted an exhaustive review of our frontline processes and reinforced the "Tone at the Top" throughout the group. The HSSE management of our contracting partners has been identified as a key focus area. To address this, the MISC HSSE Partners Summit was organised in December involving senior leaders and industry speakers to share best practices. Contractor HSSE recognition programmes have also been rolled out to reinforce our commitment to HSSE Excellence.

We continue to invest in our people, deploying close to RM60 million last year in programmes towards improving employee core competencies and developing new skills. We have adopted the UN Sustainable Development Goals on education and continue to partner with established business schools like INSEAD and Asia School of Business to deliver our leadership development programmes. For our frontliners we regularly enhance our training curriculum at ALAM to ensure our seafarers are equipped to manage upcoming regulations and emerging technologies. This is done in collaboration with the Marine Department of Malaysia, through which we also provide input to the IMO.



Graduation of cadets from ALAM.

Our commitment to talent extends to the broader community. Through our maritime sponsorship programme at ALAM, we sponsored an additional 157 Malaysian cadets in 2023, bringing our total ongoing sponsored cadets to 829 at an investment of RM29.6 million. Our investment in these cadets not only provides a highly skilled workforce to meet the future demands of the international shipping industry but also provides education and opportunity to local youth. ALAM is 87% ready to achieve university college status by 2025/2026 and aspires to become the maritime university of choice in Asia.

Elsewhere, we remain invested in the communities we serve. Our Petroleum & Product Shipping segment awards maritime scholarships to students in collaboration with Texas A&M Foundation, MaritimeONE and Newcastle University. It is also a proud sponsor of the Flying Angel Campaign 2023 by the Mission to Seafarers which operates in key areas of our shipping locations that focuses on enhancing the wellbeing of seafarers. Whilst employees in Houston and London support various foodbank initiatives. Our team members also participate in conservation efforts around the Mersing Islands through our Heart of the Ocean biodiversity programme.

We also formalised our collaboration with the Royal Malaysian Navy via the Maritime Intelligence Strategic Partnership - a commitment to advancing maritime safety and safeguarding vital interests.



Our employees participating in a beach clean-up under the Heart of the Ocean Programme.

### Exemplary Governance: Towards a Resilient Tomorrow

We continue to strengthen the governance of sustainability matters, especially in climate risk management, cybersecurity and integrity.

In 2023 we undertook a strategic business and portfolio review and the resultant organisational changes have laid the foundation for realising our Sustainability Strategy. Of note is the merger between Eaglestar and MISC Maritime Services to form MISC Marine. Additionally, the new energy unit we incubated last year will become a fully-fledged division of MISC in 2024. This will provide the Group with a central point from which to identify, assess and distribute new opportunities.

To aid transparency, we have published a dedicated Climate-related Financial Disclosure report for our stakeholders, accessible on our website. Our thorough review of time horizons and climate scenarios ensures that we respond strategically to potential business impacts while maintaining focus on mitigating risks and capitalising on opportunities.

Our governance and management of sustainability matters have earned us notable accolades, including the Silver Award in the Environmental Category: Sustainable Ecosystem at the Star's ESG Positive Impact Awards. The Singapore Maritime Port Authority acknowledged *Seri Damai* and *Seri Daya* with Green Ship statuses and we were also honoured with the Alternative-Fuelled Vessel Design of the Year by Marine Fuel 360. We were also included for the second year running in the S&P Global Sustainability Yearbook.

### Charting a Path Towards Tomorrow

The maritime and energy sectors now face a pivotal moment in addressing decarbonisation. 2024 is the year in which we must build on the foundations we have created and turn our ambition into action and tangible results.

While we are wholly committed to achieving the MISC 2050 Vision, we remain pragmatic and embrace a just transition. Our MISC 2030 Aspiration, sets the tone for our internal constituents to focus on the core and emerging opportunities. We will actively pursue collaboration with

like-minded strategic partners to develop the supply chains the low-carbon economy requires while ensuring accessibility to affordable energy amid the transition. Optimistically and realistically adjusting our sails as we progress along.

As a responsible corporate citizen, we will continue to elevate the global maritime industry through our maritime sponsorship programme to develop future leaders who will pave the way forward. We have also begun to prepare our workforce to embrace the advent of new technologies and solutions, through constant upskilling and reskilling.

Over the next few years, our focus will be on allocating capital effectively and ethically to leverage new opportunities and ensure consistent shareholder returns. We remain committed to leveraging our credentials and expertise to shape the future of MISC and create a brighter future for generations to come.

My sincere thanks to our Board members for their continuous guidance to the management. To all our stakeholders, our appreciation for your continued trust and support as we forge ahead to achieve our business and sustainability aspirations.

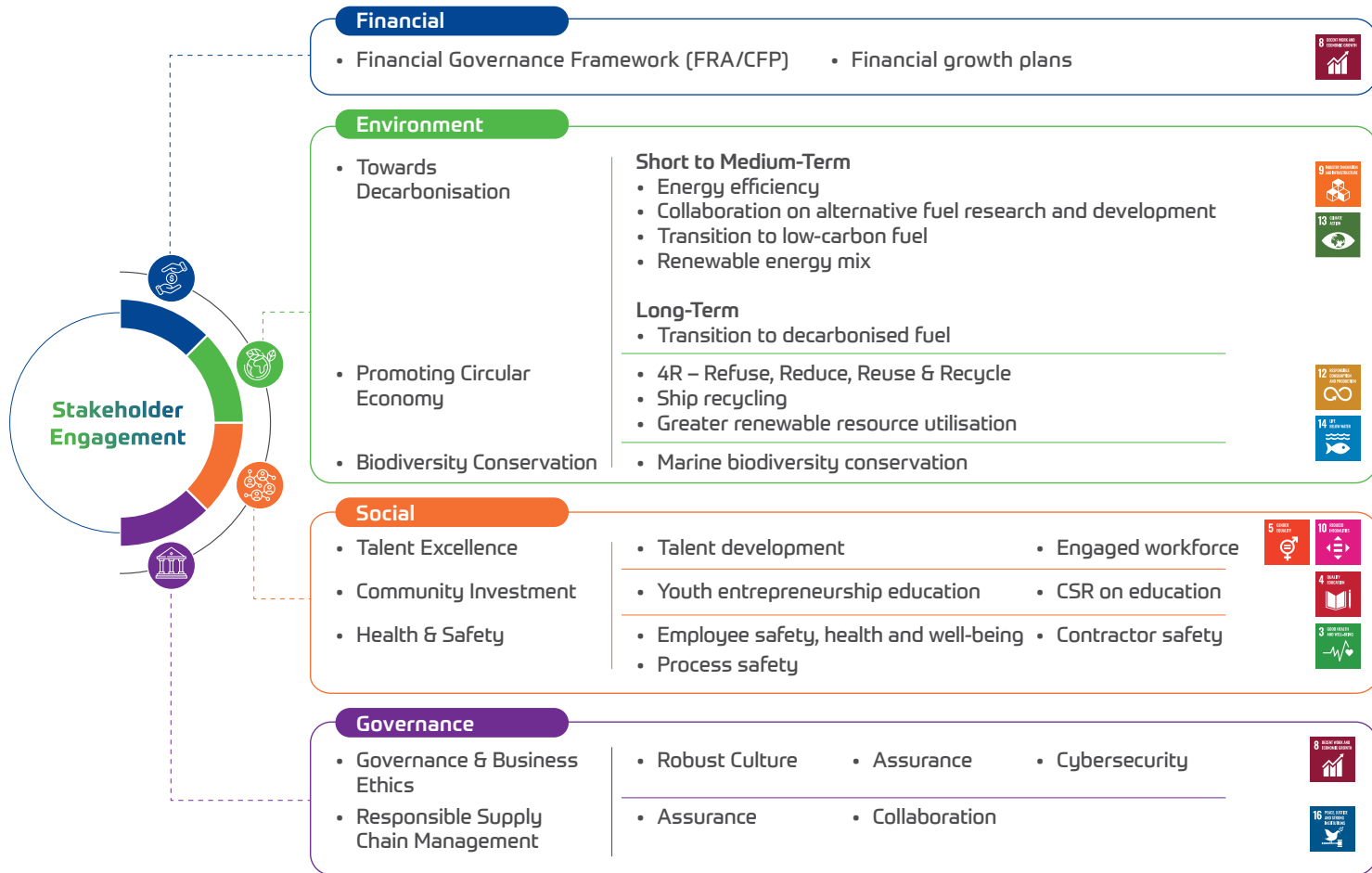
Together, let's build a better world.

**CAPTAIN RAJALINGAM SUBRAMANIAM**  
President/Group Chief Executive Officer



# Our Sustainability Voyages

At MISC, our long-standing commitment to sustainability principles not only signifies a pledge to environmental and social responsibility but also catalyses the creation of long-term value for our stakeholders. This is motivated by our dedication to promote innovation, reduce risks and improve overall organisational resilience. MISC Group is guided by our Sustainability Strategy, which is aligned with the UN SDGs. Out of the 17 SDGs, MISC has prioritised 11 SDGs which are relevant to our business operations.



# Our Sustainability Voyages

## OUR CLIMATE COMMITMENT

**Net-Zero** GHG Emissions by 2050 | **50%** reduction in GHG intensity emissions by 2030 compared with 2008 base year

## TRANSITION PLAN FROM LOW-CARBON TO NET-ZERO BY 2050

Transition to low-carbon operations | Deploy zero-carbon emission vessels by 2030 | Decarbonised shipping operations by 2050 | Net-Zero GHG emissions by 2050

## NET-ZERO GHG COMMITMENT

- GLOBAL MARITIME FORUM**  
We are committed to the Global Maritime Forum's (GMF) mission to shape the future of global seaborne trade to increase sustainable long-term economic development and human wellbeing.
- Getting to Zero Coalition**  
Getting to Zero Coalition is a global alliance committed to develop commercially viable deep-sea zero-emission vessels powered by zero-emission fuels into operation by 2030.
- the CASTOR INITIATIVE**  
We are a proud partner of The Castor Initiative, a multi-stakeholder global coalition that is committed to jointly developing commercially viable deep-sea ZEVs fuelled by ammonia by 2030.
- Strategic Investment**  
Entered into a strategic investment with PETRONAS and Mitsui O.S.K. Lines (MOL) to jointly develop and monetise Liquefied Carbon Dioxide (LCO<sub>2</sub>) carriers.
- MoU with SHI**  
Signed an MoU with SHI to jointly develop a FCSU with injection capability (FCSU-I).

## OUR KEY SUSTAINABILITY MILESTONES AND ACHIEVEMENTS IN 2023

### MILESTONES

- MISC Group was represented at the Shaping the Future of Shipping: Delivering a Net-Zero World Summit, COP28, Dubai
- MISC entered into an agreement with Pengerang LNG (Two) Sdn. Bhd. (PLNG2SB), for the supply, operation F maintenance of an LNG FSU which will be converted from one of MISC's LNGCs
- Our Marine & Heavy Engineering segment (MHB) secured a subcontract for the first offshore substation (OSS) high voltage direct current (HVDC) platform
- Entered into a USD527 million sustainability-linked loan to finance six VLECs
- Received delivery of two modern and energy-efficient LNGCs, *Seri Damai* and *Seri Daya*, for SeaRiver Maritime (SRM)
- AET successfully delivered two of its three VLCCs powered by dual-fuel LNG engines, on long-term charter to Shell Private Limited
- Maintained our position in the S&P Global Sustainability Yearbook for two consecutive years

### AWARDS AND RECOGNITIONS

- Sustainability-Linked Deal of the Year for Asia
- Seri Damai* and *Seri Daya* awarded Green Ship Status
- Alternative-Fuelled Vessel Design of The Year Award
- Awarded with Jones F. Devlin Safety Award for 48 vessels and Environmental Achievement Award for 40 vessels
- The Building Trust Awards 2023  
Among top 20 companies recognised by PwC for outstanding efforts in building stakeholder trust
- Silver Award (Environmental Category): Sustainable Ecosystems
- 6 awards with 1 Grand, 1 Gold Merit and 4 Gold Class 1 for various MISC's entities
- Awarded with Silver Award (Transport & Logistics Sector) and Silver Award (Green Transition)

# Our Sustainability Voyages

## Our Progress in 2023

### Financial Pillar

#### Our Strategy

To achieve growth in secured and recurring sources of cashflow

#### Our Progress in 2023

- Revenue: RM14.3 billion
- Operating Profit: RM2.9 billion
- CFO\*: RM6.5 billion
- Received delivery of two LNGCs, *Seri Damai* and *Seri Daya* for SRM
- Delivered two VLCC tankers powered by dual-fuel LNG engines, *Eagle Vellore* and *Eagle Ventura* to Shell
- Unveiled the design of a future ready NBFPSO unit which uses the Mega-Module topsides and incorporated sustainable technologies into the design

\* This refers to the adjusted CFO which excludes the payment for costs relating to turnkey activities for MERO 3 Project and the one-off FSU prepayments in 2023.

### Environment Pillar

#### Towards Decarbonisation

#### Our Strategy

- Transition to a low-carbon economy
- Deploy zero-carbon emissions vessel latest by 2030
- Decarbonised shipping operations by 2050
- Net-Zero GHG emissions by 2050

#### Our Progress in 2023

- AET signed a Memorandum of Understanding (MoU) with PETCO Trading Labuan Company Ltd (PTLCL) to explore a potential collaboration to deploy a future ultra-low-emission Aframax powered by green ammonia
- Signed an agreement with PETRONAS CCS Ventures Sdn Bhd, MOL to invest in the development of LCO<sub>2</sub> carriers for Carbon Capture and Storage (CCS) projects in Malaysia
- MISC with our partner, SHI received approval from DNV to jointly develop the concept for a FCSU-I
- The Castor Initiative: Conducted workshops and a panel discussion among members to discuss current regulations and guidelines, challenges and detailed concepts of the ammonia storage and fuel pre-treatment systems
- AET, ALAM and Winterthur Gas & Diesel (WinGD) inked a Collaboration Agreement to drive the development of ammonia engines for ammonia dual-fuel deep-sea vessels
- In the process of installing rooftop solar PV at MHB's Pasir Gudang Centre of Excellence (COE) which consists of 260 panels with an annual generation of 141.5 MWh clean energy
- Achieved a reduction of 24% in our fleet average GHG intensity compared with 2008
- Recorded total GHG emissions of 7.10 million tonnes

[Read more in the Decarbonisation Pathway section.](#)

# Our Sustainability Voyages

## Our Progress in 2023

#### Promoting Circular Economy

#### Our Strategy

- Promote the elimination of waste and the continual use of resources
- Increase the usage of renewable resources

#### Our Progress in 2023

- Conducted four Ship Recycling Yard audits in Turkey
- Recycled almost 100% of hazardous waste generated from our shore operations

[Read more in the Promoting Circular Economy section.](#)

#### Biodiversity Conservation

#### Our Strategy

- Conserve and rehabilitate marine biodiversity by implementing the MISC's Heart of The Ocean (HOTO) Programme

#### Our Progress in 2023

- Received the Sustainable Ecosystem Silver Award at the ESG Positive Impact Awards 2023 by The Star for the HOTO Programme
- 36 coral reef sites surveyed
- 3 coral sites rehabilitated
- 77% turtle nest hatching success rate
- 1,916 turtle nests conserved
- 10,011 kg of trash collected since 2020

[Read more in Conserving Marine Biodiversity section.](#)

### Social Pillar

#### Health and Safety

#### Our Strategy

- Provide a safe and healthy environment for employees, contractors and communities
- Achieve Generative Health, Safety, Security and Environment (HSSE) Culture

#### Our Progress in 2023

- Attained a score of 4.16 in the MISC HSSE Culture Maturity Survey
- Introduced the MISC Life-Saving Rules and HSSE Rules and Commitments
- Received the CSA Jones F. Devlin Safety Award for 48 vessels
- Received six awards at the 41<sup>st</sup> MSOSH Awards 2023 for Grand, Gold Merit and Gold Glass 1 categories
- Achieved 28 million man-hours without LTI for the MERO 3 Project
- 102,342 Unsafe Conditions Unsafe Acts (UCUAs) raised
- Introduced Fatigue Risk Management Guidelines
- Collaborated with the Royal Malaysia Navy (RMN) to conduct an annual exercise known as Naga Emas to strengthen the cooperation and coordination between both parties in dealing with maritime security issues

[Read more in the Operating Safely section.](#)



# Our Sustainability Voyages

## Our Progress in 2023

### Talent Excellence

#### Our Strategy

- Futureproof talents and drive leadership agenda by accelerating talent potential in a high-performing organisation

#### Our Progress in 2023

- Achieved 81% participation score in PETRONAS Organisational Cultural Survey (POCS)
- 92.6% high-performing talent retention
- Maintained successor ratio of 2:1
- Introduce MyWisdom-a knowledge retention initiative
- Invested RM33.1 million in training and development programmes for seafarers
- Conducted Mind Guardian Programme to raise seafarers' knowledge of mental health issues
- Welcomed additional two female captains, first two highly skilled female pilots and first female Offshore Vessel Inspection Database (OVID) Inspector

Read more in Our People, Our Strength section.

### Community Investment

#### Our Strategy

- Foster youth development towards becoming future leaders through education

#### Our Progress in 2023

- Supported 829 students at ALAM via cadet sponsorship of RM29.6 million
- Awarded maritime scholarships to nine new students in collaboration with Texas A&M Foundation, MaritimeONE and Newcastle University
- 247 employees have volunteered in the HOTO programme since 2021

Read more in Partnering with the Community section.

# Our Sustainability Voyages

## Our Progress in 2023

### Governance Pillar

#### Values, Assurance and Business Ethics

##### Our Strategy

- Continuously embed a culture of strong corporate governance and business ethics and conduct.
- Enhance the cybersecurity framework and safeguard our operations

##### Our Progress in 2023

- 40% female Board members
- Received full ISO 37001: 2016 Anti-Bribery Management System (ABMS) certification for MISC Group, with the latest addition of ALAM
- Recorded zero major cybersecurity incidents and data breaches

Read more in the Operating Responsibly section.

#### Responsible Supply Chain

##### Our Strategy

- To drive sustainable practices with our suppliers

##### Our Progress in 2023

- Rolled out the Sustainable Procurement Statement
- Completed supply chain ESG self-assessment for 55% of critical suppliers

Read more in Embracing a Sustainable Supply Chain section.





Section 3

# APPROACH

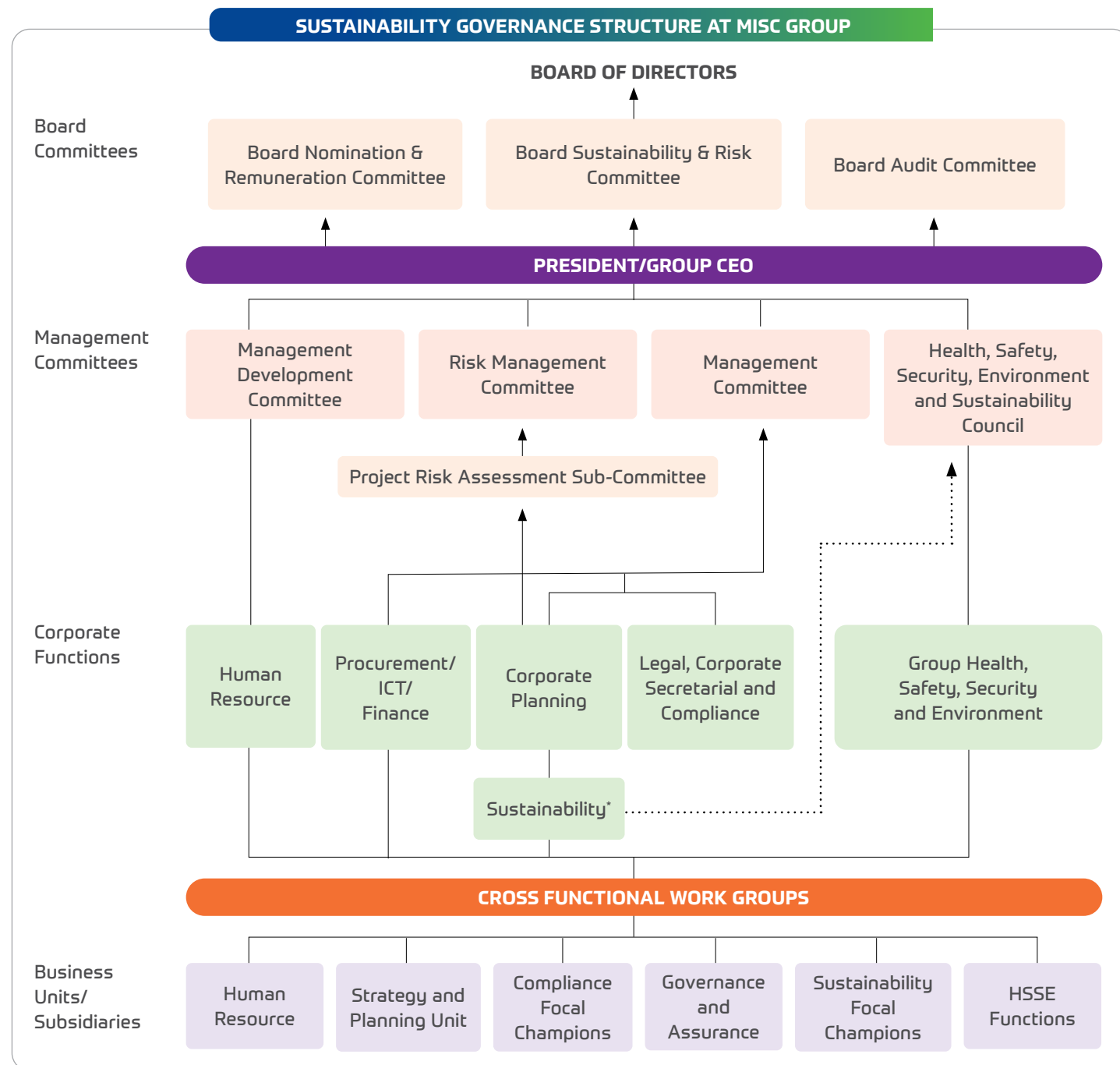
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# Sustainability Governance

At MISC, strong governance serves as both a fundamental element of our corporate commitment and a catalyst for fostering sustainable business practices. We recognise that the decisions we make today have far-reaching implications for the future and we are committed to embedding robust governance principles that build upon sustainability.

Our governance framework promotes transparency, accountability and ethical conduct across all operations. We integrate ESG considerations into our decision-making processes, with the aim of creating long-term value for our shareholders and all stakeholders.



\* The Sustainability department will be moved under Corporate Planning effective 1 February 2024.

# Sustainability Governance

## BOARD OF DIRECTORS

The Board of Directors (the Board) plays a pivotal role in steering our corporate sustainability initiatives, underscoring our commitment to responsible business practices and long-term value creation. As the highest governing body within our organisation, the Board sets the Company's strategic vision and is actively engaged in shaping the trajectory of our sustainability journey.

Roles and responsibilities of the Board are:

- Strategic Oversight:**
  - Sets the strategic direction of our sustainability initiatives
  - Provide insights and guidance to integration with overall business strategy
  - Aligning sustainability goals with the Company's mission and objectives
  - Oversees sustainability reporting and disclosures
- Risk Management:**
  - Oversees the identification, assessment and mitigation of ESG risks
  - Positions MISC to navigate evolving sustainability regulations and expectations
- Leadership and Advocacy:**
  - Advocates sustainability within our organisation and broader business community
  - Sets the tone for a culture that values responsible business practices
  - Encourages innovation in sustainable solutions

In essence, our Board embodies our commitment to integrating sustainability into the fabric of our corporate governance practices. We understand that the success of our business is inseparable from the health and prosperity of the planet and society. Therefore, we are dedicated to not only meeting regulatory requirements but setting higher standards for ourselves as a responsible corporate citizen.

## BOARD SUSTAINABILITY & RISK COMMITTEE

The main role of the BSRC is to oversee the effective implementation of MISC's sustainability strategy, which encompasses various ESG matters such as climate change, health and safety, cybersecurity and human rights, among others. Each member of the BSRC possesses extensive knowledge and expertise in sustainability and risk management. The BSRC meets every quarter to review the progress of sustainability initiatives implementation in line with the sustainability strategy and provide recommendations to the Board on MISC's sustainability strategy implementation to ensure its alignment with the Company's overall business strategy.

In addition, the BSRC reviews reports on significant strategic and operational risks, specifically those associated with ESG, which arise from the quarterly meetings of the Risk Management Committee (RMC).

Other roles and responsibilities of BSRC are:

- Performance Evaluation:**
  - Prioritises and conducts regular assessments on sustainability performance
  - Evaluates metrics, targets and key performance indicators to gauge the impact of our initiatives
  - Ensures accountability and drives a culture of continuous improvement in our sustainability practices
- Regulatory Compliance:**
  - Ensures compliance with existing sustainability regulations
  - Anticipates and prepares for emerging regulatory trends
  - Mitigates risks and capitalises innovation opportunities
- Resource Allocation:**
  - Oversees resource allocation for sustainability initiatives
  - Ensures adequate financial and human resources are dedicated to achieving our sustainability objectives
  - Approves budgets, investments and other resources required to implement sustainable practices throughout the organisation

## Sustainability Governance

### BOARD AUDIT COMMITTEE

The Board Audit Committee (BAC) oversees the internal control framework and reviews ESG matters such as HSSE, business ethics and whistleblowing/grievances cases quarterly.

Sustainability-related topics discussed in the BAC in 2023 are:

- Whistleblowing and grievance report updates, compliance and ethics updates as well as other relevant matters
- Reviewed the Group Health, Safety, Security and Environment (GHSSE) Audit and Assurance Bi-Annual Reports focusing on the efficiency and effectiveness of the maintenance of the Group's vessels and floating assets
- Reviewed reports on key strategic and operational risk issues arising from quarterly RMC meetings, including identification of the risk appetite at the enterprise level and review of the mitigation plans to address the risks. The Sustainability Department was audited by GIA for FY2023 and the outcomes were presented to the BAC

### BOARD NOMINATION AND REMUNERATION COMMITTEE

ESG performances in terms of company scorecard/remuneration are reviewed by the Board Nomination and Remuneration Committee (BNRC). In 2023, they conducted the following:

- A performance appraisal on the Company and President/Group CEO covering areas such as financial, strategic initiatives, operations, people development as well as health, safety, security, environment and sustainability
- Makes appropriate recommendations to the Board for approval based on the Company's and President/Group Chief Executive Officer's (PGCEO) performance against the balanced scorecard

### HEALTH, SAFETY, SECURITY, ENVIRONMENT AND SUSTAINABILITY COUNCIL (HSSES) COUNCIL

The Board and its committees are supported by a dedicated management-level committee called the HSSES Council. The HSSES Council is chaired by our PGCEO and its members comprise the Vice President/Managing Director/CEO of each business unit and subsidiary. Roles and responsibilities of the council:

- Convenes on a monthly basis and serves as the main authority for HSSES matters
- Provides stewardship and oversight on all HSSES-related matters that include group-wide policy, strategy, initiatives, systems, targets, performance and management review

### MANAGEMENT DEVELOPMENT COMMITTEE

The Management Development Committee's (MDC) members consist of MISC's Senior Management. Roles and responsibilities of the MDC:

- Deliberate on matters pertaining to talent performance, career development programmes, succession planning, competency assessments and other people development-related issues

### RISK MANAGEMENT COMMITTEE

The RMC is the primary platform for driving the implementation of the risk management framework within the Group. Roles and responsibilities of the RMC:

- Convenes quarterly to assess the significant risks and ensures the appropriate risk management plans are in place
- Examines the adequacy and effectiveness of controls, as well as the robustness of the mitigation strategies
- Deliberates on these risk-related matters every quarter before presenting them to the Board

The formation of the Project Risk Assessment Sub-Committee (PRASC) facilitates discussions and considerations regarding the risks associated with individual asset investments.

### GROUP HEALTH, SAFETY, SECURITY AND ENVIRONMENT (GHSSE)

The GHSSE division is responsible for overseeing the Group's sustainability efforts. The Sustainability Department is under the purview of the GHSSE division. Roles and responsibilities of the Sustainability Department:

- Drives, coordinates and monitors the progress and achievements of MISC's sustainability strategic priorities, supported by cross-functional working groups at the business units/subsidiaries level
- Manages external sustainability disclosures and reporting
- Conducts group-wide sustainability materiality assessments
- Manages sustainability-related stakeholder engagements
- Provides support and advice to business units and subsidiaries on the implementation of their sustainability strategy, monitoring of performance and disclosures

In February 2024, the Sustainability Department will be moved to the Corporate Planning Division to ensure alignment of roles to drive business strategy, in line with the enhanced requirements of sustainability in the maritime industry. However, sustainability matters are still governed by the existing structure and disclosed in this report.

### SUSTAINABILITY CUSTODIANS/FOCAL CHAMPIONS

The Sustainability Department is supported by cross-functional work groups at the business unit/subsidiaries level. These custodians and focal champions constitute those at Corporate Functions and Business Units/Subsidiaries where dedicated custodians are tasked with the responsibility to ensure that the identified sustainability initiatives are implemented. These custodians and working groups, with vast leadership abilities, expertise and industry knowledge, drive sustainability culture throughout the organisation.

## Prioritising What Matters Most

At MISC, sustainability is an integral part of our strategic planning and risk management. It is a vital element in every aspect of our business and value chain. As a world-leading provider of international energy-related maritime solutions and services, we see opportunities for creating long-term value while minimising external trade-offs associated with our operations and value chain.

We develop our sustainability agenda to address concerns that matter most to both our internal and external stakeholders. Hence, obtaining feedback and responding to matters deemed material to our key stakeholders is a core portion of our sustainability management approach as part of our stakeholder engagement.

### OUR DOUBLE MATERIALITY APPROACH

We define a sustainability matter as material based on the following criteria:

- Significant impact on the economy, environment and/or society
- Significant impact on a company's value drivers, competitive position and long-term shareholder value creation
- Risk and opportunities of internal impact on enterprise value creation

### IDENTIFYING MATERIAL TOPICS

A full materiality assessment is conducted at an interval of no more than three years. The last full materiality assessment was performed in 2022, where we engaged our key stakeholders and identified material sustainability matters for MISC to address. This was done through:



#### BENCHMARKING

We conducted desktop research on current and emerging sustainability trends and performed industry and peer benchmarking to identify a list of potential sustainability matters relevant to MISC's business.



#### STAKEHOLDER ENGAGEMENT

We conducted a survey on the prioritisation of our material matters with the following internal and external stakeholder groups:

- Senior leaders throughout the MISC Group
- Board of Directors
- Customers
- Financial institutions
- Investors/analysts



#### MATERIALITY MATRIX

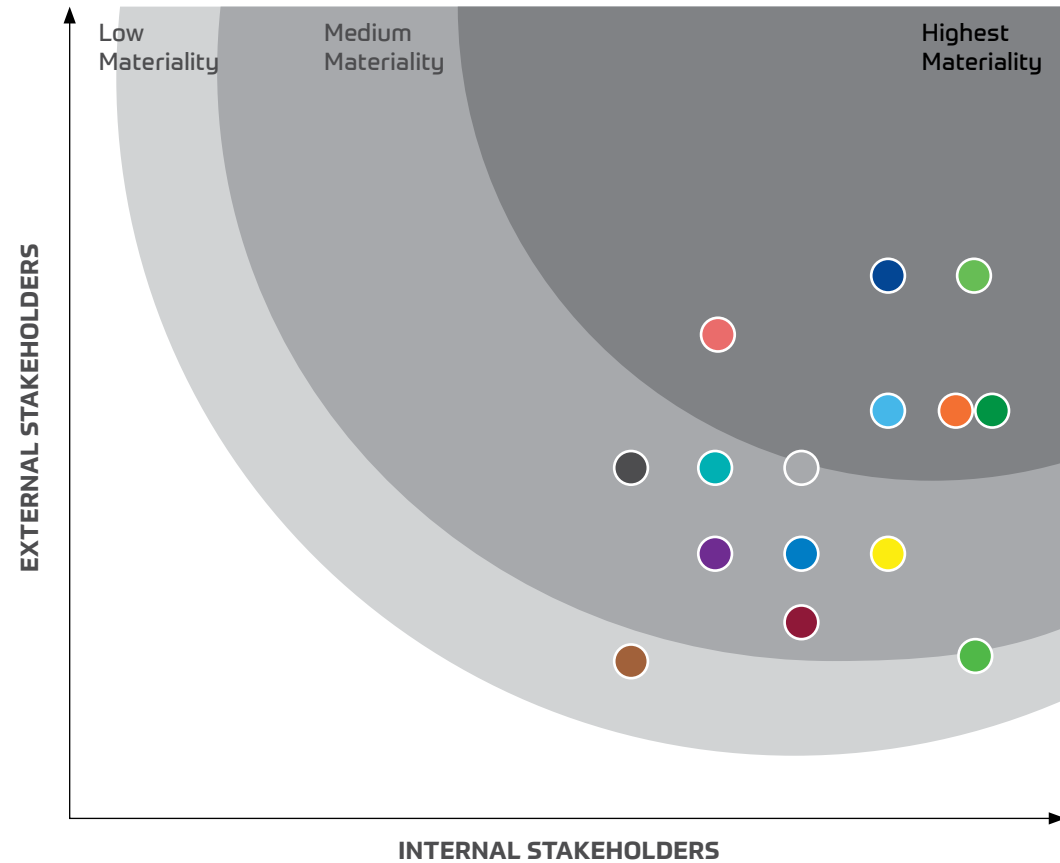
In 2023, we conducted an interim review of the previously identified material sustainability matters with feedback from internal stakeholders. The revised materiality matrix was endorsed by the HSSES Council. It was then presented to the BSRC and Board and was adopted accordingly.



## Prioritising What Matters Most

### MATERIALITY MATRIX

- Health and Safety
- Values, Governance and Business Ethics
- Human Rights
- Financial Performance
- Climate Change
- Energy Management
- Sustainable Supply Chain
- Ocean Health
- Waste Management
- Security
- Talent Development and Retention
- Diversity and Inclusion
- Digitalisation
- Cybersecurity
- Community Investment



### Creating Business Value

Results of our materiality assessment have been used in our business practices to:

- Align our Sustainability Strategic Priorities with our material matters and relevant SDGs;
- Guide us on the disclosure topics in our annual reporting;
- Reinforce the linkages between ESG risks, opportunities and corporate purpose; and
- Guide us in setting our sustainability-related targets and commitments

Our contributions to the SDGs were mapped according to the identified material sustainability topics. Ways in which we address each material sustainability matter and our contribution towards the SDGs are presented in the following table.

## Prioritising What Matters Most

Material Matter	Why Is This Material For MISC	Our Progress Update	Sustainability Strategic Priorities	Targets	Related SDGs
 <b>Health and Safety</b>	The continued safety and health of employees, assets and our cargo remain our priority to ensure safe operations.	Operating Safely	<b>Social Pillar:</b> Health and Safety	<ul style="list-style-type: none"> <li>• Zero fatalities</li> <li>• Lost Time Injury Frequency (LTIF) &lt;0.19</li> <li>• Total Recordable Case Frequency (TRCF) &lt;0.59</li> </ul>	
 <b>Values, Governance and Business Ethics</b>	Conducting ourselves with the highest integrity and embedding good corporate governance and business ethics are important to achieve sustainable financial results.	Operating Responsibly	<b>Governance Pillar:</b> Governance and Business Ethics	<ul style="list-style-type: none"> <li>• Zero compliance and business ethics breaches</li> </ul>	 
 <b>Climate Change</b>	In 2023, the IMO revised its initial GHG strategy (IMO 2030 and IMO 2050) for the shipping sector to become more stringent. This signals shipowners to become even more ambitious about combating climate change as the majority of vessels globally still rely on fossil fuels as a main source of energy for propulsion.	Decarbonisation Pathway	<b>Environment Pillar:</b> Towards Decarbonisation	<ul style="list-style-type: none"> <li>• 50% reduction of GHG intensity (for shipping operations) by 2030 (Base year: 2008)</li> <li>• Net-Zero GHG emissions by 2050</li> </ul>	
 <b>Energy Management</b>	Energy management means using energy efficiently and effectively, reducing the quantum of energy required to perform the same operation or to travel the same distance. Effective energy management will also help reduce the impact of climate change.	Decarbonisation Pathway	<b>Environment Pillar:</b> Towards Decarbonisation	<ul style="list-style-type: none"> <li>• Refer to Climate Change</li> </ul>	
 <b>Financial Performance</b>	Our business and the entire maritime and energy sector are subjected to prevailing sociopolitical and economic conditions and market sentiment. Furthermore, the global energy transition is underway and MISC is actively seeking opportunities in new segments of the energy market.	Economic Value Creation	<b>Financial Pillar</b>	<ul style="list-style-type: none"> <li>• Achieve 25% of cash flow from operating activities from Clean Energy Solutions</li> </ul>	

## Prioritising What Matters Most

Material Matter	Why Is This Material For MISC	Our Progress Update	Sustainability Strategic Priorities	Targets	Related SDGs
 <b>Human Rights</b>	Inadequate human rights management of employees, contractors, supply chain, security and community can impact MISC's license to operate and ability to trade internationally.	Respecting Human Rights at Sea and Shore	<b>Social Pillar</b>	<ul style="list-style-type: none"> <li>Zero human rights breaches</li> </ul>	
 <b>Sustainable Supply Chain</b>	MISC must ensure our suppliers are on track with their sustainability agenda as they help to achieve our long-term goals. We aim to fully integrate ethical and environmentally responsible practices aligning with low-carbon and circular economy business models into our value chain.	Embracing a Sustainable Supply Chain	<b>Governance Pillar: Responsible Supply Chain Management</b>	<ul style="list-style-type: none"> <li>100% of critical suppliers assessed on ESG</li> </ul>	
 <b>Ocean Health</b>	We recognise the importance of ocean health and have implemented pollution prevention strategies to reduce our impact on ocean biodiversity.	Conserving Marine Biodiversity	<b>Environment Pillar: Biodiversity Conservation</b>	<ul style="list-style-type: none"> <li>Zero major spills</li> <li>Installation of Ballast Water Treatment System on all vessels by 2024</li> </ul>	
 <b>Security</b>	At MISC, the importance of secure working conditions for our people and assets is taken seriously. This includes security from physical actions, intrusions and other threats that may negatively impact the running of our business operations.	Operating Safely	<b>Social Pillar: Health and Safety</b>	<ul style="list-style-type: none"> <li>Zero security breaches</li> </ul>	
 <b>Talent Development and Retention</b>	Establishing a sustainable talent stream across all job levels is a key strategic priority and will provide seamless leadership and talent succession planning throughout MISC. A robust talent management programme will equip our workforce with the necessary skills and competencies to realise our business objectives.	Our People, Our Strength	<b>Social Pillar: Talent Excellence</b>	<ul style="list-style-type: none"> <li>High-Performing Talent Retention: 95%</li> <li>Successor Ratio (Management Positions) of 2:1</li> <li>Successor Ratio (Critical Positions) of 2:1</li> </ul>	

## Prioritising What Matters Most

Material Matter	Why Is This Material For MISC	Our Progress Update	Sustainability Strategic Priorities	Targets	Related SDGs
 <b>Waste Management</b>	We recognise that our operational activities generate waste and we must responsibly manage and monitor waste from the point of generation (including waste elimination and reduction) and collection to recycling.	Promoting Circular Economy	<b>Environment Pillar: Promoting Circular Economy</b>	<ul style="list-style-type: none"> <li>27% reduction in plastic waste generation per vessel by 2025</li> <li>40% reduction in paper consumption per vessel by 2025</li> <li>Maintain an annual 3R rate of &gt;95% of hazardous waste generated</li> <li>Increase the annual 3R rate of non-hazardous waste generated to 70% by 2025</li> </ul>	
 <b>Diversity and Inclusion</b>	We believe that a diverse workforce promotes creativity, innovation and broader perspectives that are particularly important for our global operations. We practise a non-discriminatory hiring and promotion policy while providing competitive local employment opportunities wherever we operate.	Our People, Our Strength	<b>Social Pillar: Talent Excellence</b>	<ul style="list-style-type: none"> <li>18 to 20% of women in Senior Leadership</li> <li>35 to 40% of multinationals in Senior Leadership</li> <li>25 to 30% of managers identified as successors</li> </ul>	 
 <b>Digitalisation</b>	Digitalisation will allow us to rapidly respond to changes based on data-driven decisions and innovative ideas that assist us in serving customers more effectively.	Economic Value Creation	<b>Financial Pillar</b>	<ul style="list-style-type: none"> <li>Refer to Cybersecurity Material matters</li> </ul>	
 <b>Cybersecurity</b>	Due to the rapid global advancement of digitalisation of company processes and data, cybersecurity is vital to protect data from unauthorised access and any potential disruption to business continuity	Strengthening Cybersecurity	<b>Governance Pillar: Governance and Business Ethics</b>	<ul style="list-style-type: none"> <li>Zero cybersecurity breaches</li> </ul>	
 <b>Community Investment</b>	Investing in the community is part of MISC's contribution to society. Employee involvement in our community investment programmes further strengthens their connection with the workplace, enhancing productivity and talent management.	Partnering with the Community	<b>Social Pillar: Community Investment</b>	<ul style="list-style-type: none"> <li>Cadet Sponsorship Programme</li> </ul>	

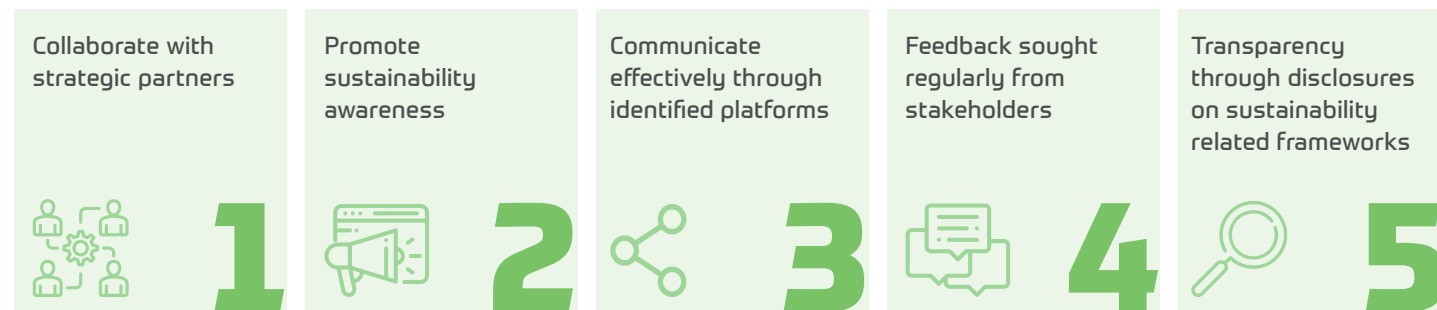


## Our Stakeholders' Universe

Establishing and nurturing relationships with stakeholders is an important focus area for MISC as their participation is vital. Their feedback and concerns are considered earnestly as they can impact our business decision-making. Guided by our stakeholder engagement strategy and principles, we have dedicated our efforts to creating value for our stakeholders through regular engagements, awareness programmes, dialogue and collaboration activities.



### MISC STAKEHOLDER ENGAGEMENT PRINCIPLES



We follow a structured stakeholder engagement process outlined in the MISC Group Stakeholder Engagement Guideline. Stakeholder engagement within individual service units, business units and subsidiaries is tailored to their specific requirements. The guideline helps us identify key stakeholders and understand their expectations, interests and influence on the business.

This information is crucial for developing targeted communication and engagement strategies that accommodate cultural differences, regulatory environments and specific industry dynamics. In addition, we have established the Responsibility Assignment Matrix or RACI (Responsible,

Accountable, Consulted, Informed) where each subsidiary and business unit is tasked with developing and monitoring their stakeholder engagement plans, in addition to and creating their RACI that are relevant to their stakeholder and business needs. Regular assessments of stakeholder priorities help business units and subsidiaries stay responsive to evolving expectations, ensuring ongoing relevance and positive relationships.

At the Group level, stakeholder engagement is overseen by the Social Performance and Stakeholder Engagement team under the Sustainability Department.

## Our Stakeholders' Universe

### DEFINING OUR STAKEHOLDERS

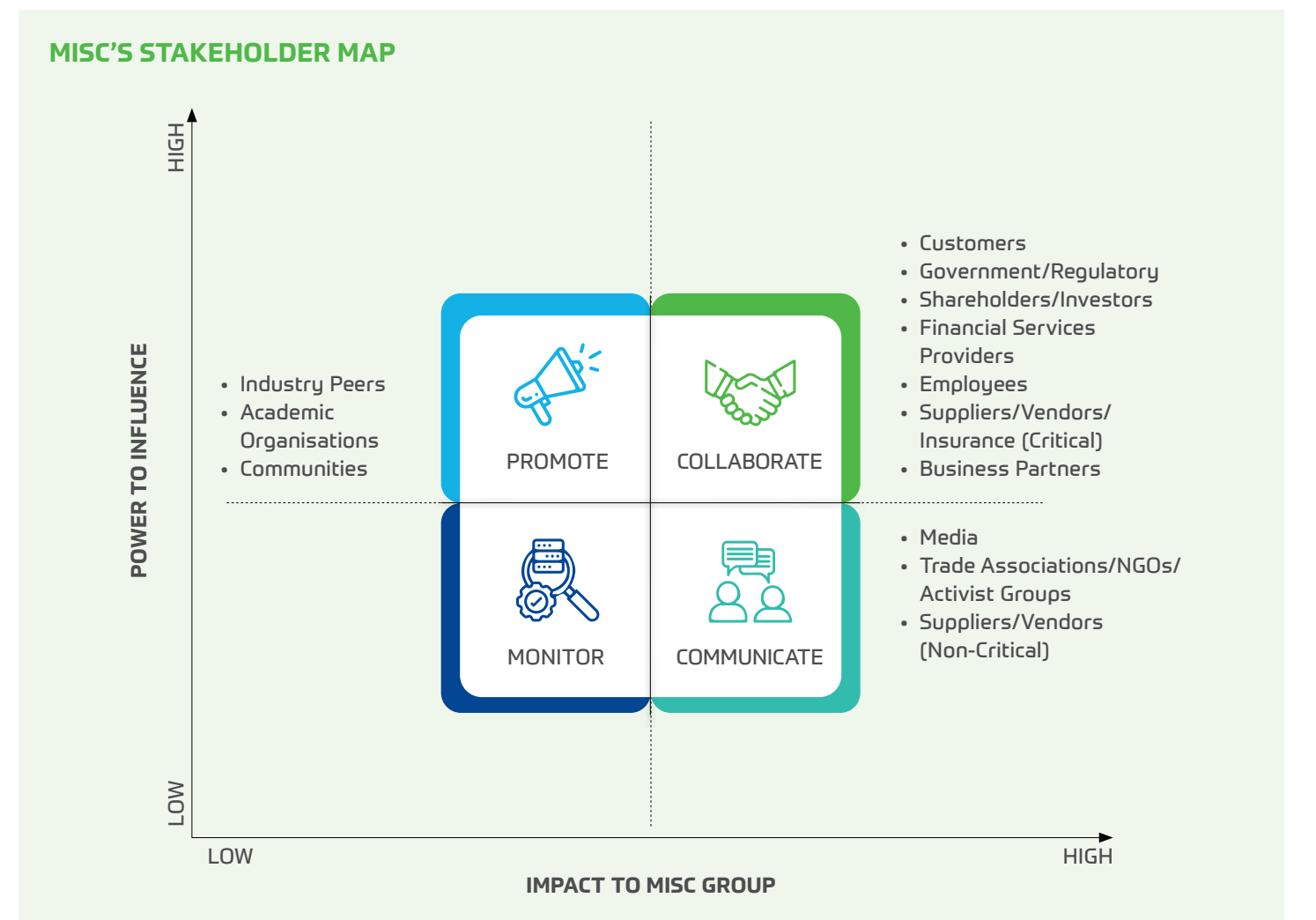
We identify our stakeholders' importance and level of involvement to ensure we cater to their needs and priorities and allocate resources optimally. MISC's stakeholders are defined as follows:

- All those who exercise, or could exercise influence over the activity of our business or operations; and
- All those who are or could be influenced by the activity of our business or operations

### STAKEHOLDER PRIORITISATION

The Stakeholder Map shows the influence and dependence of each stakeholder group on MISC. The prioritisation of our key stakeholders are as follows:

- Those who are the most likely to impact the Company's achievement of its strategic objectives
- Those who can be positively or negatively impacted by our operations and activities





# Our Stakeholders' Universe

# Our Stakeholders' Universe

## MISC STAKEHOLDER ENGAGEMENT

MISC uses a variety of engagement methods which are designed to support business operations whilst taking into consideration the needs and expectations of our stakeholders. One or more methods are used either simultaneously or sequentially. We collaborate closely with the following key stakeholders. However, there are other stakeholders such as trade associations, NGOs, activist groups, industry peers, academic organisations and media in which we take a more tailored approach to engagement, as necessary.

Our Stakeholders	Stakeholder Value Proposition	Concerns/Issues Raised	Our Strategic Response	How We Engage				
				Collaborate	Promote	Communicate	Feedback	Transparency
 <p><b>Government/Regulators</b></p>	<ul style="list-style-type: none"> <li>Support the government's agenda in promoting innovation and sustainable growth of the maritime industry</li> <li>Sustain MISC's license to operate</li> </ul>	Compliance with laws and regulations	<ul style="list-style-type: none"> <li>Collaborate with regulators to ensure compliance with laws and regulations</li> </ul>	x		x		
		Introduction of future laws and regulations	<ul style="list-style-type: none"> <li>Engage with regulators to provide feedback on proposed laws and regulations</li> </ul>			x	x	
		Crisis management and business continuity	<ul style="list-style-type: none"> <li>Collaborate with authorities on emergency response and preparedness</li> </ul>	x		x		
		Development of talent and job opportunities	<ul style="list-style-type: none"> <li>Collaborate on maritime academy syllabus to nurture and develop seafarers in line with the nation's maritime vision</li> <li>Provide job opportunities and development of local talents</li> </ul>	x	x			
		Corruption and bribery	<ul style="list-style-type: none"> <li>Participate in the Maritime Anti-Corruption Network (MACN) to combat corruption in the maritime industry</li> <li>Implement the CoBE for employees and third-parties</li> </ul>	x	x			x
 <p><b>Shareholders/Investors/Financial Services Providers</b></p>	<ul style="list-style-type: none"> <li>Provide platforms to better understand MISC's business performance, financial position and sustainability agenda</li> <li>Increase shareholder/investor confidence</li> <li>Improve access to debt funding for capital expenditure (CAPEX)</li> </ul>	Project and financial performance	<ul style="list-style-type: none"> <li>Ensure strong governance in project and financial management</li> </ul>	x		x		x
		Values and governance	<ul style="list-style-type: none"> <li>Establish strong governance policies and procedures</li> <li>Improve awareness on business ethics and whistleblowing processes</li> </ul>	x	x	x	x	x
		Climate change	<ul style="list-style-type: none"> <li>Participate in the Getting to Zero Coalition by collaborating with strategic partners along the value chain to develop commercially viable ZEVs by 2030</li> <li>Fleet renewal to low-carbon fuel and energy-efficient vessels</li> </ul>	x	x			
		Diversity and inclusion	<ul style="list-style-type: none"> <li>Develop and implement diversity and inclusion policy</li> </ul>		x	x		x
		ESG risks, opportunities and performance	<ul style="list-style-type: none"> <li>Establish strong sustainability practices and regularly disclosing performance</li> <li>Participate in third-party ESG performance ratings</li> <li>Incorporate ESG risks and opportunities into business decisions</li> </ul>		x	x	x	x
 <p><b>Customers</b></p>	<ul style="list-style-type: none"> <li>Increase confidence in MISC's capabilities in delivering quality and sustainable products and services</li> </ul>	Crisis management and business continuity	<ul style="list-style-type: none"> <li>Drive close engagement with customers to brief them on our business continuity plan to ensure minimal interruption to customer operations</li> </ul>	x	x	x	x	
		Values and governance	<ul style="list-style-type: none"> <li>Ensure strong governance in project management</li> <li>Improve business ethics awareness and whistleblowing processes</li> </ul>	x	x	x	x	x
		Business experience	<ul style="list-style-type: none"> <li>Implement upskilling and reskilling initiatives for employees to provide niche expertise for maritime services</li> </ul>	x				
		Supply chain management	<ul style="list-style-type: none"> <li>Enhance awareness and conduct ESG assurance along the supply chain</li> </ul>	x		x	x	
		Climate change	<ul style="list-style-type: none"> <li>Ensure fleet renewal to low-carbon fuel and energy-efficient vessels</li> </ul>	x	x			
		Health and Safety	<ul style="list-style-type: none"> <li>Implement high health and safety standards</li> </ul>	x	x	x		
		Labour and human rights	<ul style="list-style-type: none"> <li>Establish the MISC Modern Slavery Policy and CoBE for employees and third-parties</li> <li>Conduct Human Rights Risk Assessments (HRRRA) and due diligence on material human rights matters</li> </ul>				x	x



## Our Stakeholders' Universe

## Our Stakeholders' Universe

Our Stakeholders	Stakeholder Value Proposition	Concerns/Issues Raised	Our Strategic Response	How we engage				
				Collaborate	Promote	Communicate	Feedback	Transparency
 <p><b>Employees</b></p>	<ul style="list-style-type: none"> <li>• Career development and growth in a sustainable organisation</li> <li>• Talent attraction and retention</li> </ul>	Business ethics and compliance	<ul style="list-style-type: none"> <li>• Ensure mandatory business ethics e-learning modules</li> <li>• Enhance business ethics awareness and whistleblowing processes</li> </ul>		X	X	X	X
		Health, safety, security and environment management	<ul style="list-style-type: none"> <li>• Implement high health, safety, security and environmental standards</li> <li>• Encourage employees to report UCAs</li> </ul>	X	X	X		
		Upskilling and reskilling talent	<ul style="list-style-type: none"> <li>• Support and encourage employees to improve their skills and enhance their competency via the Talent Management System (TMS)</li> <li>• Encourage employees to participate and provide feedback to stimulate two-way conversations via ECHO+</li> </ul>	X	X		X	
		Diversity and inclusion	<ul style="list-style-type: none"> <li>• Encourage and support employee diversity and equal opportunities in our career development and volunteering programmes</li> </ul>		X			X
		Employee Engagement Programmes	<ul style="list-style-type: none"> <li>• Conduct festive celebrations</li> <li>• Provide multiple platforms for employee conversations</li> <li>• Organise various employee engagement programmes such as family day, townhalls and religious talks</li> </ul>	X	X	X	X	
 <p><b>Business Partners/Suppliers and Vendors</b></p>	<ul style="list-style-type: none"> <li>• Leverage each other's expertise and collaborate for innovative products and services</li> <li>• Improve understanding of MISC's expectations (including sustainability agenda) on suppliers and increased business opportunities</li> </ul>	Project and financial performance	<ul style="list-style-type: none"> <li>• Ensure strong governance in project and financial management</li> </ul>		X	X		X
		Crisis management and business continuity	<ul style="list-style-type: none"> <li>• Engage closely with business partners/suppliers and vendors to ensure minimal business interruption</li> </ul>	X	X	X	X	
		Values and governance	<ul style="list-style-type: none"> <li>• Enhance business ethics awareness and whistleblowing processes</li> <li>• Enhance the Know Your Counterparty (KYC) requirements for all business dealings as part of the Third-Party Compliance Due Diligence Guidelines</li> <li>• Provide CoBE training for third-party service providers to drive awareness of MISC's CoBE and other requirements and expectations</li> <li>• Adopt Competition Law and Compliance Protocols to support the Competition Law Guidelines</li> </ul>	X	X	X	X	X
		Health, Safety and Environment	<ul style="list-style-type: none"> <li>• Inculcate strong discipline and mindset around health, safety and environment</li> <li>• Recognise suppliers/vendors with good practices</li> </ul>	X	X	X		
		Business knowledge and expertise	<ul style="list-style-type: none"> <li>• Drive upskilling and reskilling initiatives competencies for employees to provide niche expertise for maritime services</li> </ul>	X	X			

## Our Stakeholders' Universe

### STAKEHOLDER ENGAGEMENT ACTIVITIES

In 2023, we conducted a wide range of engagement activities with our stakeholders to communicate efforts, build rapport, strengthen business relationships and gain knowledge on the latest developments in the industry. These activities have helped the Group to stay ahead of the curve and continuously create value.

The section below highlights our significant efforts in engaging key stakeholders.

#### OUR STAKEHOLDER: Government and Regulators

##### COP28 Delegation

Shaping the Future of Shipping: Delivering a Net-Zero World summit at COP28 in Dubai brought together over 300 global energy and maritime leaders. As a key participant in the International Chamber of Shipping's Shaping the Future of Shipping taskforce, MISC Group fielded a delegation of seven representatives, headed by our PGCEO.



The summit aimed to tackle decarbonisation challenges, promote greener shipping solutions and discuss advancements in infrastructure, fuel availability and financing for sustainable energy-maritime development. We actively contributed to the global dialogue on achieving the IMO's ambitious Net-Zero targets by 2050 during the Accelerating and Scaling Global Energy Transition panel session and the Delivering Net-Zero Fuels for the World fireside chat. In addition, we also advocated for the development of Clean Energy Hubs.

##### Visit from the Malaysian Minister of Transport

MISC Group received a courtesy visit from the Malaysian Minister of Transport, Yang Berhormat Anthony Loke Siew Fook. As this is his inaugural visit to our headquarters, it serves as an opportunity to brief the minister on our worldwide operations and contributions to the global maritime industry. Discussions included potential strategic collaborations between the Ministry of Transport and MISC Group, to further elevate the Malaysian, regional and global maritime industry.



##### Maritime Intelligence Strategic Partnership

MISC Berhad's Security Department and the Naval Intelligence Department of Royal Malaysia Navy (RMN-NID) have formalised the Terms of Reference for the Maritime Intelligence Strategic Partnership. This partnership programme provides a platform for both parties to share intelligence and information on maritime security issues affecting merchant shipping. It also aims to enhance communication effectiveness between MISC, our subsidiaries and RMN-NID.



## Our Stakeholders' Universe

### Information Fusion Centre (IFC)

Our Petroleum & Product Shipping segment, AET, participated in the biennial Maritime Information Sharing Exercise (MARISX) in Singapore conducted by the Information Fusion Centre (IFC) of the Republic of Singapore's Navy. 100 participants from 29 countries comprising Maritime Security (MARSEC) practitioners from 43 navies, coast guards, agencies like the International Association of Independent Tanker Owners (INTERTANKO) and P&I clubs, alongside 25 shipping companies took part in the exercise which facilitated information sharing, exchange of best practices, knowledge and insights across the industry. The exercise also enabled discussions on challenges faced by the shipping community contributing to overall confidence building in maritime security.



Post MARISX, AET and Marine Services hosted a joint discussion with the IFC at the AET Singapore office, focusing on knowledge exchange, best practices and explored opportunities for collaboration in maritime security.

### Malaysian Authorities

In August 2023, the Malaysian Deputy Minister of Transport and other Malaysian government officials attended the inaugural ship naming ceremony of AET's Malaysian-flagged LNG dual-fuel VLCC, *Eagle Vellore*, at the MMHE Pasir Gudang yard.



Later in the year, we were proud to have been one of the sponsors at the National Day and Malaysia Day Celebration hosted by the High Commission of Malaysia in Singapore for the second consecutive year, bringing together esteemed leaders, industry peers and many more to foster a sense of unity and community.

### Maritime and Port Authority of Singapore (MPA)

Several leaders from across the MISC Group participated as panellists in important discussions and high-profile forums during the Singapore Maritime Week 2023 organised by MPA. The event brought together the global maritime community under the theme "Ambition Meets Actions" and our then Global Director of VLCC/PCS and MISC Head of Decarbonisation Unit participated as a panellist alongside other industry leaders at the Lloyd's Register Maritime Transformation Forum discussing the Maritime Energy Transition – risks and opportunities for the world's fleet.



MPA was also engaged through AET's annual crisis drill exercise which focused on an LNG spill on one of our petroleum vessels while at Singapore anchorage. The exercise tested the operational linkage and communication workflow with the Singapore government agencies, strengthening our readiness to respond during a crisis.



## Our Stakeholders' Universe

### Brazilian Authorities

With a growing presence of the MISC Group in Latin America, we hosted a stakeholder reception and dinner in Brazil to interact and strengthen relationships with our key stakeholders including the Brazilian authorities, key customers and business partners.

### Visit by Bintulu Port Authority

Bintulu Port Authority (BPA) visited Menara Dayabumi in the first quarter of 2023 to build trust, align client expectations with our capabilities and enhance communication. The visit strengthened the relationship and led to discussions about BPA employees experiencing sailing on our LNG vessels. Subsequently, in August 2023, our Gas Assets & Solutions segment formalised a Collaboration Agreement (CA) with BPA, to foster mutual understanding, commitment and a vessel familiarisation programme on MISC LNG vessels. The collaboration focuses on strengthening the relationships and improving human resources in the maritime sector through education, knowledge and experience sharing garnered over the years serving in the industry.



### Visit by the Department of Environment to MHB's West Yard

The Department of Environment (DOE) visited the MMHE West Yard to understand MHB's operations and factors contributing to scheduled waste generation. This provided a valuable learning experience for DOE delegates and allows MHB to identify areas for improvement, including reducing our environment impact.



The visit also underscored the importance of Environmental Mainstreaming Tools (EMT) in fostering Guided Self-Regulation in industrial activities and efforts by MHB in embracing the EMT through self-regulation.

## Our Stakeholders' Universe

### Sustainability Sharing Sessions with Institutional Investors and Analysts

We hosted two sustainability sharing sessions, reaffirming our dedication to building trusted stakeholder relationships in line with SDG 17. The first sharing session brought together key institutional shareholders from Employees Provident Fund (EPF), Kumpulan Wang Persaraan (Diperbadankan) (KWAP) and Permodalan Nasional Berhad (PNB), whilst the second session involved sell-side and buy-side analysts from investment banks and asset management companies.



Both sessions were designed to enhance our shareholders' understanding of MISC Group's sustainability path, strengthen investor relationships and communicate our ESG priorities. Key highlights included our commitment to reducing GHG emissions, adoption of cutting-edge technologies and exploration of clean energy solutions in our journey toward achieving Net-Zero emissions. These engagements served as a valuable platform to align expectations on our ESG priorities, fostering confidence and trust in MISC's journey towards a sustainable maritime industry.

### Analyst Visit to MHB

Visits to MHB's MMHE West and East Yards are conducted annually for analysts, fund managers and shareholders to provide them with information to elevate their understanding of the businesses and operations within MHB. These visits showcased our Marine & Heavy Engineering segment strengths and capabilities and fostered a better understanding of overall business operations, yard infrastructure and ongoing projects progress at MHB.



## OUR STAKEHOLDER: Shareholders/Investors/Financial Services Providers

### Analyst Visit Aboard *Seri Alam*

MISC Group hosted a team of sell-side analysts on board *Seri Alam*, MISC's LNG vessel at berth No. 1, MLNG Bintulu, Sarawak. The tour offered an in-depth look into our vessel, allowing the analysts to gain a better understanding of an LNG ship's operations. Additionally, the ship's captain shared firsthand insights and briefed the group about a day in the life of the vessel's crew – covering their day-to-day routines and operations. Our guests had the opportunity to also meet the crew.



## OUR STAKEHOLDER: Customers

### Operations and Lightering Forum

Our team in Houston hosted the first AET Operations and Lightering Forum which brought together approximately 30 of our key clients located in the area. The half-day event aimed to further strengthen working relationships, foster collaboration and create a space to share knowledge while also providing networking opportunities. Representatives from various departments took the stage and shared their expertise to provide our clients with a comprehensive overview of our operations and an in-depth understanding of our capabilities. The inaugural forum was a testament to our commitment to excellence, collaboration and building lasting partnerships.





## Our Stakeholders' Universe

### Port and Maritime Exchange

Marine Services organised the Port and Maritime Exchange 2023 (POMEX23) in Le Meridien, Kota Kinabalu, Sabah, Malaysia. The event aims to foster mutually beneficial relationships with key stakeholders, understand their perspectives, while addressing their concerns and collaborate on initiatives that contribute to shared goals and values. It kicked off with a friendly golf tournament and continued with a forum that served as a melting pot of ideas, where leaders and experts discussed various matters in the industry.

Over 200 key stakeholders including industry leaders such as Marine Department Malaysia (MARDEP), Oil Companies International Marine Forum (OCIMF), INTERTANKO, Sabah Ports, Miri Port, Kertih Port, PETRONAS, PERTAMINA and many others, participated in POMEX23. There were many vital discussions held during the event on the evolving dynamics of the port and maritime industry. This engagement further guides Marine Services through the intricate landscape of the maritime and shipping sector whilst ensuring alignment with its mission and core values.



### Project Safety Workshop

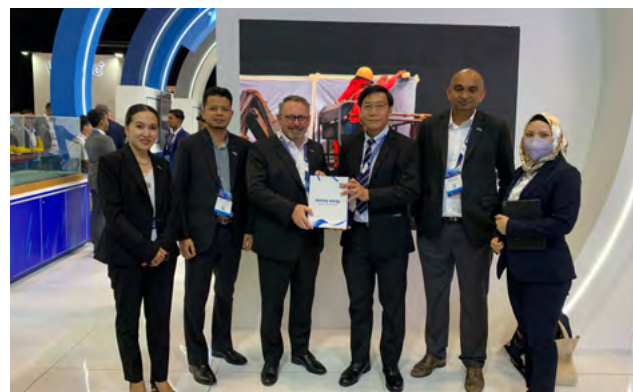
This safety workshop, which apart from Marine Services, saw participation by Qatar Energy, Hanwha Ocean Co. Ltd, Korea Green LNG Consortium Meiji Shipping and TMS Cardiff to brief on the charterer's expectations of safety requirements and alignments between all stakeholders involved with the Qatar Energy projects.



### International Petroleum Technology Conference

The International Petroleum Technology Conference event was held from 1 to 3 March 2023 in Bangkok, Thailand, hosted by PTTEP under the theme of "Balancing the Energy Landscape through Innovation and Sustainability".

We showcased our capabilities at an exhibition booth, with technical presenters from each business unit discussing technology and innovation topics. During the three-day event, MISC had several meetings with the leadership team from PTTEP, Chevron, the Department of Minerals and Fuels, PETRONAS and local vendors such as the Bangchak Corporation to discuss existing asset performance and new business opportunities.



## Our Stakeholders' Universe

### Offshore Technology Conference

Our Offshore Business participated in the Offshore Technology Conference at Houston and unveiled a design of the world's first NBFPSO unit which uses Mega-Module topside. They also presented a paper on the Partial Electrification of an FPSO Operating in the Brazilian Pre-Salt Region at the Technology Conference to an international audience.

This honour proved our strong presence and capabilities in the Americas and worldwide.



### Stakeholder Engagement Event

MISC organised a stakeholder engagement event in Yantai, China, focusing on offshore business achievements, vision and future ambitions in the floating offshore industries. The event highlighted MISC's strategic investments, innovative approaches and upcoming opportunities within this dynamic sector. It served as a platform to showcase our expertise in delivering complex FPSO units, emphasising the company's dedication to fostering innovation and growth in the floating offshore industry.



### PETROBRAS, operator of the 'Libra Consortium,'<sup>1</sup> and Partners Visit MERO 3 Project

In August 2023, PETROBRAS and partners conducted a visit to the MERO 3 Project. Led by PETROBRAS' senior management, the delegation, including key executives from associated partners, toured the FPSO to deepen their understanding of the project's development. The visit aimed at aligning goals, strengthen partnerships between PETROBRAS, field partners and MISC. Delegates interacted with MISC's Project Management Team, discussing cutting-edge technologies, safety protocols and strategies to ensure the project's on-time delivery while maintaining the highest safety standards.



<sup>1</sup> The Libra Consortium is operated by PETROBRAS (38.6%), in partnership with Shell Brasil (19.3%), TotalEnergies (19.3%), CNPC (9.65%) and CNOOC (9.65%) and, with Pré-Sal Petróleo SA (PPSA) (3.5%), representing the Government in the non-contracted area.



## Our Stakeholders' Universe

### Saudi Aramco IKTVA 2023 Forum and Exhibition

Saudi Aramco organised an event at the Dhahran Expo centre to promote the growth of local suppliers and encourage new international suppliers to expand their business footprint in Saudi Arabia. Our Marine & Heavy Engineering segment as a Long-Term Contractor with Saudi Aramco on offshore projects, seized this opportunity to promote its capabilities and achievements in the offshore oil and gas EPCIC business to Saudi Aramco and an international audience. Our delegates engaged with senior executives from Saudi Aramco, local suppliers and service providers to explore potential collaboration opportunities to participate in upcoming Saudi Aramco LTA projects. This event allowed MHB to strengthen its presence in the Middle East through client engagements and partnerships, providing avenues to penetrate the international market as an EPCIC contractor.

### ASEAN Green Hydrogen Conference 2023

MHB participated in the ASEAN Green Hydrogen Conference 2023 with the aim of keeping abreast of the market trends, shifts, challenges and opportunities introduced by the hydrogen economy.

### Visit by QatarEnergy LNG

In March 2023, we organised a visit by QatarEnergy LNG (previously known as Qatargas) to strengthen our business relationship and collaboration efforts. This visit emphasised MISC's commitment to the highest standards of safety and quality in supporting the growth of the QatarEnergy Tranche 1 Project with JV partners.

The Gas Assets & Solutions segment also actively conducted regular engagements with existing clients, including PETRONAS, ENI S.p.A, SRM, Satellite Chemical Co. Ltd and others to strengthen existing relationships, enhance alignment and pursue common goals. Recognising the transformative nature of the maritime industry, where sustainability plays a pivotal role, we are committed to adopting innovative and responsible practices and actively contributing to the industry's decarbonisation goals.



## Our Stakeholders' Universe

### OUR STAKEHOLDER: Employees



#### Townhall with the Leaders

On 27 January 2023, a total of 2,200 employees gathered physically and virtually for the MISC Group Townhall where the PGCEO introduced the theme "Shifting Gear: Accelerating to 2030". The session featured insights into business performance, achievements from the previous year and expectations for the year. The event included a Q&A session, allowing employees to interact with the leadership team, which provided insightful information.



#### BhS Programme Launching and Roll-Out of MISC Life-Saving Rules and HSSE Rules and Commitment

Offshore Business officially launched its BhS Programme on 15 June 2023 and rolled-out MISC Life-Saving Rules and HSSE Rules and Commitment. This event was an inspiring endeavour to remind and empower Offshore Business employees with crucial safety actions required for a secure work environment, while simultaneously fostering a robust HSSE culture within the team.



#### POCS Intervention Plan – Coffee Talk and Speak My Mind Box

Based on the POCS result, our Offshore Business developed an Intervention Plan to improve and elevate internal culture to the next level. In 2023, there were two programmes namely "Coffee Talk with Offshore Business Leaders" and "Speak My Mind Box" were conducted.



#### Day of the Seafarers Celebration

Held on 21 June 2023, the event included corporate social responsibility (CSR) activities at the Turtle Information Centre, Melaka and an engagement session at ALAM, attended by shore and sea employees collectively.





## Our Stakeholders' Universe

### AET Employee Engagement

The MISC Group embraces diversity and believes that working collaboratively as one team is the key to success. Our leaders are trained to be inclusive and to actively engage with their teams. Towards this, a leaders retreat was organised by AET to enhance team synergy and strengthen collaboration, inspiring them to work together. Outcomes from the retreat were shared across AET to bring everyone together to celebrate the journey so far and to look towards future goals and aspirations.

To this end, there were several in-person focus and engagement sessions with the AET President & CEO across all offices and quarterly townhalls in each region to allow for greater interaction between employees and the Executive Leadership Team.

To further encourage interaction, a new digital tool was launched for employees to share ideas, allowing AET's global team to connect and collaborate with one another in an informal and fun way. Through the digital tool, employees also get to ask questions and connect directly with the Executive Leadership Team. Social activities and events were organised across all AET offices to foster greater connections among employees and celebrate diversity. Employees also participated in various volunteering initiatives, building on a common sense of purpose while giving back to the communities in the areas where AET operates.

Employee engagements are measured using POCS, which saw a 10% and 5 points increase in participation rate and engagement score respectively.



### GAS Business Quarterly Employee Engagement

The Gas Assets & Solutions segment organised quarterly employee engagement sessions to foster strong relationships between the leadership team and employees, creating a positive work culture that promotes employee satisfaction and productivity. During these sessions, various activities were conducted such as the sharing of business updates and interactive activities among employees and the management team.



### Employee Engagement via CSR Programme

In December 2023, the Gas Assets & Solutions segment organised a CSR programme at the Turtle Conservation and Information Centre in Melaka. Among the activities conducted were beach cleaning, clean-up of the Turtle Egg Sanctuary and mural painting. This programme aims to elevate awareness among our employees about the importance of environmental conservation and to actively promote efforts to conserve turtle species.



## Our Stakeholders' Universe

### OUR STAKEHOLDER: Business Partners/Suppliers and Vendors



#### SGMF Asia Member Forum

The Society for Gas as a Marine Fuel (SGMF) Asia Member Forum aims to provide the latest developments in Ship Design and Construction and Alternative Fuels. During the forum, updates on the application of LNG fuel in the current market, decarbonisation consideration in ship design and rules development for alternative fuels such as ammonia, methanol and hydrogen were discussed. This forum was participated by SGMF members and industry players.

#### HSSE Partners Summit

The MISC HSSE Partners Summit was conducted to strengthen collaboration with business partners, focusing on HSSE, sustainability, quality, work efficiency and contractual performance. Attended by 235 participants, over half represented business partners, the event emphasised expectations and commitments to uphold the highest standards and build a Generative Culture. The summit celebrated our partners' achievements in 2022, highlighting HSSE and Sustainability Best Practices. Eight business partners received HSSE Excellence Recognition for outstanding performance in health, safety, environment and sustainability practices.



#### Offshore Business Visit to MHB

Offshore Business coordinated a visit to MHB, led by the Head of Malaysia Engineering and Construction Department for PTTEP. This visit is part of ongoing engagements between MISC and PTTEP where MISC initiated a courtesy visit to PTTEP's Bangkok offices back in March and subsequently to their Kuala Lumpur offices in the same year to fortify the relationship between the two parties, discuss several projects and emphasise MISC's steadfast commitment to sustainability and our decarbonisation agenda.



#### Brown Water/Blue Water Operators – Industry Workshop Collaboration

Our Petroleum & Product Shipping segment was instrumental in organising an industry workshop together with the Sabine Pilots to connect the Brown Water/Blue Water operators and encourage a facilitated dialogue between professionals who work in the maritime space in Houston and Sabine. This initiative was a result of several incidents or near misses recorded over the past few years in the Houston and Sabine ship channels. The workshop was well received with over 150 participants from pilots, port captains, ship owners as well as inland tug and barge owners/operators and the shrimp and fishing boat community. Besides bringing together industry leaders and technical experts, the workshop created a collaborative space where everyone could discuss case studies and scenarios. Our active participation continues to underscore our commitment to collaboration and partnerships with all stakeholders to keep contributing to safety at sea.

#### Engagement with Brokers

The Gas Assets & Solutions segment organised engagement with brokers to provide understanding on client needs, build trust and confidence between brokers and ship owners. Additionally, the engagement provided knowledge, alongside the elements of consultancy on the brokers' approaches, innovative solutions and experience alongside fostering good relationships for future collaborations.



## Our Stakeholders' Universe

### Engagement with Shipyards

The Gas Assets & Solutions and Petroleum & Product Shipping segments have been actively engaging with the shipyard community throughout the year to gain knowledge on the latest vessel technology and understanding the shipyard's products and offerings, specifically on conventional LNGCs, LCO<sub>2</sub> carriers and eco-friendly ships, among others. This is important to ensure our business segments are ahead of the curve on the advancement of technologies.

### Engagement Sessions with Agencies

Throughout 2023, we have been actively engaging with various agencies including classification societies, engineering houses, equipment makers and shipyards to obtain information on the latest developments in areas such as ammonia-fuelled vessels, LCO<sub>2</sub> carriers and other new asset solutions.

### Visit by Japanese Marine Service Providers

The Japanese Marine Service Providers conducted a courtesy visit which proved to be a mutually benefitting experience as both parties had the opportunity to exchange information and expectations on the various aspects of business and operations. The Japanese delegates highlighted their expertise and commitment to providing high-quality marine services to MISC and PETRONAS, showcasing their highest standards of professionalism and HSSE. MISC, on the other hand, highlighted our capabilities in providing end-to-end marine logistics solutions such as maritime academy, port and terminal management, shipping and new assets solutions, offshore as well as technical and engineering services. Such visits play an essential role in creating a platform for relationship-building between our stakeholders.



### MISC Appreciation Annual Reception

In September 2023, the annual MISC Appreciation Reception brought together more than 160 guests of LNG terminal operators, service providers, bankers and business partners at the New Otani Hotel, Tokyo. The reception demonstrated the importance of establishing good sustainable partnerships and continuous engagements in the way we do business.

For four decades, MISC has been diligently supporting the Malaysia-Japan LNG supply chain since the first LNG delivery in 1983. MISC has successfully completed every single delivery of LNG cargo to Japan and we have grown from strength to strength with the support of our Japanese partners.



## Our Stakeholders' Universe

### LIST OF ASSOCIATIONS AND PRINCIPLES

We remain committed to shaping and advancing the global shipping sector and we do this through active engagement with industry associations, participation in public policy initiatives and adheres to regulatory frameworks. We prioritise economic, environmental and social dimensions, given our active participation and memberships in organisations dedicated to addressing climate-related challenges. Our commitment to limiting temperature rise to well below 2°C is reflected in our holistic approach, covering all subsidiaries and business units, in ensuring sustainable practices and responsible corporate citizenship.

The following provides information on our involvement and memberships in business associations and public policy within the shipping industry and climate-related areas.

### CLIMATE-RELATED TRADE ASSOCIATIONS AND PRINCIPLE/CHARTER

#### CALL TO ACTION

##### Description

The Call to Action was developed by a multi-stakeholder task force convened by the Getting to Zero Coalition with members from the entire maritime ecosystem including shipping, chartering, finance, ports and fuel production. The Call to Action was delivered to world governments in November 2021 before COP26.

##### Our Position

We are a signatory to the Call to Action for shipping decarbonisation.

#### CARBON DISCLOSURE PROJECT (CDP)

CDP is a not-for-profit organisation that administers the global disclosure system used by investors, businesses, cities, states and regions to manage their environmental impacts.

We disclose our carbon management strategies, policies and procedures to CDP annually.

#### GETTING TO ZERO COALITION

Getting to Zero Coalition is a partnership between the Global Maritime Forum (GMF), Friends of Ocean Action and the World Economic Forum. The coalition is a powerful global alliance of more than 70 public and private organisations committed to developing zero-emission vessels by 2030 and furthering international shipping's decarbonisation in line with the IMO's aspirations.

We collaborate with critical maritime strategic partners on a joint development project for an ammonia-fuelled tanker that supports the shipping industry's drive for a decarbonised future. The joint development enables industry players with similar mindsets to pursue decarbonisation and reduce the effect of climate change. The coalition aims to develop commercially viable zero-carbon emissions, deep-sea-going vessels by 2030.

#### CLIMATE GOVERNANCE MALAYSIA (CGM)

##### Our Position

CGM is Malaysia's chapter of the World Economic Forum's Climate Governance Initiative that supports the awareness-raising, best-practice sharing and implementation of good climate governance within corporate boards. MISC is a corporate friend of CGM.

## Our Stakeholders' Universe

### TRADE ASSOCIATIONS AND MEMBERSHIPS

We demonstrate our commitment to upholding the highest standards of excellence, safety and sustainability in the shipping industry through memberships in these esteemed organisations. Through active participation, collaboration and knowledge exchange with fellow members, we strive to contribute to the advancement and growth of the maritime shipping industry while fostering meaningful relationships with key stakeholders.

#### AMERICAN BUREAU OF SHIPPING (ABS)

ABS is a classification society and non – governmental organisation that establishes and maintains technical standards for the construction and operation of ships and offshore structures. MISC is a member of its advisory council and serve in several of its committees.

#### CHAMBER OF SHIPPING OF AMERICA (CSA)

CSA represents U.S. based companies that own, operate or charter oceangoing vessels engaged in both domestic and international trades and companies that maintain a commercial interest in the operation of such oceangoing vessels. CSA envisions an integrated maritime sector with coordination and cooperation between regulators and industry. AET is represented on the Board, gaining access to critical information and leaders such as Washington DC Regulators, Policy Makers, Legislators, US Customs and Border Protection and US Coast Guard to capitalise on opportunities and make informed decisions. Furthermore, we also get to interact with Senior Members of our customer base who are members of CSA and participate in the CSA Members Awards Programme which includes the Jones F. Devlin Awards and the Environmental Achievement Award.

#### GARD

The Gard Group is a shipowner-controlled diversified provider of protection and indemnity (P&I), marine and energy insurance products. We play an active role with MISC's PGCEO sitting on the Board of Gard P&I.

#### GLOBAL MARITIME FORUM (GMF)

GMF is an international not-for-profit organisation committed to shaping the future of global seaborne trade to increase sustainable long-term economic development and human well-being. We are a strategic partner and founding member of GMF with a seat on its Advisory Council. We play an active role in shaping the future of maritime trade by collaborating on improving the environment by reducing GHGs.

#### INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO)

INTERTANKO promotes the interests of independent tanker owners in international forums and organisations. MISC has representatives sitting and actively involved in the Executive Committee, Council, Gas Tanker Committee (GTC), Vetting Committee, Insurance and Legal Committee and the Human Element in Shipping Committee (HEISC). Our involvement in the GTC allows MISC to look at issues affecting the industry and encourages best practices and standards that surpass regulations and provides owners with expert counsel on specific technical and commercial matters for gas tankers. In HEISC, we advocate for industry interests by emphasising the crucial role of the human element in adopting best practices for the safe operation of tankers and our focus on ensuring strict compliance with operational and environmental regulations and practices. We play an active role in INTERTANKO through collaborations with peers, constructively listening to feedback from industry partners and resolving members' concerns.

#### LLOYD'S REGISTER (LR)

MISC is represented at the Lloyd's Register Advisory Board through our PGCEO. We are also part of the South-East Asian Technical Committee (SEATEC). This committee provides Marine Services with the opportunity to share our operational experience with our new LNG dual-fuel Aframax Tankers, bunkering experiences and boil-off gas (BoG) management to improve sustainability. This enables us to showcase our capabilities with other LR Technical Committee members in interactive sessions.

#### MALAYSIAN GAS ASSOCIATION (MGA)

MGA is the nation's lead advocate for the natural gas industry that promotes a vibrant and sustainable Malaysian gas industry. We are a Council Member and are part of the Regulatory and Government Affairs working committee within MGA. This membership has broadened our business base and international ventures by participating in International Gas Union (IGU) events and offering the expertise of our collaborative projects.

## Our Stakeholders' Universe

#### MALAYSIA SHIPOWNERS' ASSOCIATION (MASA)

MASA frequently engages the government and the industry to strengthen existing relationships and form new ones. MISC Group is represented in its Executive Committee and as ordinary and associate members. We play an active role in MASA by highlighting issues that develop the national shipping industry.

#### MALAYSIA WOMEN IN ENERGY (MYWIE)

MyWiE is an advocacy group that champions equal opportunity for women in the energy sector by bringing industry leaders together to encourage equal opportunity and diversity at all levels and categories. We play an active role as the Chairman of the Advisory Panel.

#### MARITIME ANTI-CORRUPTION NETWORK (MACN)

MACN is a global business network that envisages a corruption-free maritime industry that provides fair trade for the benefit of society. As a member of MACN, we work towards the elimination of all forms of maritime corruption by raising awareness of the challenges faced, implementing the MACN Anti-Corruption Principles and co-developing and sharing best practices, collaborating with governments, non-governmental organisations and civil society to identify and mitigate the root causes of corruption and creating a culture of integrity within the maritime community.

#### MARITIME INSTITUTE OF MALAYSIA (MIMA)

MIMA is a policy research institute set up by the Malaysian Government looking into matters relating to Malaysia's interest at sea and serving as a national focal point for research in the maritime sector. As a member of MIMA, Marine Services benefit through policy papers, publications (in print and online), advisory, consultancy, workshops/training courses and events such as talks, forums, seminars and conferences, all related to maritime issues.

#### OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)

OCIMF is widely recognised as the voice of the oil industry. It provides expertise in the safe and environmentally responsible transport and handling of hydrocarbons in ships and terminals as well as sets standards for continuous improvement. Marine Services is an official member of OCIMF, which qualifies us as the official marine assurance and compliance representative for PETRONAS Group of Companies.

#### SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL OPERATORS (SIGTTO)

MISC is a member of the SIGTTO and our representatives sit on its Board and General Purpose Committee. The society provides a platform to exchange technical information and experience between industry members. Through SIGTTO's affiliation at IMO, we can address common problems and derive agreed-upon criteria for best practices and accepted industry standards that affect the safety of gas tankers.

#### SINGAPORE SHIPPING ASSOCIATION (SSA)

SSA is a national trade association formed to serve and promote the interests of its members and to enhance the competitiveness of Singapore as an International Maritime Centre. As a member of SSA, AET is a part of a collective voice representing the interests of the Singapore shipping industry at the local, regional and international levels, participate in forums, feedback and dialogue sessions that engage key regulatory agencies and international maritime organisations, drive key initiatives of interest to the Singapore shipping industry and have an impact on the development of regulatory and operational issues.

#### THE LONDON P&I CLUB

The London P&I Club plays a crucial role in coordinating and promoting the collective strength of the P&I industry on behalf of the global ship-owning community. As a committee member, we benefit by sharing knowledge and expertise in insuring and reinsuring shipowners' liabilities.



## Our Stakeholders' Universe

### OTHER ASSOCIATIONS AND MEMBERSHIPS

Apart from the trade associations listed, MISC Group is also involved in the following organisations:

- Association of Marine Industries of Malaysia (AMIM)
- Construction Industry Development Board (CIDB)
- Global Maritime Education & Training (GlobalMET)
- Houston International Seafarers Center
- Industry Taskforce on Lightering (ITOL)
- Institute of Marine Engineering, Science and Technology (IMarEST)
- International Marine Contractors Association (IMCA)
- International Tankers Owners Pollution Federation Limited (ITOPF)
- Johor Skill Development Centre (PUSPATRI)
- Lone Star Harbour Safety Committee (LSHSC)
- Malaysia Anti Corruption Academy (MACA)
- Malaysia Board of Technologists (MBOT)
- Malaysia Offshore Contractors (MOCA)
- Malaysia Oil & Gas Services Council (MOGSC)
- Malaysian Employers Federation (MEF)
- Marine Preservation Association (MPA)
- National Institute for Occupational Safety and Health (NIOSH)
- National Navigation Safety Advisory Committee (NNAVSAC)
- North American Marine Environment Protection Agency (NAMEPA)
- Offshore Marine Service Association (OMSA)
- Pasir Gudang Emergency Mutual Aid (PAGEMA)
- San Jacinto College Maritime Advisory Committee
- Singapore Business Federation (SBF)
- Singapore National Employers Federation (SNEF)
- Society for Gas as a Marine Fuel (SGMF)
- Society of Maritime Arbitrators (SMA)
- Southeast Texas Waterway Advisory Council (SETWAC)
- South Texas Waterways Advisory Committee (STWAC)
- Texas A&M University Marine Engineering Technical Industry Advisory Board
- Welding Institute of Malaysia (WIM)
- West Gulf Maritime Association (WGMA)



We contributed **RM24.47 million** to our trade associations and memberships in 2023.

## Our Stakeholders' Universe

In addition, MISC Group also supports several economic, environmental and social charters and principles, as below.

### THE HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009 (THE HONG KONG CONVENTION)

#### Description

The Hong Kong Convention on Ship Recycling recognises ship recycling as the most environmentally sound method of disposal as most ship material can be reused even after their end-of-life.

#### Our Position

We develop and maintain an inventory of hazardous materials and dispose of vessels responsibly, following the Hong Kong Convention on Ship Recycling and MISC's Ship Recycling Policy.

### NEPTUNE DECLARATION ON SEAFARER WELL-BEING AND CREW CHANGE

#### Description

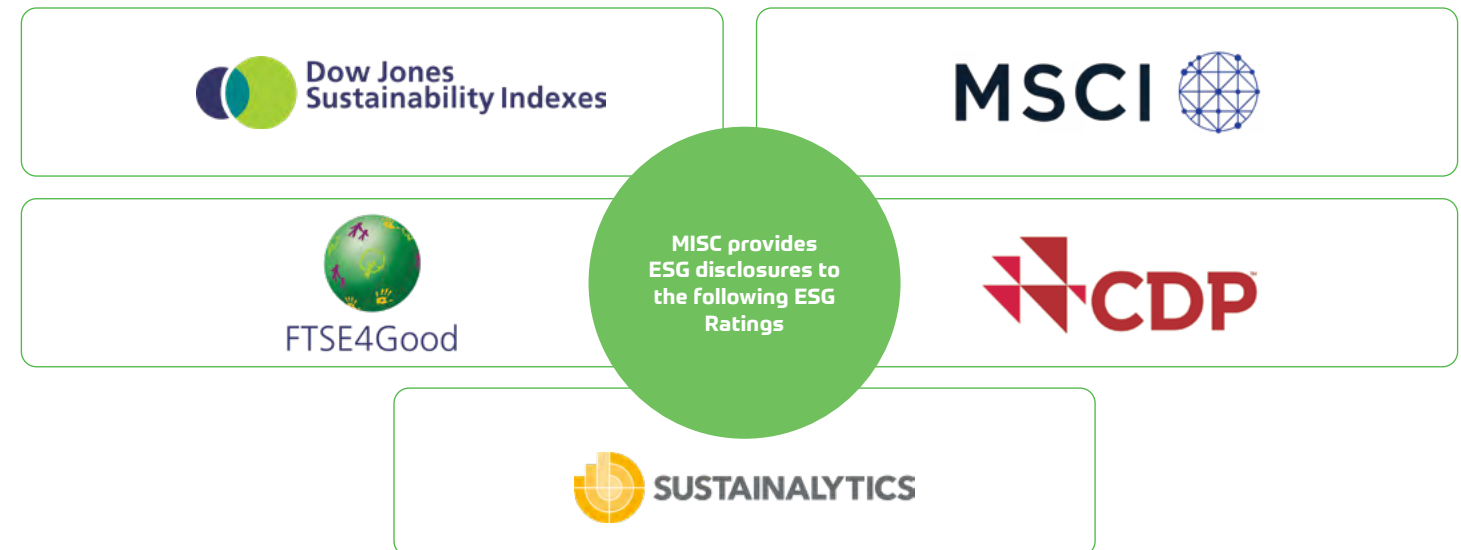
The COVID-19 pandemic in 2020 led to an unprecedented crew change crisis, leaving numerous seafarers stranded on ships beyond their initial contracts due to widespread lockdowns, travel restrictions and border closures. Along with over 300 companies and organisations from the maritime value chain, we joined a worldwide call to action to end the crew change crisis, which caused seafarer fatigue and affected their physical and mental well-being.

#### Our Position

We are a signatory to The Neptune Declaration on Seafarer Well-being and Crew Change, which defines four main actions to facilitate crew changes and keep global supply chains functioning:

1. Recognise seafarers as critical workers and prioritise COVID-19 vaccines for them;
2. Establish and implement gold-standard health protocols based on existing best practice;
3. Increase collaboration between ship operators and charterers to facilitate crew changes; and
4. Ensure air connectivity between key maritime hubs for seafarers.

### LIST OF ESG DISCLOSURES





## Section 4

# SUSTAINABILITY STRATEGIC PRIORITIES

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## Economic Value Creation

### MISC'S ROLE IN THE BLUE ECONOMY

The World Bank defines the Blue Economy as the 'sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of the ocean ecosystem'. With this, MISC plays a vital role in moving energy worldwide in the global economic supply chain.

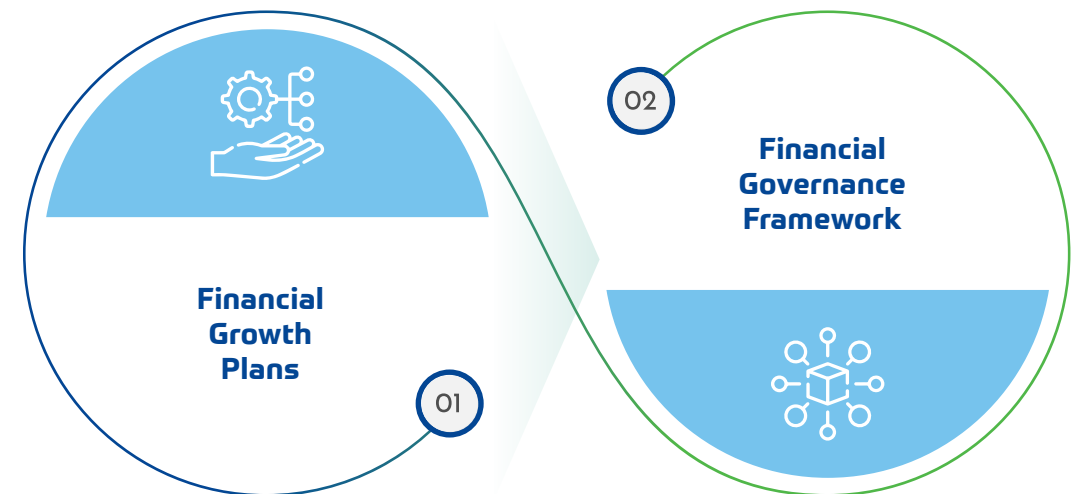
MISC strives to continuously contribute to the local and global economy by strengthening our market position, scaling current businesses and expanding into new business opportunities. To achieve this, we are committed to not only growing our financials but also helping our business partners to achieve the same, protect the environment and contribute to society, grounded by robust governance practices.

➔ For more details on our value creation, please refer to MISC's Integrated Annual Report 2023.

### OUR FINANCIAL STRATEGY

The Financial Pillar of MISC's Sustainability Strategy aims to achieve secured growth through recurring cash flow whilst promoting the effective and responsible use of resources to create long-term value for our stakeholders. Apart from shareholders, financial value creation positively impacts employees through increased compensation and opportunities for growth, customers through improved products and services, suppliers through timely payments and stronger relationships, communities through job creation, tax contributions and corporate social responsibility initiatives and governments through tax revenue and regulatory compliance. This pillar contributes to SDG 8 through promoting sustained, inclusive and sustainable economic growth, full and productive employment, as well as decent work for all.

The two key strategic priorities that drive our financial sustainability under this pillar are:



We develop financial growth plans to forecast the future operating revenue, business costs and cash flow management. Our financial management strictly follows the Financial Governance Framework reflected in the Financial Policy and is subjected to annual external third-party assurance and internal audits.

#### Our Commitment

- To achieve growth in secured and recurring sources of cashflow

#### Our Initiatives

- A business plan with financial growth plans
- Financial Governance Framework, developed in line with the Financial Reporting Accounting Standards and Corporate Financial Policy

#### Our Contribution to SDG

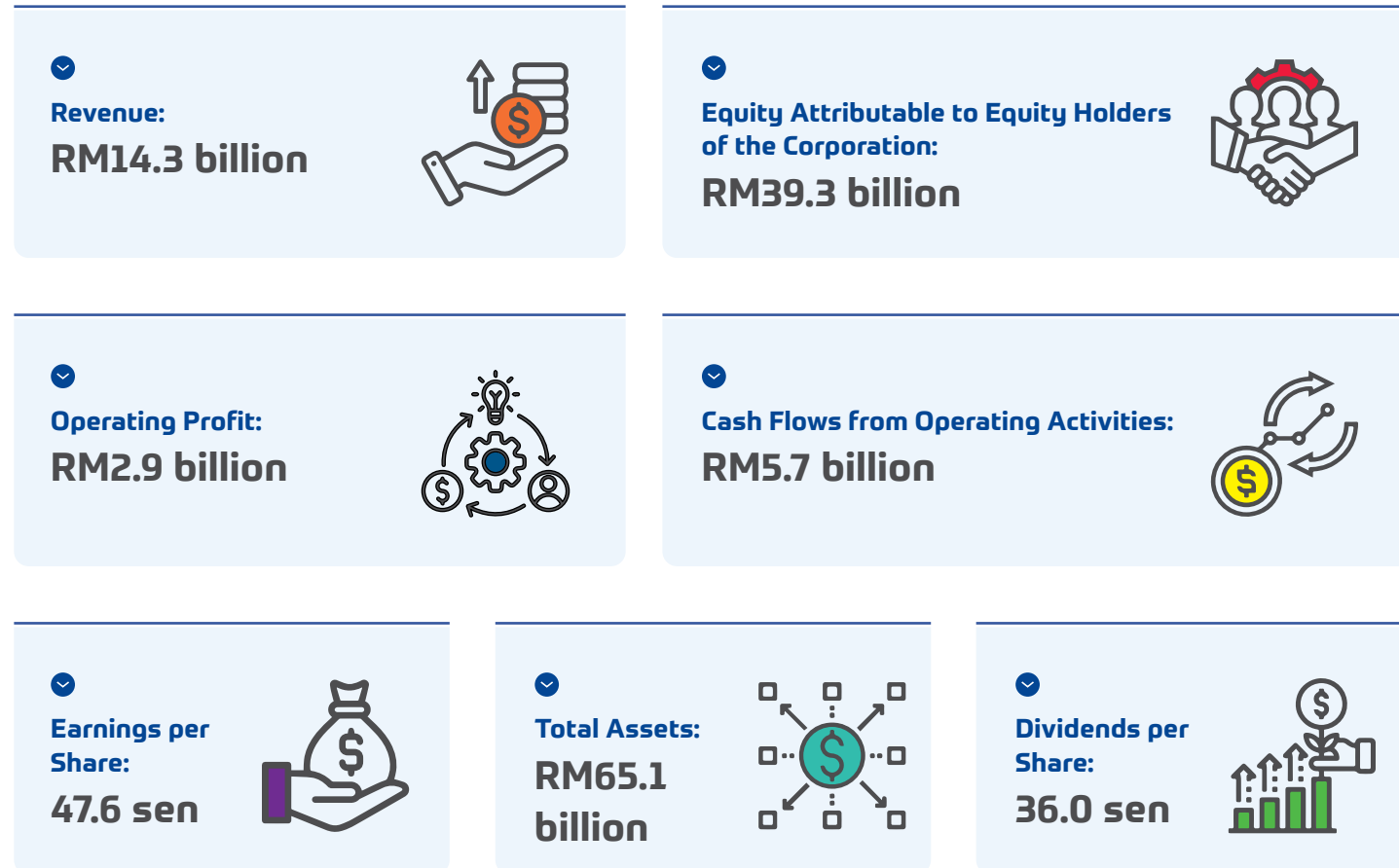
- Promote sustained economic growth, full and productive employment and decent work for all





## Economic Value Creation

### FINANCIAL PERFORMANCE



For more details on our financial performance and economic value added and distributed, please refer to MISC's Integrated Annual Report.

In ensuring integrity and robustness of our financial practices and reporting, we engage external auditors annually for both audit and non-audit work when necessary and in FY2023, we spent RM1,205,000 on non-audit fees for services rendered by external auditors or their affiliates. This sum included non-financial data assurance, a limited review of semi-annual financial results and tax advisory.

The Audit Engagement Partner for MISC is changed every seven years to ensure that the external auditors' independence is not compromised. The partner must also observe a five-year cooling-off period before reappointment, per the Malaysian Institute of Accountants (MIA) recommendations. Internally, the external auditors conduct an independent Partner Review to preserve their independence.

Our external auditors also provide written assurances to the BAC, stating their independence throughout the audit engagement following all the terms of the relevant professional and regulatory requirements. The BAC assesses the performance and independence of the external auditors based on the following:

- The quality of the engagement team, including the sufficiency of resources;
- The quality of communication and interaction; and
- Independence, objectivity and professional scepticism

We will continue to assess the external auditors' performance on an annual basis in line with the Policy on External Auditors.

## Economic Value Creation

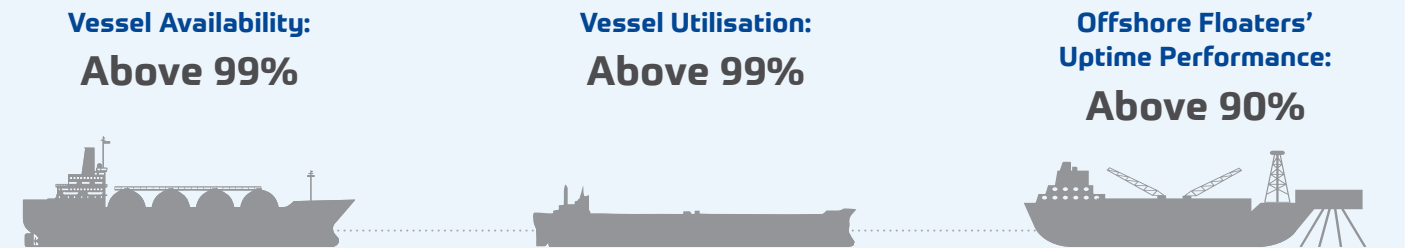
### SUSTAINABILITY-LINKED LOAN

We entered into a USD527 million non-recourse syndicated loan facility to refinance six VLECs purchased in 2020. The 11-year sustainability-linked loan (SLL) is the first SLL for the Group which aligns with the Group's long-term business strategy and sustainability aspirations to achieving Net-Zero GHG emissions by 2050 and to contribute to a carbon neutral economy by offering low-carbon and eventually zero-carbon emissions transport solutions. The SLL facility includes two key performance indicators (KPIs) for environment and governance.

The environment KPI is benchmarked to exceed the emissions target as set by IMO 2050 and the Poseidon Principles and involves measuring the carbon intensity of MISC's Gas Assets & Solutions fleet through the annual efficiency ratio (AER). MISC will benefit from the annual adjustments of the interest rate benchmark by meeting these two pre-agreed KPIs.

### OPERATIONAL EXCELLENCE PERFORMANCE

In navigating a competitive business landscape, we are committed to providing excellent service quality for our customers and securing business growth for our shareholders. This is achievable through efficient management of vessels, robust maintenance of assets and strategic planning of fleet renewal and newbuilds to meet customers' demand.



### TAX

At MISC, we comply with tax regulations in the countries where we operate. We believe that this is our responsibility to our stakeholders in upholding good tax practices. The following sections elaborate our tax practices in line with our commitment to transparency and credibility.

#### Tax Strategy

MISC tax strategy has been approved by the Board and is implemented via the Tax Policy as below:

**MISC Group is committed to be a responsible taxpayer by:**

- **Complying in good faith with all applicable tax laws, regulations, guidelines and international tax treaties and settling tax obligations when legally due, as company and employer; and**
- **Maintaining cooperative working relationships with tax authorities**

**Adherence to this Policy is everyone's responsibility, by referring all tax-related matters to the appropriate parties.**



## Economic Value Creation

We strictly uphold our Tax Policy and continue to strive to ensure full adherence to all applicable tax regulations and pay taxes when legally due in localities where our businesses are conducted and operated.

Our goal is to always behave in a highly cooperative manner with all relevant tax stakeholders while creating a culture of mutual respect, aligned with MIAASC's corporate values and culture.

We strongly support and welcome efforts taken by the tax authorities or government agencies to improve the tax environment of the respective jurisdiction. To promote the enhancement of the tax environment, these opportunities are explored further by active participating in dialogue sessions, forums and discussions with the tax personnel and/or relevant institutions and non-government organisations.

### ▼ Tax Roles and Responsibilities

We are equipped with a team that is responsible for managing the Group's tax compliance and tax risks at the operational level. The team serves as a strategic business partner and collaborates with all business segments across the Group towards this purpose. The team also provides support during the engagement of new projects.

We established the Tax Compliance & Control Assurance Framework. This framework serves as the Management's instrument to oversee the roles, responsibilities and accountability of the tax function.

To meet both direct and indirect tax requirements, Tax Manuals on various tax components have been introduced specifically to establish the tax-related roles and responsibilities of each stakeholder.

At the strategic level, the BAC, BSRC and the Board have oversight of the Group's strategic tax, tax governance and tax risks as part of the Group's financial reviews.

### ▼ Tax Risk Management

Group Tax is led by the Head of Group Tax, who reports to the Vice President of Finance and is accountable for compliance with the Tax Policy as well as managing the overall tax risks of the Group, which includes (but is not limited to):

- **New global tax laws/practices and changes in tax developments;**
- **Contractual, business structure and operational tax risks; and**
- **Non-compliance events which may result in penalties imposed by tax authorities**

Key tax risks are reported to the Management and the Board every quarter depending on the degree of risk to ensure that they are promptly monitored and addressed. Management oversight on tax risks is placed through the Management Committee (MC) and RMC. Ultimately, reporting is made to the Board, BAC and BSRC, respectively based on the nature and criticality of the tax risks.

We ensure that the tax function is well-equipped with updated tax knowledge to maintain and enhance the capability and necessary technical skillset of tax personnel through external training. In addition to managing the Group's tax risks, the tax function is also equipped with access to local and global tax.

### ▼ Tax Reporting

For our income tax contribution, please refer to the Performance Data section of this report.

### ▼ Tax Assurance

As part of the statutory processes, an independent assurance is performed by our external auditor on MISC's financial reporting, including income tax, tax provisioning and tax accounting.

If any circumstances occur that could involve material monetary, regulatory and/or reputation risks as well as other compliance matters, external tax consultants will be engaged to provide advice and assurance to aid in the Group's decision-making process.

The Group is in compliance with the respective tax jurisdictions and any financial or regulatory risks have been fairly and accurately reflected in the Financial Statements.

## Indirect Economic Value Creation

The principal businesses of the Group comprise energy shipping and its related activities, owning and operating offshore floating solutions, marine repair and conversion, engineering and construction works, integrated marine services and maritime education. We see ourselves as serving to connect energy producers to energy consumers for electricity generation, heating, transportation and raw materials to produce other manufactured consumer goods.

Considering the global trends affecting our customers, communities, the environment and broader society, we anticipate our business' indirect impacts on all stakeholders. As we propel ourselves forward, we keep abreast with the current and emerging trends in energy use globally and locally which could impact our business operations including the transition to a low-carbon economy and climate change mitigation.

Presently, most of our business is within the conventional energy space where we continue to capitalise on our expertise and financial strength to ensure steady returns for our stakeholders and our next phase of growth. MISC is one of the world's largest single owners and operators of LNGCs that can call at more than 40 liquefaction terminals and more than 100 receiving terminals worldwide. MISC Group's fleet of LNG vessels transport an estimated 6% of the world's LNG cargoes. LNG has been earmarked as a transition fuel for several reasons, primarily due to its economic and logistical advantages. We believe its use will complement the broader energy transition strategy that includes increased adoption of more sustainable technologies.

Our Petroleum & Product Shipping is a market leader in the provision of specialised ship-to-ship (STS) lightering services in the US Gulf and an established DPST owner and operator. We are also the only owner-operator of Modular Capture Vessels (MCVs), which are capable of capturing hydrocarbons and other contaminations in the event of an oil well incident. We are a pioneer of LNG dual-fuel vessels and operate a growing fleet of dual-fuel assets, setting a new standard of eco-efficient shipping.

Over the past years, we have remained on a steady growth trajectory to generate sustainable value for our customers, shareholders and employees including the provision of over 10,000 job opportunities for over 40 nationalities. We operate globally with a total of 2,466 business partners supporting us.

As part of our contribution to the community, we continued to provide quality maritime education and training through our maritime academy, ALAM. ALAM is tasked with ensuring a sustainable supply of maritime professionals for the maritime industry. ALAM has trained more than 14,000 seafarers since 1977 with a total of 160 types of courses being offered to date.

**MISC is one of the world's largest single owners and operators of LNGCs that can call at more than 40 liquefaction terminals and more than 100 receiving terminals worldwide.**

1

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3

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4

## Indirect Economic Value Creation

### MISC'S MARKET OPPORTUNITIES

#### Clean Energy Business

In recent years, MISC has been exploring opportunities to venture into the new energy economy, driven by the global energy transition to clean energy. According to the World Energy Outlook 2023, investment into new energy is estimated to reach between USD3.2 trillion to USD4.7 trillion in 2030, simultaneously creating seven million to 30 million jobs.

MISC is embracing the energy transition and has been actively seeking opportunities to increase operational efficiencies, develop ultra-low, zero-emission and dual-fuel vessels, switch to low-carbon fuel for our vessels, install renewable energy technology and venture into the CCS business.

#### Talent Attraction

Our diverse workforce provides opportunities for employees to learn from each other and continuously improve their knowledge and capabilities. We continue to invest in people to ensure our employees are equipped with the necessary knowledge and skills to enhance business competitiveness. For instance, we upskill our employees to operate incoming fleet additions and a wider range of vessels, as well as in new and emerging technologies for career growth during the energy transition.

We ensure that our processes in recruiting, career advancements, learning and development and performance management are handled fairly and in a transparent manner. We also prioritise employees' mental health and well-being and hence, we organised various health and employee engagement programmes to keep them fit for work and maintain high spirits.

[Read more in Our People, Our Strength section of this report.](#)

#### Supply Chain Risks and Opportunities

At MISC, we believe our business partners, including suppliers are integral to our success. These business partners are aligned with our expectations to comply with relevant laws and regulations and uphold the highest standards of business conduct.

MISC has taken various measures to ensure our suppliers are aware of requirements due to the increasing concern on ESG risks arising from the value chain. We have embarked

on a Responsible Supply Chain Programme comprising an ESG assurance framework and self-assessment.

[Read more in Embracing a Sustainable Supply Chain section of this report.](#)

#### Digitalisation

We embarked on our digitalisation journey since 2020 by introducing multiple digital systems to improve vessel efficiency and safety. Among the systems installed are e-navigation systems, Internet-of-Things connectivity for real-time monitoring of shipboard systems, Internet-of-Services to connect with shore-based services and integrated ship control with big data capabilities. Other initiatives include:

- i e-Procurement system to manage Source-To-Pay processes;
- ii e-learning platform for various modules comprising Health, Safety, Security and Environment, Human Rights, Anti-Bribery and Anti-Corruption, Sustainability as well as career management, functional, technical and leadership modules;
- iii Permit-to-work processes digitalised through a system; and
- iv Digital signatures for internal documents

These initiatives aim to improve turnaround times and reduce the use of paper-based processes at the workplace, apart from improving accessibility for all parties involved.

### NEW ENERGY & DECARBONISATION

#### MISC 2050: Waste to Value Chain – Carbon Capture & Storage (CCS)

Venturing into the CCS business is aligned with MISC 2050 Vision to achieve Net-Zero emissions in a low-carbon economy while providing a strong recurring income base for MISC's long-term business sustainability. Currently, many interested shipowners are entering the LCO<sub>2</sub> carrier segment, creating a highly competitive market. However, MISC has a competitive advantage in the LCO<sub>2</sub> carrier segment due to our wide knowledge and expertise in the development of floating solutions and liquified gas transport.

## Indirect Economic Value Creation

Our New Energy and Decarbonisation Unit has been actively seeking technology partnerships, developing strategies and establishing designs for these business areas, namely LCO<sub>2</sub> carriers, FCSUs (liquefaction/injection) and carbon capture (shipboard/onshore). This is strongly supported by the Group's capabilities and expertise in LNG/liquified petroleum gas (LPG) handling, shipping, EPCIC, shipbuilding and module fabrication.

#### Hydrogen Economy

The hydrogen market is still nascent, especially when it comes to hydrogen in its pure form. However, there is increasing progress and efforts when it comes to hydrogen derivatives, i.e.: ammonia. We have identified opportunities in this market and are exploring synergies within the MISC Group. At MISC, any references to hydrogen and/or ammonia refer to low-carbon hydrogen/ammonia:

- **Ammonia carrier:** Engagements with potential clients that produce ammonia for exports, where MISC can own and operate ammonia carriers, preferably running on dual-fuel ammonia engines
- **Ammonia floating production:** MISC Group could be a provider of ammonia via a dedicated ammonia offshore floating production facility
- **Ammonia bunkering hub:** MISC Group could be a potential user of this bunkering hub, in line with our transition to using ammonia dual-fuel engines. MISC could also support the operations of this hub by providing and operating ammonia bunker vessels

### GAS ASSETS & SOLUTIONS SEGMENT

#### LNGC

In 2022, we, together with our consortium partners, NYK, K-Line and CLNG were awarded a total of 12 newbuilding LNGC awards by QatarEnergy and two LNGC awards by SRM. In 2023, we received the delivery of two of our LNGCs, *Seri Damai* and *Seri Daya* for SRM which were constructed in South Korea. These cutting-edge LNGCs are fdesigned with modern technologies and are some of the world's most efficient LNG-fuelled vessels in the market today.

Collaborative partnerships are vital to ensuring success in fulfilling the growing demand for energy and achieving sustainable value creation for all our stakeholders. As we navigate the evolving energy industry ahead, we will continue strengthening partnerships to build a progressive, sustainable and successful future.

[Read more in the Decarbonising Our Operations section.](#)

#### VLEC

MISC expanded the business into the ethane market in 2021 with six VLECs in our fleet. Our VLECs are powered by a ME-GI (gas injection) engine that is fitted with state-of-the-art technology, making them some of the very few vessels in the world with ethane-burning capability.

These vessels are equipped with a cargo containment system for dual cargo loading as well as LNG-ready notation by ABS. We utilise an advanced active emissions control technology system called selective catalytic reduction (SCR), which injects a liquid-reductant agent through a special catalyst into the exhaust stream of the engine. The SCR system complies with the IMO Tier III NOx (nitrogen oxides) standards. All our VLECs comply with NOx and SOx emission requirements in the gas and fuel mode.



## Indirect Economic Value Creation

### ▼ Conversion of *Puteri Delima Satu* into an FSU in Pengerang

On 31 October 2023, MISC entered into an agreement with Pengerang LNG (Two) Sdn. Bhd. (PLNG2SB), a subsidiary of PETRONAS Gas Berhad (PGB), for the supply, operation and maintenance of an LNG FSU intended to be deployed at the PETRONAS LNG Regasification Terminal Pengerang (RGTP) in Johor.

This project will see the conversion of MISC's LNGC *Puteri Delima Satu*, into an FSU designed to receive shore power to reduce emissions while improving operational efficiency.

[Read more in the Decarbonising Our Operations section.](#)

### ▼ LCO<sub>2</sub>

In September 2023, PETRONAS CCS Ventures Sdn Bhd, MOL and MISC Berhad signed an agreement for the potential establishment of a JV entity to invest in the development of the LCO<sub>2</sub> carriers for CCS projects in Malaysia. With this, we are set to embark on our journey in a new business segment of CCS whilst providing opportunities for decarbonisation. With our strong knowledge and technical expertise, we are well-equipped to deliver the expected outcomes for this project.

## PETROLEUM & PRODUCT SHIPPING SEGMENT

### ▼ LNG Dual-Fuel Very Large Crude Carriers (VLCCs)

AET successfully delivered two LNG dual-fuel VLCCs designed with modern technologies, on long-term charter to Shell. In August 2023, the first vessel in the series, Malaysian-flagged *Eagle Vellore*, was named at a ceremony at the MMHE Pasir Gudang yard, attended by the Malaysian Deputy Minister of Transport and other Malaysian government officials. Two months later, her sister vessel, Singapore-flagged *Eagle Ventura*, was also delivered. The third vessel, Singapore-flagged *Eagle Veracruz*, was later delivered to Shell in January 2024.

These three ships are classed by Lloyd's Register and have been designed with state-of-the-art technologies, featuring optimised hull forms and propellers, wake improvement ducts and rudder bulbs, all of which contribute to enhancing the vessel's energy efficiency. These vessels are recognised as among the most eco-efficient VLCCs available today, meeting the IMO's 2025 Energy Efficiency Design Index (EEDI) Phase III standards. When operating on LNG, these vessels will achieve a 99% reduction in SOx emissions, 85% reduction in NOx emissions and a 95% reduction in particulate matter. By adding these three LNG dual-fuel VLCCs to our fleet and concurrently pursuing the development of ultra-low and zero-emission vessels, AET is demonstrating our steadfast commitment to delivering more energy with less emissions, supporting customer demand and the global need for energy security.

### ▼ Eco-Efficient Dynamic Positioning Shuttle Tankers (DPST)

AET is an established DPST owner with shuttle tanker operations in the Barent and North Seas and the Brazilian Basin. Our DPSTs are the crucial link between offshore production assets and the discharge port as they can utilise dynamic positioning technology to maintain a fixed position to load crude oil from offshore production facilities located in deepwater and/or under harsh weather conditions to shore.

Our fleet of DPSTs was developed in partnership with our customers and they are designed to incorporate a wide range of eco-efficient solutions to optimise performance. For instance, *Eagle Campos* and *Eagle Cambe*, including their sister vessels, are equipped with electrically driven variable frequency cargo pumps and high-powered thrusters to improve fuel efficiency. *Eagle Petrolina* and her sister vessel are equipped with smart technologies, which include a navigation decision support system with route optimisation features, an energy efficiency management system with trim optimisation and a ship performance monitoring system. Our LNG dual-fuel DPSTs, *Eagle Blane* and *Eagle Balder*, are fitted with volatile organic compound (VOC) recovery systems where captured VOCs can be reused as supplementary fuel reducing emissions as well as operating costs.

## Indirect Economic Value Creation

## OFFSHORE BUSINESS SEGMENT

### ▼ Clean Power Generation

Valverde Power Solutions, Inc., MISC Berhad, Clean Energy Systems, Inc. and Aker Solutions jointly announced the execution of an Agreement to specify and fund certain preliminary front-end engineering design (Pre-FEED) to assess and demonstrate two North American emission-free power projects utilising Clean Energy Systems' proven Oxy-Fuel burner technology.

[Read more in the Decarbonising Our Operations section.](#)

### ▼ New Build Floating Production Storage Offloading (NBFPSO) Unit

We unveiled the design of our future ready NBFPSO unit at the Offshore Technology Conference 2023 in Houston, Texas. It is the world's first NBFPSO, which uses the Mega-Module topsides and incorporates sustainable technologies into the design, which makes it one of the largest and greenest NBFPSOs in the market. The NBFPSO, known as MMEGA, capitalises on its innovative mega-module topsides that minimise interfaces and improve system integration. It reduces the overall EPCIC schedule and optimises CAPEX.

[Read more in the Decarbonising Our Operations section.](#)

### ▼ Floating Carbon Storage And Injection Unit (FCSU-I)

We secured an Approval in Principle (AiP) for our innovative FCSU-I that aims to lead the way in enhancing the efficiency of the CCS value chain within the maritime industry. The jointly developed FCSU concept with SHI is a culmination of the partnership between MISC and SHI, which took root following the signing of a MoU in January this year. The AiP from DNV confirms the technical feasibility of the concept as well as initial conformity to the applicable rules, industry codes and standards.

[Read more in the Decarbonising Our Operations section.](#)

## MARINE & HEAVY ENGINEERING SEGMENT

### ▼ Solid Oxide Electrolyser For Large-Scale Green Hydrogen Production

The collaboration between MHB and FuelCell Energy aims to address the two most significant challenges in the production of green hydrogen, namely the cost of input electricity and the capital cost of the production facility. Due to its efficiency in producing hydrogen, FuelCell Energy's solid oxide technology requires less energy input compared to lower efficiency and low-temperature electrolysis. On the other hand, MHB's ability to modularise and build at scale is expected to reduce the total capital cost for large-scale electrolyser projects. Furthermore, the joint solution is expected to produce zero-carbon hydrogen to power hundreds of thousands of homes from each production facility.

### ▼ Offshore Wind Substation Project

In November 2023, MHB secured a subcontract for the first OSS HVDC platform. The OSS platform will comprise a topside, weighing approximately 30,000 tonnes (including equipment) and a jacket, weighing approximately 10,000 tonnes.

In delivering this project, MHB will be expanding the reactivation of the MMHE East yard, which will be utilised alongside the MMHE West yard. This project marks our venture into the renewable energy sector and further strengthens our presence internationally.

## Indirect Economic Value Creation

### Maritime Decarbonisation Partnership With Shipyards

Due to the tremendous industry demand for newbuilds, most Korean and China yards are at full capacity over the next few years. In addition, retrofitting and upgrading of vessels to comply with IMO regulations on EEXI/CII are also important in the coming years. MHB believes that this is a good opportunity to partner with these shipyards to help them fulfil demands and build experience in retrofitting vessels with energy-saving technologies at Pasir Gudang.

## MARINE SERVICES

### Reskilling And Upskilling Seafarers For Alternative Markets

Our pool of seafaring employees is managed by our integrated marine services subsidiary. We have taken a multi-pronged approach via a structured and comprehensive capability development programme for both sea and shore employees. The aim is to enhance our employees' competency levels as well as improve and expand their proficiency and capabilities across various business functions and operations.

Currently Marine Services seafarers are operating and managing a wide range of vessels including VLECs, LNG Bunkering Vessels (LBVs), LNGCs, LNG dual-fuel petroleum tankers, DPSTs, LNG FSUs and MCVs.

With the growing demand for the use of LNG and dual-fuel vessels such as the latest collaboration between AET, ALAM and WinGD on the development of ammonia engines for ammonia dual-fuel vessels, Marine Services has been actively reskilling its employees through different modes of training to build employee competencies on the management of alternate fuels.

### Smart Port

The Smart Port initiative was implemented with the objective of digitising port operations and maintenance processes to ensure data consistency, accuracy and integrity. Initiated in 2021, the Smart Port system has been rolled out in phases to enable effective allocation of resources and time management. In 2023, the focus of the initiative was to have web-based Smart Port applications available on heavy-duty tablets suitable for operational use onboard vessels. Marine pilots will be able to input, access and retrieve real-time data and information, significantly reducing manual interventions. Marine Services will continue to explore opportunities to further leverage valuable data for meaningful analytics.

## MARITIME EDUCATION & TRAINING

ALAM is our flagship and leading maritime academy in the region that offered a total of 36 new programmes in 2023, with five of these being Standards of Training, Certification and Watchkeeping for Seafarers (STCW), which have been approved by the MARDEP, while 31 are customised courses based on industry demand.

This year, we have conducted four Ministry of Higher Education (MOHE) programmes approved in 2022, namely Diploma in Maritime Transportation and Logistics, Diploma in Maritime Services, Diploma in Maritime Business Administration and Diploma in Maritime Management. This brings a total of eight MOHE-approved academic programmes at ALAM.

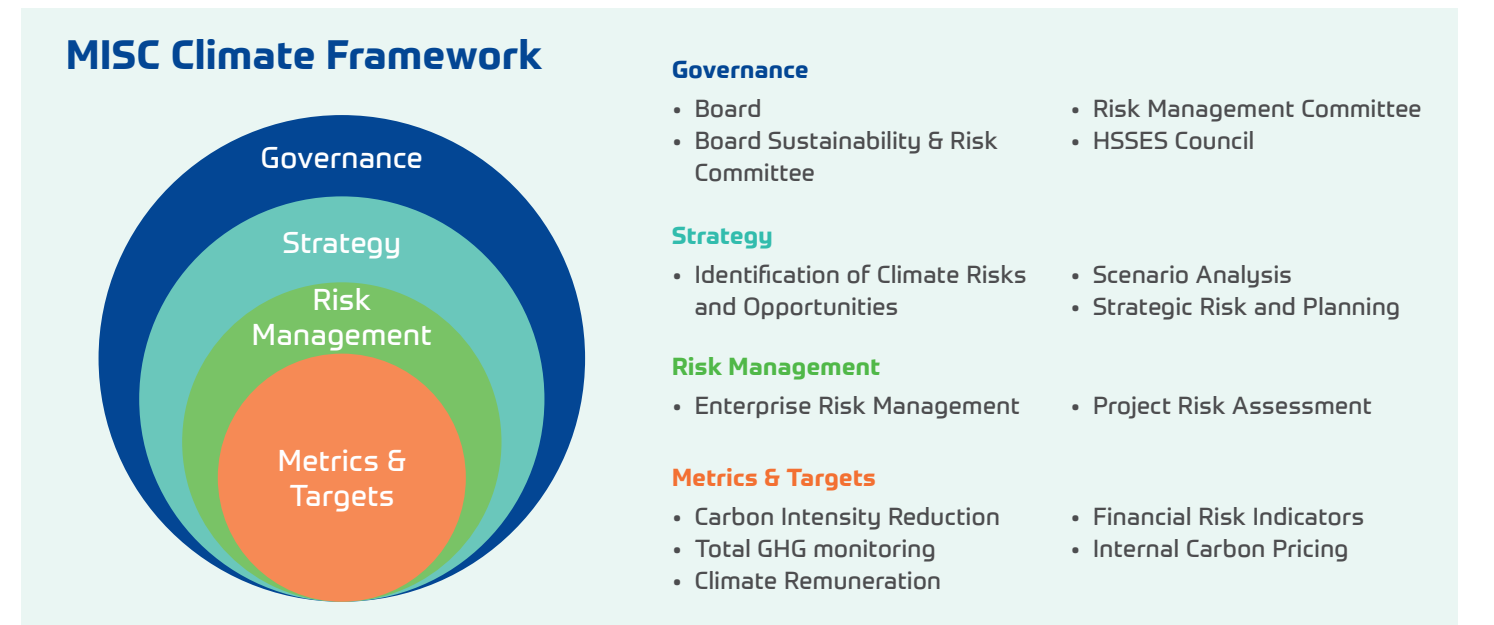
With most of the cadetship programme students under sponsorships, previous records have shown they have been employed upon graduation. As for others, we assisted a total of 71 eligible cadets for ship berths at 15 shipping companies and eight eligible ratings graduates to find employment at various shipping companies.

[Read more in the Strategic Community Investment section.](#)

## Climate-related Financial Disclosures

The climate-related financial disclosures aim to describe how climate change scenarios may impact our operations, outlining our strategy to mitigate potential impacts and ensure resilience.

The report outlines the climate-related financial disclosures' recommendation of our governance structures, strategy and risk management, assessment of resilience and metrics and targets.



## GOVERNANCE

MISC has set up an effective governance structure that ensures responsibility for the oversight, evaluation and management of climate-related matters, along with our associated risks and opportunities, receive appropriate attention from both the Board and Management.



<sup>1</sup> Chaired by the PGCEO. The members comprise Vice Presidents from each division and the Managing Directors/CEOs of MISC Group of Companies.

[Read more in the MISC's Climate-related Financial Disclosures 2023 Report.](#)



# Climate-related Financial Disclosures

## STRATEGY

We have aligned with the IMO decarbonisation goals by embedding sustainability principles into our business model and strategies. Our target is to reduce GHG intensity by 50% by 2030 and achieve Net-Zero GHG emissions by 2050 and this commitment also extends to our value chain. Internally, we aspire to achieve a 50% reduction in total GHG by 2030 (versus 2008 baseline).

Our approach involves driving short-to-medium-term growth through our business plans, prioritising immediate business demands in traditional markets while actively tackling climate change risks and opportunities through a comprehensive

strategy that combines the implementation of solutions with ongoing innovation. This allows us to secure recurring cash flows through long-term contracts with premium clients, ensuring financial sustainability, returns to shareholders and the necessary capital for the transition of our business.

Our Net-Zero commitment is intricately linked to our growth strategy, which involves the decarbonisation of our existing operations, converting our fleet progressively and ensuring all newbuilds from 2030 or sooner are ultra-low-or zero-emission vessels. Simultaneously, we are exploring new income streams aligned with our 2050 target.

## Time Horizons

MISC Group has established short-, medium- and long-term time horizons to assess climate risks and opportunities and subsequent strategies. The chosen timeframes are aligned with MISC's regular business planning cycles, where these cycles are reviewed, adjusted and evaluated as part of our transformation plans. This approach considers the lifespan of our assets and evaluates the business impact of climate-related issues over extended durations.

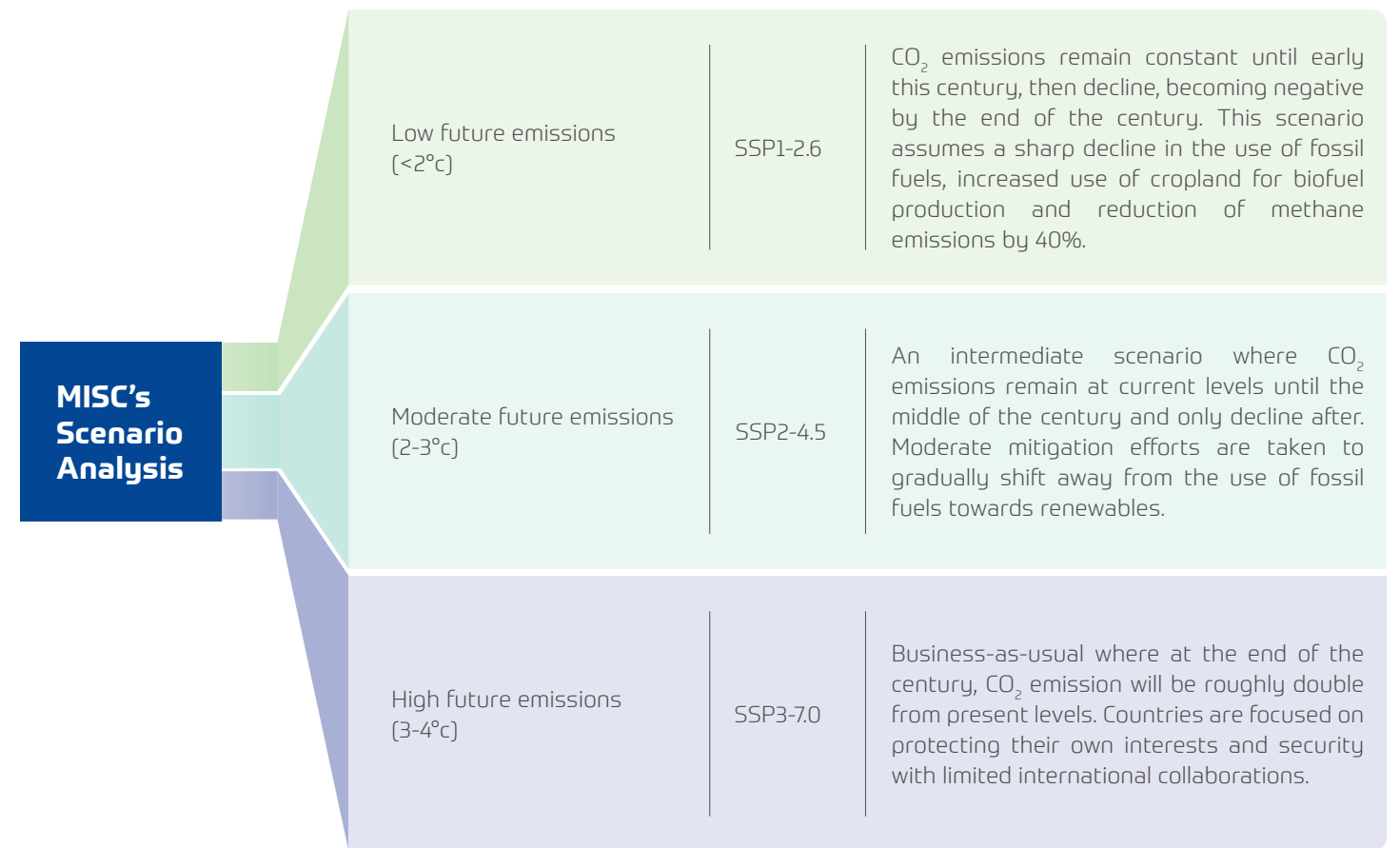
These short planning cycles are designed to mirror the rapid pace and intricate changes in our industry, enabling us to adapt promptly to evolving business, customer and external stakeholder needs. While we acknowledge that climate-related issues often unfold over the medium to longer terms and though we can identify potential risk types, the precise impact and timing of these risks remain uncertain. Despite this, climate-related risks and opportunities increasingly influence MISC's strategic and financial planning processes.

Time Horizons	Rationale on Material Financial Impact
Short-Term (within the next 2-3 years)	Any climate-related risks and opportunities that have or are expected to have material financial impacts in the next two to three years from current and emerging climate legislation and market transition to low-carbon assets.
Medium-Term (current year up to 2030)	<p>Any climate-related risks and opportunities that have or are expected to have material financial impacts in meeting the following expectations:</p> <ul style="list-style-type: none"> <li>Achieving IMO targets, which are reducing emissions by at least 20%, striving for 30% by 2030 and by at least 70% striving for 80% by 2040</li> <li>Acknowledging the typical lifespan of a vessel to be around 20-25 years, the shipping industry must develop economically sustainable deep-sea vessels with ultra-low or zero-carbon emissions by 2030 to fulfill IMO 2050 Net-Zero goals and achieve MISC's Net-Zero emissions target by 2050</li> </ul>
Long-Term (2031-2050)	Any climate-related risks and opportunities that have or are expected to have material financial impacts in addressing the energy transition and global movement towards Net-Zero GHG emissions by 2050.

# Climate-related Financial Disclosures

## Climate Scenarios

In 2023, we further refined the process used to identify the impact of several pathways and assumptions on our business using three climate scenarios – a low, medium and high CO<sub>2</sub> concentration in 2100 from pre-industrial levels, while considering the trajectory in 2050:



These scenarios were sourced from:

- Intergovernmental Panel on Climate Change (IPCC)
- Shared Socioeconomic Pathways (SSP)
- International Energy Agency (IEA)
- The International Renewable Energy Agency (IRENA)

# Climate-related Financial Disclosures

## SHARED SOCIOECONOMIC PATHWAY SCENARIO PROJECTION

MISC Scenario Analysis (°C)	Scenario	Projection of temperature rise from 2081 to 2100 (°C)	
		Mean	Range
< 2 (Low emissions)	SSP1-2.6	1.8	1.3 ~ 2.4
2 – 3 (Moderate emissions)	SSP2-4.5	2.7	2.1 ~ 3.5
3 – 4 (High emissions)	SSP3-7.0	3.6	2.8 ~ 4.6

To understand and connect the political, business and social responses to climate change and associated global carbon budgets, shared socioeconomic pathways (SSP) and the expected physical and transitional climate-related impacts, the climate analysis and scenarios were derived based on the following driving forces:

Driving Forces	Low Emissions Scenario (< 2°C)	Moderate Emissions Scenario (2 – 3°C)	High Emissions Scenario (3 – 4°C)
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Sea level rise and higher sea surface temperatures are affecting coastal communities</li> <li>Increase in wind speed and wave power in the Southern Hemisphere</li> </ul>	<ul style="list-style-type: none"> <li>Climate-related risks are significantly affecting lower latitudes infrastructure and communities</li> <li>Larger winter ocean waves and increase in wave heights</li> </ul>	<ul style="list-style-type: none"> <li>Extreme sea level rise and intense impacts on ports and coastal infrastructure</li> <li>Warmer sea surface with extreme heatwaves and intense tropical cyclones</li> </ul>
<b>Political and Legal</b>	<ul style="list-style-type: none"> <li>Extensive international collaboration</li> <li>Clear policies to support Net-Zero transition</li> <li>Well-established carbon pricing</li> <li>Industry environmental standards</li> </ul>	<ul style="list-style-type: none"> <li>Growing international collaboration</li> <li>Clear policies to support Net-Zero transition.</li> <li>Well-defined industry environmental standards</li> <li>Moderate implementation of carbon pricing</li> </ul>	<ul style="list-style-type: none"> <li>Large differences across regions and countries on environmental standards and policies</li> <li>Continuing government incentives for the oil and gas sector in some countries</li> <li>Carbon pricing is not widely adopted</li> </ul>
<b>Technological</b>	<ul style="list-style-type: none"> <li>Collaborations between different industries and financial backing encourage the adoption of CCUS</li> <li>Extensive investment in CCUS technology to bridge the transition towards a Net-Zero carbon economy</li> <li>Utilisation of e-fuels in international shipping decarbonisation</li> <li>Significant investor interest in the hydrogen economy</li> </ul>	<ul style="list-style-type: none"> <li>Rapid technological development and extensive adoption of carbon-neutral fuels</li> <li>Governments across the globe invest in CCUS</li> <li>Leverage natural sources to offset remaining emissions</li> <li>Supply of renewable energy is growing faster than electricity demand</li> </ul>	<ul style="list-style-type: none"> <li>Focus is on process efficiency and a slower transition towards technological advancement</li> <li>Lack of funding and incentives to deploy CCUS on a large scale</li> <li>Limited CO<sub>2</sub> storage availability raises energy transition costs</li> <li>Lower transition to renewables</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>Decrease in total energy supply is predicted due to strong implementation of policies and efficiency measures</li> <li>Rapid transformation towards electrification and renewables as a large part of global energy systems</li> <li>Significant global annual investment into the renewable energy sector</li> </ul>	<ul style="list-style-type: none"> <li>Slight increase in total energy supply is predicted</li> <li>Increased electrification with a moderate shift towards renewables with a focus on transitional fuels</li> <li>Utilisation of bioenergy as a potential alternative to replace traditional biomass</li> <li>Strengthen policy commitments to limit fossil fuel usage to balance Net-Zero ambitions</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in total energy supply for advanced economies, while this increases for emerging and developing economies</li> <li>Slower transformation towards renewables with a preference for traditional sources of energy such as coal, oil and gas in emerging and developing economies</li> <li>Continued investment into upstream oil and gas</li> </ul>

# Climate-related Financial Disclosures

Driving Forces	Low Emissions Scenario (< 2°C)	Moderate Emissions Scenario (2 – 3°C)	High Emissions Scenario (3 – 4°C)
<b>Reputation and Social</b>	<ul style="list-style-type: none"> <li>Significant stakeholder pressure to reduce emissions across the value chain</li> <li>Increased regulatory requirements for reporting and disclosing performance and targets</li> <li>Creation of a new green economy and employment opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Widespread social awareness about climate change which influences purchasing and consumption decisions</li> <li>Shortage of skills in climate change adaptation with many displaced workers</li> </ul>	<ul style="list-style-type: none"> <li>Some pressure and urgency placed on companies for climate action</li> <li>Inequal spread of job gains and losses between sectors and countries</li> </ul>

## Identifying Climate-Related Risks and Opportunities

Climate change is a global challenge that will affect every community, industry and company, including MISC. Therefore, when we assess the various risks associated with climate change and their potential impacts on our business and operations, we also consider our value chain, which includes suppliers and customers.






As MISC transitions towards a low-emissions economy, we have identified nine significant climate-related physical and transitional risks and opportunities based on driving forces that may impact our business over short-, medium-and long-term time horizons. The risks are categorised into two groups, namely:

- Physical risk created by a changing climate;
- Transitional risks created by the world's transition to a low-carbon economy

These risks have the potential to materially affect our business, resulting in financial impact based on the way the transition unfolds. The anticipated timeframe in which the climate issue will likely be of global concern.

- The likelihood of the climate issue impacting MISC's business objectives
- The severity/financial impact of climate risks on MISC's business objectives

## OVERVIEW OF MISC GROUP CLIMATE-RELATED RISKS AND OPPORTUNITIES

 <p><b>PHYSICAL</b></p> <ul style="list-style-type: none"> <li>Increase in extreme wind and precipitation (acute)</li> <li>Sea level rise (chronic)</li> </ul>	 <p><b>REGULATORY</b></p> <ul style="list-style-type: none"> <li>Increasing environment/ carbon policies and legislation</li> </ul>	 <p><b>TECHNOLOGICAL</b></p> <ul style="list-style-type: none"> <li>Development of new technologies for low-carbon solutions</li> <li>Training for the right expertise and skills required to manage new assets</li> </ul>
 <p><b>MARKET</b></p> <ul style="list-style-type: none"> <li>Market interest shift towards low-carbon economy</li> <li>Changing capital providers trends</li> <li>Shift in customer expectations</li> </ul>	 <p><b>REPUTATION AND SOCIAL</b></p> <ul style="list-style-type: none"> <li>Talent retention and attraction</li> <li>Being perceived as advanced or laggard in climate change action/failure to comply with regulation</li> </ul>	

➔ Read more in our Climate-related Financial Disclosures 2023 Report.




# Climate-related Financial Disclosures

# Climate-related Financial Disclosures


## Outcome of MISC Group's Climate Scenario Analysis

The following is the outcome of our analysis using the three future scenarios identified and respective time horizons. We have systematically categorised climate-related risks and opportunities and identified risks of particularly high importance, considering the degree of impact and importance, as well as stakeholder interest.


Material risks and opportunities will be incorporated into our strategic priorities within our business plan. The risk or opportunity is deemed material if it has a high chance of occurrence and has a substantial financial impact on MISC's businesses.



Insignificant to minor impact on MISC's current business objectives.



Minor to moderate impact on MISC's current business objectives.



Major or substantial impact on MISC's current business objectives.

Risk Category	Driving Forces	Risk	Low Emissions Scenario	Medium Emissions Scenario	High Emissions Scenario
Physical	Acute	Extreme weather	<ul style="list-style-type: none"> <li>Minimal impact as our assets are built to withstand certain extreme weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>Increased OPEX to maintain and reinforce assets due to heightened extreme weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>Increased CAPEX for designing and constructing new assets and OPEX to maintain and reinforce assets due to heightened extreme weather conditions</li> </ul>
	Chronic	Sea level rise	<ul style="list-style-type: none"> <li>Additional incurred cost of property maintenance/ reinforcements due to erosion from sea level rise/tidal wave changes</li> </ul>	<ul style="list-style-type: none"> <li>Increased cost of property maintenance/ reinforcements and relocations due to erosion from sea level rise/tidal wave changes</li> </ul>	<ul style="list-style-type: none"> <li>Increased OPEX to relocate or implement adaptation measures for operations at coastal locations, such as upgrading building sites/ yard infrastructures or relocating to higher grounds</li> <li>Increased cost from operational delays and disruptions related to trading routes, ports and related infrastructure due to submergence, coastal flooding and coastal erosion</li> </ul>
Transitional	Regulatory	Increasing environmental/ carbon regulations	<ul style="list-style-type: none"> <li>Significantly increased compliance costs due to stringent carbon policies and legislation for more efficient assets – CAPEX and OPEX</li> </ul>	<ul style="list-style-type: none"> <li>Increasing compliance costs due to extensive carbon regulations – CAPEX and OPEX</li> </ul>	<ul style="list-style-type: none"> <li>Increased compliance cost due to moderately increasing carbon regulations – CAPEX and OPEX</li> </ul>
	Technological	Development of new technologies for low-carbon solutions	<ul style="list-style-type: none"> <li>Significantly increased investment costs in low-carbon solutions</li> </ul>	<ul style="list-style-type: none"> <li>Increased investment costs in low-carbon solutions</li> </ul>	<ul style="list-style-type: none"> <li>Increased investment costs in low-carbon solutions</li> </ul>
		Training for the right expertise and skills to manage new assets	<ul style="list-style-type: none"> <li>Increased talent development and upskilling costs (OPEX)</li> </ul>	<ul style="list-style-type: none"> <li>Increased talent development cost (OPEX)</li> </ul>	<ul style="list-style-type: none"> <li>Increased talent development cost (OPEX)</li> </ul>
	Market	Shift in customer and market expectations toward a low-carbon economy	<ul style="list-style-type: none"> <li>Substantial reduction in market demand for oil and gas production, storage and transportation assets and logistic services</li> </ul>	<ul style="list-style-type: none"> <li>Costs of investment and risk of temporary business interruption in adapting to the uncertainties to transition and expand low-carbon solutions technology to meet customer expectations</li> </ul>	<ul style="list-style-type: none"> <li>Market trends toward profit-driven motives, showing less emphasis on environmentally conscious and lower-carbon solutions</li> <li>The global demand for fossil fuels is expected to decrease moderately, potentially affecting exploration and production activities, impacting business operations and revenues</li> </ul>
		Changing capital providers' trends	<ul style="list-style-type: none"> <li>Lack of funding/increased interest rates for conventional marine-fuelled assets</li> </ul>	<ul style="list-style-type: none"> <li>Shift in investor sentiment impacts the valuation and funding opportunities for traditional energy companies</li> <li>Increased cost of borrowing and reduced capital availability</li> </ul>	<ul style="list-style-type: none"> <li>Lack of funding/increased interest rates for conventional marine assets</li> <li>Challenges in attracting the requisite capital for our operations and growth with increasing apprehension about committing capital to carbon-intensive industries</li> </ul>
	Reputational and Social	Being perceived as advanced/ laggard in climate change	<ul style="list-style-type: none"> <li>Increased costs, potential fines and a negative impact on reputation from failure to meet stakeholders increasing social awareness</li> </ul>	<ul style="list-style-type: none"> <li>Increased costs, potential fines and a negative impact on reputation from failure to meet stakeholders increasing social awareness</li> </ul>	<ul style="list-style-type: none"> <li>More room for adjustments to expectations and requirements towards low-carbon solutions with lesser concerns on compliance issues</li> </ul>
Talent retention and attraction		<ul style="list-style-type: none"> <li>Increased OPEX to attract and retain talent</li> </ul>	<ul style="list-style-type: none"> <li>Increased OPEX to attract and retain talent</li> </ul>	<ul style="list-style-type: none"> <li>Moderately increased OPEX to attract and retain talent</li> </ul>	

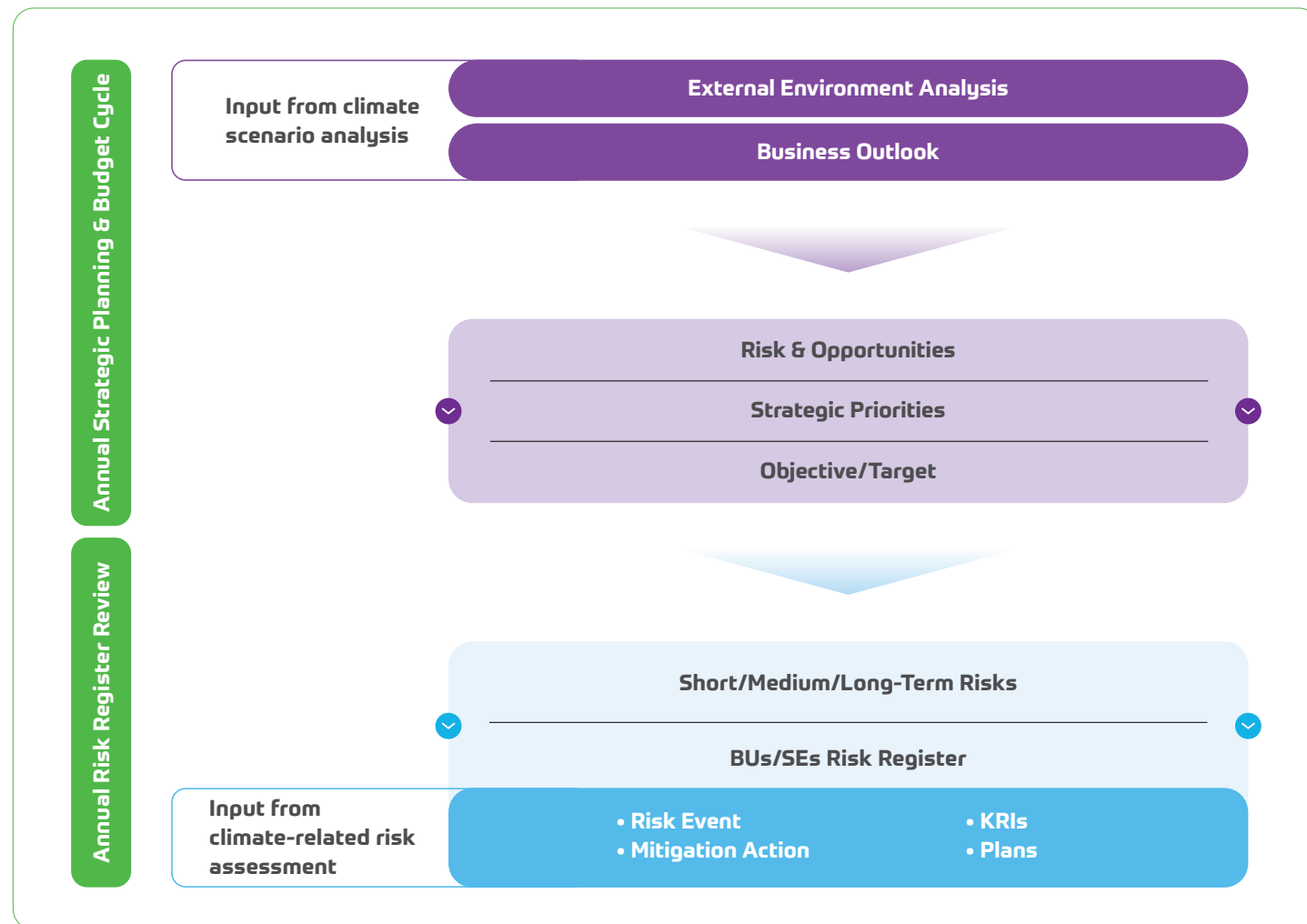
➔ Read more in our Climate-related Financial Disclosures 2023 Report.

# Climate-related Financial Disclosures

## RISK MANAGEMENT

Our risk management process is integral to our sustained business success and resilience against climate change impacts. It seamlessly incorporates the identification, assessment and management of climate-related risks within our comprehensive risk management programme, which is specifically structured to identify risks across MISC Group, gathering input from each business unit and function.

MISC Group incorporates climate risk evaluation into our strategic planning and business processes, aligning with our Enterprise Risk Management (ERM) framework. Specifically, a Project Risk Assessment (PRA) is systematically conducted before the initiation of any new capital-intensive project. This thorough assessment aids in the identification of potential risks associated with the project, allowing the business to implement effective controls and measures to mitigate these risks.



[Read more in our Climate-related Financial Disclosures 2023 Report.](#)

# Climate-related Financial Disclosures

## METRICS AND TARGETS

In quantifying our commitment to climate resilience, we have identified several performance indicators and targeted benchmarks used to manage climate-related risks and opportunities that are essential in steering us towards a sustainable and low-carbon future. These include:

- GHG intensity performance (in annual emissions ratio in the unit of gCO<sub>2</sub>e/t-nm) for historical periods and 2050 projections;
- Total GHG for Scope 1, 2 and 3;
- Internal carbon price;
- Cashflow from operations from Clean Energy Solutions;
- Operating expenditure on low-carbon or energy reduction initiatives; and
- Energy consumption

### Our Commitment and Performance

#### Mid-Term Target: 50% reduction in GHG intensity (for shipping operations) by 2030

- Scope**
  - Gas and petroleum shipping falls within MISC’s GHG Organisational Boundary (Financial Control)
  - Ships not subjected to the requirements of Regulations 21 and 25 of MARPOL Annex VI are excluded
- Base Year**: 2008
 **Target Type**: Intensity reduction
 **Measurement Metric**: AERCO<sub>2</sub>e (gCO<sub>2</sub>e/t-nm)
- GHG Included**
  - All material GHG:
    - Carbon dioxide
    - Methane
    - Nitrous oxide

#### Long-Term Target: Net-Zero GHG Emissions by 2050

- Scope**
  - MISC Group of Companies’ Value Chain:
    - MISC’s own operations (Scopes 1 and 2)
    - Material upstream and downstream operations to MISC (Scope 3)
- Base Year**: 2008
 **Target Type**: Absolute reduction
 **Measurement Metric**: AERCO<sub>2</sub>e (gCO<sub>2</sub>e/t-nm)
- GHG Included**
  - All material GHG:
    - Carbon dioxide
    - Methane
    - Nitrous oxide

[Read more in our Climate-related Financial Disclosures 2023 Report.](#)





# ENVIRONMENT PILLAR

## Our Approach

At MISC, our environmental policy is captured as part of our HSE Policy. Key elements of our Environmental Policy include:



**Ensures compliance with relevant environmental laws and regulations**

**Commitment to continuous improvement of environmental performance**

**Commitment to set targets and objectives to reduce environmental impacts**

**Measures to raise stakeholders' awareness on relevant environmental matters**

We regularly review our environmental management approach, learn from our experiences and adapt our strategies to align with emerging regulations, best practices and evolving environmental challenges. Our environmental management approach is strengthened by ongoing engagement with stakeholders including our employees, customers, suppliers and local communities, to ensure a holistic understanding of risks and opportunities. Feedback from our stakeholders is incorporated into our decision-making processes to ensure we address their concerns and priorities.

are important to ensure robust environmental management practices are integrated into our operations. As part of the certification requirements, regular internal and external audits and assessments are conducted to assess the effectiveness of environmental-related procedures and improve our environmental practices and performances. These audits are carried out through integrated HSE Management System (HSEMS) assurances and internal audits for ISO 14001 and ISO 50001.

To support the implementation of our environmental and energy policy, our Offshore Business, Marine & Heavy Engineering and Marine Services have been certified with the ISO 14001:2015 Environmental Management System and similarly, our Marine Services are also certified with the ISO 50001:2018 Energy Management System. These certifications

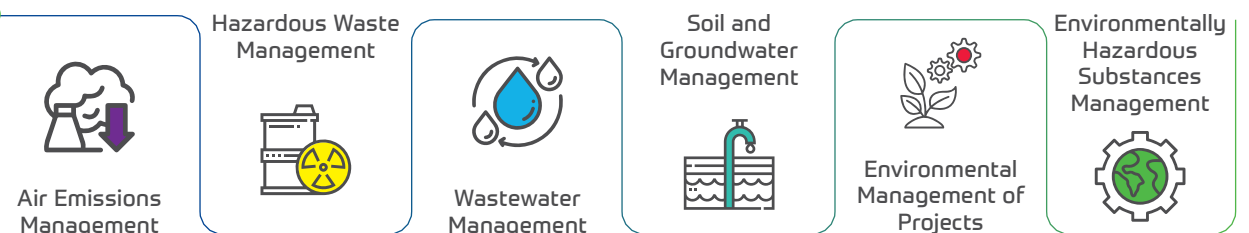
As part of MISC's HSEMS, we have established minimum environmental requirements for each business to comply with in six key areas. Under each key area, prescriptive requirements have been established to strengthen governance of identified environmental risks as well as to clearly define the scope for environmental assurance within MISC Group.

## Our Approach

At MISC, our commitment to environmental stewardship is deeply ingrained in our operations and this section outlines our comprehensive management approach to minimising environmental impacts and fostering a sustainable future.

Our environmental management approach is guided by a robust policy articulating our commitment to compliance with applicable environmental laws and regulations, prevention of pollution and the continual improvement of our environmental performance. This policy is an integral part of our commitment to sustainability, serves as the foundation for our strategic decision-making processes and drives us towards continuous improvement.

### 6 Key Areas of the Group's Environmental Minimum Requirements Procedure



In addition, we regularly track and report key environmental performance metrics, including energy consumption, waste generation, water usage, air emissions and GHG emissions. These metrics are disclosed within our annual sustainability report, providing transparency and accountability to our stakeholders.

# Decarbonisation Pathway

## Our Commitment

- Transition to a low-carbon economy
- Deploy zero-carbon emissions vessel latest by 2030
- Decarbonised shipping operations by 2050
- Net-Zero GHG emissions by 2050

## Our Initiatives

- SHIPPING OPERATIONS**  
**Short to Medium-Term (until 2030)**
  - Continuous improvement in energy efficiency design and operations
  - Progressive fleet renewal to low-carbon fuel
  - Collaboration with strategic partners in developing zero-carbon emission vessels
- Long-Term (until 2050)**
  - Progressive fleet renewal to zero-carbon emission vessels
  - Beyond value chain mitigation (carbon removal, avoidance and reduction)
- NON-SHIPPING OPERATIONS**
  - Improve energy efficiency in operations
  - Increase usage of renewable energy mix

## Our Contribution to SDG

- Design and operate assets that can combat or reduce the effects of climate change



- Design or retrofit sustainable assets which optimise resource-use efficiency with greater adoption of clean and environmentally sound technologies



### MISC'S CLIMATE COMMITMENT

**LONG-TERM COMMITMENT**

Net-Zero GHG emissions by 2050

1

**MEDIUM-TERM CLIMATE TARGET**

Reduce 50% GHG intensity from our shipping operations by 2030 (compared to the baseline year of 2008)

2

MISC Group operates in the maritime sector with key businesses in shipping energy and energy-related products globally, offshore assets, maritime services and maritime education. We recognise that climate change is a global challenge and the energy and shipping sector has contributed to climate change through our business activities.

The global community has advocated for an energy transition towards renewable energy solutions to keep global temperature increase to well below 2°C above pre-industrial levels by 2050. According to the IEA, 35% of global electricity generation demand will be met by renewable energy by 2025. This is a positive development in tackling climate change, but these developments in zero-emission technologies will need to scale significantly for the maritime sector.

# Decarbonisation Pathway

## ▼ Navigating the Energy Transition

Although shipping is considered the most efficient form of transport, the industry still mainly relies on fossil fuels for its energy needs which are significant contributors to GHG emissions and climate change. As the world moves toward renewable energy and decarbonisation, there is growing pressure faced by MISC and our stakeholders.

The availability and affordability of technology and alternative fuels for the shipping and maritime sectors are major barriers to a rapid transition away from traditional fossil fuels. The industry faces the challenge of finding a way of navigating the energy transition to a low-carbon or zero-carbon future while meeting the immediate business demands of the industry and balancing economic interests with environmental sustainability.

Additionally, ships and offshore assets have long lifecycles and substantial upfront investments. This requires prudent

and multifaceted decisions by the Group on where to allocate resources—whether to invest in cleaner technologies, sustainable fuels and energy-efficient vessels or continue with more traditional infrastructure that may become obsolete or face increased regulatory scrutiny.

While we consider the expectations of various stakeholders, including investors, customers and the public, we need to balance between meeting stakeholder expectations and fulfilling immediate energy needs. This means navigating economic interests with the imperative to adapt to a changing energy landscape while ensuring the efficient and cost-effective transportation of oil and gas, which are still the primary energy sources in many parts of the world.

[Read more in the Indirect Economic Value Creation section.](#)

## ▼ Remaining Steadfast in Our Commitment

Despite this, we are committed to demonstrating our dedication to sustainability. MISC is actively tackling climate change risks through a comprehensive strategy that combines the implementation of solutions with ongoing innovation. Although we operate in a challenging sector, we are intensifying our efforts to achieve our medium-and long-term goals. This includes the development of green ammonia-powered vessels, slated for delivery by 2030 at the latest. Our steadfast commitment to sustainable shipping not only resonates with global environmental objectives but also establishes a resilient and future-oriented business model.

In 2023, we focused on further defining and clarifying the roadmap that would transform this challenging yet attainable vision into reality. The next few years will be critical for MISC as we work towards materialising and implementing effective solutions in decarbonising our business. Towards this, we have established key milestones to ensure we stay on track with our journey, where these targets serve as guiding principles for the decisions we make.

We steadfastly uphold our commitment to align with the IMO's resolve to address the escalating climate crisis, ensuring that the shipping industry actively contributes to the global reduction of GHG emissions. The IMO, a division of the UN responsible for regulating the shipping sector, initially adopted a strategy in 2018 to curtail GHG emissions from international shipping. This marked a pivotal moment affirming the IMO's vision and dedication to emissions reduction.

Notably, at the IMO Marine Environment Protection Committee (MEPC) 80 on 7 July 2023, additional significant commitments were established. These include a pledge to decrease total annual GHG emissions from international shipping by a minimum of 20%, with an ambitious aim for 30% compared to 2008 levels by 2030. Furthermore, the objective was set to attain Net-Zero GHG emissions by 2050. MISC's climate commitment is aligned with the IMO's ambitious targets, reflecting our proactive stance in contributing to a more sustainable shipping industry.

### IMO GHG COMMITMENT

- 2030:**  
Reduce international shipping's total GHG by at least 20% compared with 2008 baseline
- 2050:**  
Net-Zero GHG emissions by 2050

### MISC'S CLIMATE COMMITMENT

- 2030:**  
Reduce shipping operation's GHG intensity by 50% compared with 2008 baseline
- 2050:**  
Net-Zero GHG emissions by 2050



# Decarbonisation Pathway

## MISC'S NET-ZERO TARGET

In March 2022, the Science Based Target Initiative (SBTi) published the SBTi Fossil Fuel Policy, which affects the extent to which companies engaging in fossil fuel businesses can commit to climate targets. SBTi is unable to accept commitments or validate targets for companies in the oil and gas or fossil fuels sectors. This includes companies engaged in exploration, extraction, mining, or production of oil, natural gas, coal, or other fossil fuels, regardless of revenue, i.e. including, but not limited to, integrated oil and gas companies, integrated gas companies, exploration and production pure players, refining and marketing pure players, oil products distributors, gas distributors and retailers and traditional oil and gas service companies. In November 2023, SBTi released a new Terms of Reference for its project to develop a target-setting standard for companies in this sector.

MISC is keeping track of these developments and we are committed to aligning our emissions target to the SBTi and IMO targets. We will continue to review our targets as necessary to ensure we adhere to industry best practices and demonstrate our unwavering commitment to sustainability. The diagram below presents MISC Net-Zero GHG Commitment against SBTi.

SBTi (Near-Term And Long-Term Net-Zero Targets) Criteria	MISC Net-Zero GHG Commitment 2050
The boundary of long-term science based targets shall cover company wide Scope 1 and Scope 2 emissions, as defined by the GHG Protocol Corporate Standard. Exclusions in the GHG Inventory and target boundary must not exceed 5% of total Scope 1 and 2 emissions.	MISC Net-Zero GHG Commitment is company-wide, covering both shipping and non-shipping operations. Our exclusions form less than 5% of our total Scope 1 and 2 emissions.
The targets must cover all relevant GHGs as required per the GHG Protocol Corporate Standard.	We cover all relevant GHGs (CO <sub>2</sub> , N <sub>2</sub> O and CH <sub>4</sub> ).
The use of offsets must not be counted as emissions reduction toward the progress of companies' science based targets.	We will deploy carbon abatement and removal technologies within our value chain and only unabated residual emissions shall be neutralised with carbon removals outside of MISC's value chain.

MISC's Net-Zero GHG emissions target is defined as reducing the volume of emissions produced to zero to mitigate climate change. To achieve this, we will explore and implement commercially viable technologies to progressively decarbonise our operations until we reach a state where we are left with unabated residual emissions. These unabated residual emissions will be compensated with carbon removal offsets (i.e., reduction outside our value chain).

### Our Net-Zero Equation

**TOTAL GHG**

-

**CARBON ABATEMENT**

-

**CARBON REMOVAL**

=

**RESIDUAL EMISSIONS**

-

**CARBON REMOVAL OFFSET**

=

**NET-ZERO EMISSION 2050**

<p><b>Scope of Gases</b></p> <ul style="list-style-type: none"> <li>All GHG</li> <li>Unit: CO<sub>2</sub>e</li> </ul> <p><b>GASES INCLUDE</b></p> <ul style="list-style-type: none"> <li>Carbon dioxide (CO<sub>2</sub>)</li> <li>Methane (CH<sub>4</sub>)</li> <li>Nitrous oxide (N<sub>2</sub>O)</li> </ul>	<p><b>Scope of Activities</b></p> <ul style="list-style-type: none"> <li>Scopes 1, 2, 3</li> </ul> <p>MISC operations (Scope 1 &amp; 2)</p> <p>Upstream and downstream of MISC's operations (Scope 3 on material categories)</p>	<p><b>Mitigation Pathways</b></p> <ul style="list-style-type: none"> <li>Abatement</li> <li>Removal</li> <li>Removal Offset (beyond value chain)</li> </ul> <p>Abatement and removal pathways to reduce own operations and value chain emissions</p> <p>Beyond value chain carbon removal, avoidance and reduction to offset residual GHG</p>	<p><b>Timeframe</b></p> <ul style="list-style-type: none"> <li>Long-term</li> <li>2050</li> </ul>
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**RATIONALE WHY NET-ZERO BY 2050**

- Investments in our newbuild assets generally last for 20 years on average
- Assuming ZEVs are commercially available only in 2030, we will need 20 years from 2030 to complete the transition from existing fleet to ZEVs

# Decarbonisation Pathway

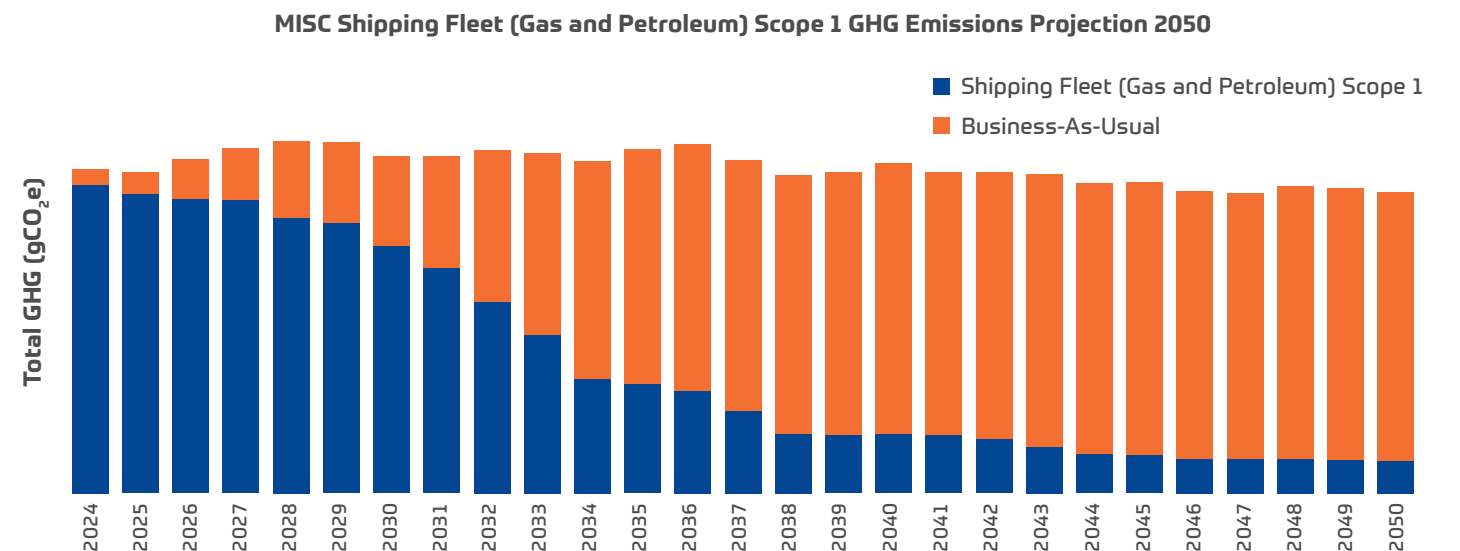
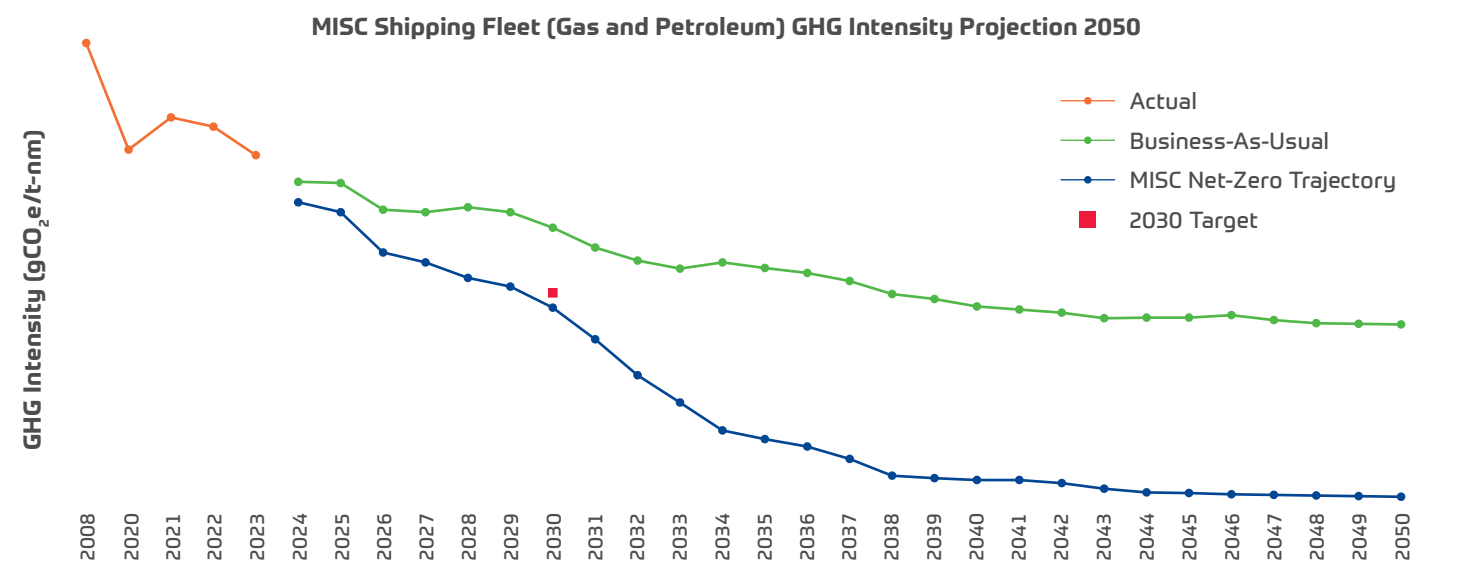
## DECARBONISING OUR OPERATIONS

Shipping demands high energy density fuels for long-distance voyages and powering large, heavily laden vessels. Many alternative fuels with lower carbon footprints may not meet the energy density requirements, making it challenging to find suitable alternatives without compromising efficiency. Furthermore, ships typically have long lifecycles, often exceeding two decades, which means decarbonising operations for established shipping companies will require time due to the capital costs involved.

We conduct annual assessments to determine our GHG profile and potential pathways towards decarbonising our business, premised on our rolling business plan. These assessments consider our existing fleet, including individual vessel performance, as well as newbuilds and upcoming projects. We also consider potential operational and technological interventions that can be deployed on existing assets to further improve energy efficiency and reduce overall emissions.

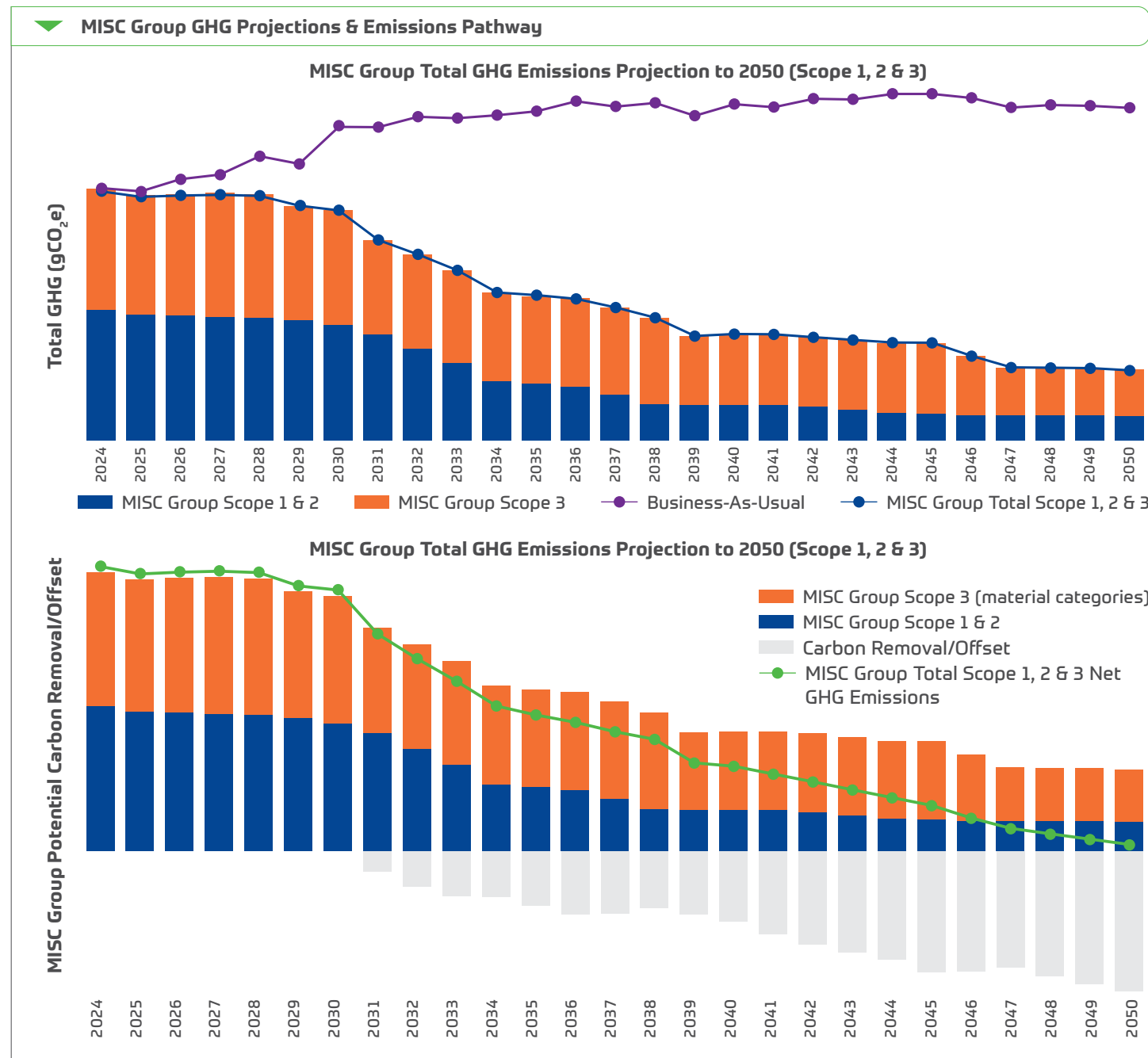
### MISC Group GHG Projections & Emissions Pathway

We expect to see a steady decline in our GHG emissions between 2024 to 2027 with contributions coming from the expected energy efficiency improvements on the existing fleet and the introduction of new vessels with high efficiency/low-carbon design.



# Decarbonisation Pathway

# Decarbonisation Pathway

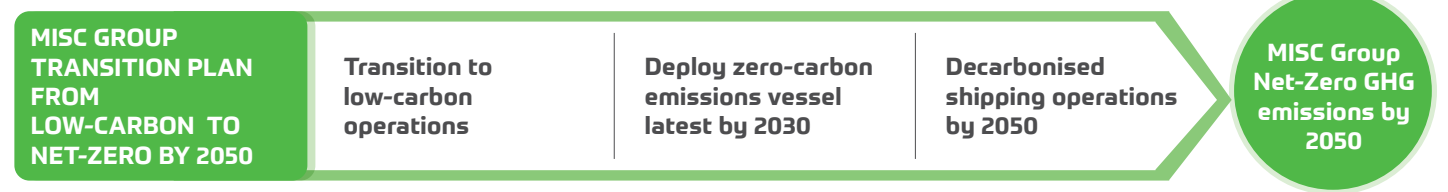


## Our GHG Transition Plan

Our aspiration to reach Net-Zero emissions by 2050 represents our long-term commitment and having a well-defined transition plan is key in propelling us towards the goal. Our short to medium-term plan will be focused on commercial and operational efficiency interventions. This entails close collaboration with charterers on implementing voyage planning and trade optimisation, slow steaming, maximising boil-off gas utilisation and hull and propeller cleaning. MISC also plans to implement technological retrofits on selected vessels. In 2023, detailed feasibility studies had been carried out for four vessels with regards to these new technologies.

**Our Marine Services initiated research of a total of 77 technological solutions for our Petroleum & Product Shipping and Gas Assets & Solutions fleet in the same year.**

To date, 35 technologies are under review, 12 of which are novel or new.



Short-Term (within the next 2-3 years)	Medium-Term (current year up to 2030)	Long-Term (2031-2050)
<b>Fleet Renewal and Newbuilds</b>		
<ul style="list-style-type: none"> <li>Progressive fleet renewal of our shipping fleet to high-efficiency LNG dual-fuel engine vessels from now to 2030</li> <li>Methane abatement on selected vessels</li> </ul>	<b>Fleet Renewal and Newbuilds</b> <ul style="list-style-type: none"> <li>Progressively renew the fleet with ULEVs and ZEVs latest by 2030</li> <li>The Castor Initiative: Deployment of ultra-low emissions ammonia vessel in or after 2027 (except LNGCs)</li> <li>Methane abatement on selected vessels</li> </ul>	
<b>Value Chain Reduction</b>		
<ul style="list-style-type: none"> <li>Value Chain emissions (Scope 3) reductions</li> </ul>		
<b>Beyond Value Chain Mitigation (Carbon Removal, Avoidance &amp; Reduction)</b>		
<ul style="list-style-type: none"> <li>Carbon avoidance, reduction and removal outside of MISC's value chain</li> </ul>		
<b>GHG Removal</b>		
<ul style="list-style-type: none"> <li>Explore and adopt commercially viable technologies for our existing fleet with methane and carbon capture technologies to safely capture and store away excess carbon</li> </ul>		
<b>Technical and Operational Efficiency</b>		
<ul style="list-style-type: none"> <li>Continuous exploration and adoption of technological solutions and improvements to optimise the operational efficiencies of our vessels</li> </ul>		
<b>Low-Zero Carbon Offshore Assets</b>		
<ul style="list-style-type: none"> <li>Explore and adopt commercially viable energy efficient, zero-flaring, GHG reduction and CCUS-ready technologies for offshore assets</li> </ul>		
<b>Renewable Energy</b>		
<ul style="list-style-type: none"> <li>Explore and adopt renewable energy for shipping and non-shipping assets</li> </ul>		

**Note:**

- Zero-emissions vessels (ZEVs) refer to vessels that produce zero or negligible GHG emissions under continuous operations.
- Ultra-low-emissions vessels (ULEVs) refer to vessels that produce very low, almost zero GHG emissions under continuous operations.
- Low-emissions vessels refer to vessels that are powered by LNG.

One of our focus areas in decarbonisation is CCUS. Hence, in 2022, the CCS Incubation Team was formed to drive CCS initiatives within the Group. As the team progressed and as more development translated into activities in the clean energy space involving multiple business functions within the Group, the CCS Incubation team was further expanded and evolved into the New Energy & Decarbonisation (NED) Unit effective February 2023. The NED team was set to drive MISC's efforts forward, focusing on seeking new business opportunities that will enable the company to thrive in a low-carbon economy.



## Decarbonisation Pathway

## Decarbonisation Pathway

### GHG Abatement Pathways

As we progress towards achieving our 2030 GHG emissions reduction target, we have identified short to medium-term initiatives. Long-term initiatives will further contribute towards achieving our 2050 Net-Zero GHG emissions target.

#### Fleet Renewal and Newbuilds

Our shipping business segments support the IMO's aspirations to reduce emissions by rejuvenating our fleet through investments in low-, ultra-low- and zero-emissions vessels. As part of our transition plan, we will progressively renew our fleet with high-efficiency LNG dual-fuel engine vessels from now until 2030 and we target to deploy ultra-low and zero-emissions ammonia dual-fuel vessels no later than 2030.

Presently, LNG is the lowest-carbon emissions fuel available at scale to the shipping industry and beyond GHG, it also emits a negligible amount of SOx and particulate matter. NOx emissions from LNG combustion are significantly lower compared with traditional bunker fuels. MISC will be relying on LNG as a transitional fuel until alternative fuels are available to the shipping industry at scale. However, we are cognisant of the fact that methane emissions are a key challenge associated with LNG-fuelled engines, particularly from unburned methane during combustion or methane slip. For this reason, MISC will continue to harness the latest engine designs and technologies that minimise methane leakages on our newly built vessels.

#### LNG Dual-Fuel VLCCs

In 2023, AET successfully delivered two of its three VLCCs powered by dual-fuel LNG engines, *Eagle Vellore* and *Eagle Ventura*, on long-term charter to Shell. The third vessel, Singapore-flagged *Eagle Veracruz*, was later delivered to Shell in January 2024.

[Read more in the Indirect Economic Value section.](#)

#### "Green" LNGCs

In 2023, we received the delivery of two of our LNGCs, *Seri Damai* and *Seri Daya*, for SRM which were constructed in South Korea and featured technologies that include modern XDF propulsion i.e., XDF 1.0 engines and partial re-liquefaction facility for higher efficiencies to meet the demand for worldwide trading and long-haul.

With these notable features, the Singapore Registry of Ships Forum 2023 recognised these two vessels with the prestigious Green Ship status under the MPA GSP. *Seri Damai* and *Seri Daya* stand as pioneering vessels in MISC's LNG fleet to attain Green Ship status under this programme, following our dual-fuel VLCC, *Eagle Valence*.

In addition, MISC, through a consortium with K-Line, NYK and CLNG was awarded a total of 12 newbuild LNGC contracts by QatarEnergy and also awarded a contract in 2022 for two newbuild LNGCs by SRM. These newbuilds will be equipped with eco-efficient technologies, namely:

- X-DF 2.1 engines with Intelligent Control by Exhaust Recycling (iCER) System
- Partial re-liquefaction facility
- Air Lubrication System

These technologies serve to improve fuel efficiency, reduce methane slip by 50% compared to X-DF1.0 engines and reduce overall GHG emissions.

### GHG Abatement Pathways

#### Ultra-low Emissions Vessels

In February 2023, AET signed a MoU with our customer, PTLCL to explore a potential collaboration to deploy a future ultra-low emissions Aframax powered by green ammonia. This MoU marks a further positive step to advance AET's Net-Zero commitment, adding to the pair of ultra-low emissions ammonia-fueled deep-sea tanker vessels under the Castor Initiative and our collaboration with our customer, PTT which were both announced in 2022.

In June 2023, AET, ALAM and WinGD inked a Collaboration Agreement that aims to drive the development of ammonia engines for ammonia dual-fuel vessels, marking a historical milestone as the first of its kind in the world for deep-sea vessels. This strategic collaboration also plays a crucial role in the development and training of mariners to safely manage and operate vessels built with ammonia dual-fuel engines and new technologies.

#### The Castor Initiative

In 2020, we allied with three maritime industry players, namely SHI, LR and MAN Energy Solution, to form a Joint Development Project (JDP) to develop commercially viable deep-sea ZEVs by 2030. Our JDP to develop commercially viable deep-sea ZEVs by 2030 is aligned with:

- The IMO's 2050 commitment; and
- Getting to Zero Coalition's commitment

In 2021, LR awarded AiP to SHI for its ammonia-fueled tanker design as well as its fuel supply and fuel storage system, with a target to commercialise these developments by 2024. In early 2021, the JDP was rebranded to the Castor Initiative as Yara International ASA (Yara) and the MPA joined the coalition, followed by Singapore's Jurong Port later in the year. Jurong Port's role is to facilitate the testing of the port infrastructure and processes required to handle future marine fuels, including ammonia. The Castor Initiative was motivated by the partners' shared belief that the maritime industry requires leadership and greater collaboration if the shipping industry is to meet the IMO's GHG ambitions. Ultimately, our shared agenda is exploring multiple decarbonisation pathways.

A workshop with participation from project managers was held in Kuala Lumpur in March 2023, the first physical meeting to be held post-COVID-19. The workshop covered topics relevant to using ammonia as fuel, including:

- latest updates on rules and regulations;
- latest updates on IMO's interim guidelines for ammonia;
- safety studies and rule application to the ammonia dual-fuel system design;
- debunking myths on ammonia safety; and
- studies on ammonia bunkering

A panel discussion was also held to address specific challenges raised by the members in adopting ammonia as a marine fuel. About 30 participants from classification society, shipbuilders, regulators and learning institutions attended this workshop.

From 28 to 29 July 2023, a Hazard Identification Workshop amongst project managers was held at the SHI headquarters in Pangyo, South Korea, to discuss the detailed concept of the ammonia storage and fuel pre-treatment systems. The outcomes of these studies were to test the efficacy of the developed rules and guidelines for shipbuilding against the design of the Aframax/VLCC vessel class within the multi-disciplined community of Castor Initiative stakeholders.

#### Methane Abatement

As we progressively renew our fleet with high-efficiency LNG dual-fuel engine vessels to reduce our GHG emissions, we are cognisant of addressing the methane emissions that may escape into the atmosphere. To identify the right methane abatement solution, we will need to measure the methane emissions released in the exhaust accurately. We have been in discussions with Daphne Technology on the deployment of PureMetrics™, an emission monitoring system, for this purpose. Daphne Technology is a Swiss climate tech start-up which we had invested in 2021 alongside Shell Ventures, Trafigura and Saudi Aramco Energy Ventures to address challenges in GHG. The target is to implement PureMetrics™ on at least two of our vessels by 2024 while we continue to evaluate the methane abatement solutions available in the market.

## Decarbonisation Pathway

## Decarbonisation Pathway

### GHG Abatement Pathways

#### Technical and Operational Efficiency

As part of near-term measures to reduce GHG emissions, we are adopting technical and operational efficiency improvements on our existing fleet to meet regulatory requirements such as the IMO EEXI and CII. These measures include:

- Awareness and collaboration programmes with charterers to optimise speed, improve voyage planning and maximise usage of boil-off gas;
- Internal awareness and engagement sessions on fuel optimisation and efficient voyage planning and execution with various groups namely Marine Services engineering team and fleet operations, vessel crews and business functions units (AET and GAS);
- Retrofit Energy Efficiency Devices (EED) and application of ultra-low friction paint (tributyltin-free) for underwater hull hydrodynamics improvement.
- Optimise deployment of vessels between STS trade to long-haul voyages; and
- Existing fleet compliance with EEXI through shaft power limitation (ShaPoLi) installation on identified vessels.

#### Computational Fluid Dynamics (CFD) Study

Apart from investing in LNG dual-fuel, ultra-low and zero emissions vessels, we acknowledge the need to take immediate measures to optimise the operational efficiency of our existing fleet to ensure compliance with increasingly stringent environmental regulations and as part of our commitment towards decarbonisation. In 2023, we partnered with third-party consultants to conduct a bespoke CFD study on our lead sister vessels to identify the right energy-efficient technologies to improve their emissions efficiency.

Scenario-based decarbonisation plans will be developed based on an in-depth study of hydrodynamics, flow patterns and interactions between our vessels and their aquatic surroundings. The energy-efficient technologies explored as part of the study include Mewis Duct, Pre-Swirl Fins, Propeller Boss Caps and Air Lubrication Systems. The study is expected to be completed in 2024, setting the stage to retrofit energy-efficient technologies on our vessels.

#### Conversion to LED Lights

MHB proceeded with the implementation of its action plan aimed at reducing electricity consumption. This involved the replacement of conventional lights with LED lights, which are energy-efficient, have higher luminous efficacy and have significantly longer lifespans.

As of 2023, MHB has successfully replaced 85.6% of conventional lights on its premises with LED lights.

#### GHG Removal

As the shipping industry explores alternative and sustainable fuels, GHG removal technologies play a role in offsetting emissions during this transitional phase in the global energy sector. These technologies for the shipping sector are an effective means for mitigating emissions, achieving regulatory compliance, supporting the transition to sustainable fuels and contributing to global efforts to decarbonise the industry. They provide a bridge to cleaner energy sources by capturing and storing GHG from conventional fuels until the industry can fully transition to zero-emission or low-carbon alternatives and contribute toward shaping a more sustainable and environmentally responsible future for maritime transportation.

#### Carbon Capture, Utilisation & Storage (CCUS)

Venturing into the CCUS business is aligned with MISC 2050 Vision towards a low-carbon business that provides a strong recurring income base for MISC's long-term sustainability. We are exploring opportunities within new gas markets, such as carbon capture on ships or onshore, LCO<sub>2</sub> carriers and FCSUs. The talent and knowledge pool that MISC has in cargo handling, EPCIC, shipbuilding and module fabrication can pave the way into the decarbonisation market.

In 2023, MISC, PETRONAS CCS Ventures Sdn Bhd a wholly-owned subsidiary of PETRONAS and MOL jointly signed a Term Sheet for the potential incorporation of a JV entity. This entity aims to invest in developing and monetising LCO<sub>2</sub> carriers for CCS projects in Malaysia, marking another milestone for the positioning of CCS as a key lever in our MISC 2050 Vision.

Apart from the midstream solution identified within the CCS value chain, MISC is currently looking at setting up a CO<sub>2</sub> hub or receiving terminal via Marine Services. This will enhance

### GHG Abatement Pathways

Marine Services capabilities in managing the offtake and loading of CO<sub>2</sub>. MISC has also embarked on feasibility studies with IONADA and Hi-Air for onboard carbon capture solutions on identified LNGCs and petroleum tankers.

#### Clean Power Generation

Valverde Power Solutions, Inc., MISC Berhad, Clean Energy Systems, Inc. and Aker Solutions have jointly announced the execution of an Agreement to specify and fund certain preliminary front-end engineering design (Pre-FEED) to assess and demonstrate two North American emission-free power projects utilising Clean Energy Systems' proven Oxy-Fuel burner technology. Clean Energy Systems' Oxy-Fuel technology is utilised to meaningfully reduce or eliminate oil field operations' GHG emissions and convert stranded and contaminated natural gas feedstocks into emission-free power with one hundred percent CO<sub>2</sub> capture.

This project aims to demonstrate the robustness of the Oxy-Fuel burner technology in an oil and gas field setting to generate emission-free power, reduce or eliminate oil field GHG emissions, sequester carbon dioxide and provide a solution for stranded natural gas reserves. In a sustainability context, by utilising the Oxy-Fuel burner, both Scope 1 and Scope 2 GHG emissions can be addressed. The project team intends to capitalise on the significant CCUS technical and engineering expertise among the project participants.

#### Floating Carbon Storage and Injection Unit (FCSU-I)

We secured an AiP for our innovative FCSU-I that aims to lead the way in enhancing the efficiency of the CCS value chain within the maritime industry. The jointly developed FCSU-I concept with SHI is a culmination of the partnership between MISC and SHI, which took root following the signing of a MoU in January 2023. The AiP from DNV confirms the technical feasibility of the concept as well as initial conformity to the applicable rules, industry codes and standards.

Leveraging MISC's maritime expertise and SHI's shipbuilding as well as offshore engineering prowess, the FCSU-I is a dynamic and versatile solution that is crafted to meet the unique demands of diverse offshore-related CCS projects worldwide. It addresses a critical gap, particularly when GHG emitters lack access to nearby sequestration sites, necessitating seamless maritime transportation and storage of CO<sub>2</sub>.

The FCSU-I is a result of our collective ambition to steer the maritime sector and other hard-to-abate sectors towards greener horizons. Both MISC and SHI firmly believe that the FCSU-I concept will redefine the CCS landscape, setting a new benchmark for sustainable advancements. This pioneering partnership underscores our unwavering commitment to drive transformative change, aligning with global aspirations to mitigate carbon emissions and forge a greener future.

#### Key attributes of the FCSU-I



#### Agile:

The FCSU-I can be deployed across multiple depleted oil and gas fields offshore that have been earmarked as potential carbon dioxide storage sites. It introduces alternative approaches to carbon storage in comparison to the traditional pipeline method.

#### Versatile:

The FCSU-I serves a dual role by functioning either as an intermediate carbon dioxide storage unit or, in tandem, as an injection vehicle for offshore carbon dioxide reservoirs. Efforts are currently ongoing to explore a wider range of potential applications and for example, to include a carbon dioxide liquefaction facility, amplifying its utility and practicality.

#### Adaptable:

Designed with a total storage capacity of 100,000 cubic meters and an injection capacity of 5 million metric tons per annum (MTPA), the FCSU-I's scalability and storage capabilities make it suitable for a broad range of CCS projects in the maritime space.



## Decarbonisation Pathway

## Decarbonisation Pathway

### GHG Abatement Pathways

#### Low/Zero Carbon Offshore Assets

As the global energy landscape evolves, there is a growing recognition of the need to transition to cleaner and more sustainable sources. Low-and zero-carbon emissions offshore assets for the energy sector play a role in advancing sustainability goals and contributing to the overall decarbonisation of the energy industry as renewable energy sources progressively expand to achieve the scale required to power the global economy.

Embracing low- and zero-emission technologies encourages innovation within the oil and gas sector as it can lead to the development of new, more efficient technologies and processes, driving progress toward a more sustainable energy industry. At MISC, investing in low- and zero-emission offshore assets positions us to adapt to changing market dynamics, ensuring the long-term resilience and competitiveness of our operations.

#### ➤ Newbuild Floating Production Storage and Offloading Unit (NBFPSO)

We unveiled the design of our future ready NBFPSO Unit at OTC Houston 2023. It is the world's first NBFPSO, which uses the Mega-Module topsides and incorporates sustainable technologies into the design, which makes it one of the largest and greenest NBFPSOs in the market. The NBFPSO, known as MMEGA is based on modern fifth-generation FPSOs for deepwater and ultra-deepwater fields, with high production capacity and longer field life. MMEGA differs from other solutions in the market as it results in minimised interfaces, improved system integration, reduced overall EPCIC schedule and optimised capital expenditure.

MMEGA represents MISC's solution to the offshore industry's current and future needs. The design, developed over 24 months, underscores our ongoing dedication to creating innovative, eco-efficient and economically feasible solutions. Leveraging on proven sustainable technologies, the MMEGA has the potential to reduce the GHG emissions intensity by up to 40% per barrel of oil extracted due to the use of Combined Cycle Power Generation and an all-electric drive, making it one of the lowest emitting FPSOs in the world. We are confident that the improved design and construction flexibility of MMEGA will generate maximum economic value for our customers by reducing project costs and timelines. We look forward to sharing the solution

and building greater synergy with like-minded partners to decarbonise the energy value chain and achieve society's aspiration for a just energy transition.

In recognition of its innovative and sustainable features, the MMEGA has been granted AiP and the SUSTAIN-1 notation by ABS.

#### ➤ Conversion of Vessel into LNG FSU

On 31 October 2023, MISC Berhad entered into an agreement with Pengerang LNG (Two) Sdn. Bhd., a subsidiary of PETRONAS Gas Berhad, for the supply, operation and maintenance of an LNG FSU intended to be deployed at the PETRONAS LNG Regasification Terminal Pengerang in Johor.

This project will see the conversion of MISC's LNGC, *Puteri Delima Satu* into an FSU, which has been designed to operate on shore power to reduce GHG emissions while improving operational efficiency. This project will be commercially operational by the second quarter of 2025 under a 20-year contract term. It is a revenue-generating opportunity through the repurposing and redeployment of our existing assets and draws on our experience from operating FSU Tenaga Satu and FSU Tenaga Empat at the existing PETRONAS LNG Regasification Terminal Sungai Udang (RGTSU), in Melaka.

By utilising our LNGC, we have extended its lifecycle, eliminating the need to recycle or scrap the vessel for another 20 years and further generating financial returns for MISC.

#### Renewable Energy/Low-Carbon Fuel

The primary purpose of low-carbon fuels and renewable energy in the shipping sector is to significantly reduce GHG emissions associated with maritime activities. By shifting from conventional fossil fuels to cleaner alternatives, such as biofuels, hydrogen, or ammonia, the shipping sector can lower its total emissions and contribute to global efforts to combat climate change. The adoption of low-carbon fuels and renewable energy is a key component of the shipping industry's transition towards sustainable energy sources. Incorporating a variety of low-carbon fuels and renewable energy sources allows for a diversified fuel mix in the shipping industry which reduces dependence on a single energy source, increasing the sector's flexibility and adaptability to future changes in energy markets and technology advancements.

### GHG Abatement Pathways

#### ➤ Solar PV Installation

In our ongoing commitment to enhance the utilisation of renewable energy, we are currently in the process of installing rooftop solar PV at MHB's COE. The solar PV consists of 260 panels with an estimated annual generation of 141.5 MWh of clean energy. This is in addition to the rooftop solar PV installed at MMHE West Yard in 2021, which generates up to 10,000 MWh clean energy.

#### ➤ Cold Ironing Initiative-Onshore Electrical Power Supply

At our Galveston facility in Texas, US, our AET Offshore team continues to use onshore electrical power supply as an alternative fuel source instead of burning fuel onboard our LSVs when docked. This resulted in an estimated 47% reduction of GHG emissions in 2023 and eliminated noise onboard, thereby helping to create a healthier working environment for our LSV crew.

#### ➤ Biofuels as Alternative Fuels

Exploring and increasing the use of renewable fuel in our marine fuel mix is one of the pathways we have identified in our transition towards low-carbon operations. As such, we piloted the use of biofuel, a B30 blend, on two of our Aframaxes throughout 2021 and 2022. Based on learnings from the pilot, we then utilised biofuel during the vessel operations of four of our Aframaxes, including our MCVs operating in the US Gulf, in 2023 to improve vessel performance. This not only allowed us to improve the vessels' CII ratings but also to achieve GHG emissions savings of approximately 4,000 tonnes of CO<sub>2</sub>.

The outcome of the utilisation of biofuel shows that it is an effective measure to reduce GHG emissions and can be considered for broader adoption across our fleet when coupled with trading routes optimisation and fuel availability.

#### ➤ Hydrogen Market

The hydrogen market is still nascent, especially when it comes to hydrogen in its pure form. However, more progress and efforts can be seen when it comes to hydrogen derivatives, i.e., ammonia. NED has identified opportunities for low-carbon hydrogen/ammonia and is pursuing these with the respective business units and subsidiaries within the MISC Group. Some of the opportunities include ammonia carriers/vessels, ammonia floating production and ammonia bunkering hubs.

#### ➤ Collaboration for the Delivery of Solid Oxide Electrolyser for Large-Scale Green Hydrogen Production

➤ Read more about this collaboration in the Indirect Economic Value Creation section, Marine & Heavy Engineering segment.



# Decarbonisation Pathway

# Decarbonisation Pathway

## GHG Abatement Pathways

### Value Chain Reduction

MISC's Net-Zero emissions target by 2050 includes Scope 3 emissions in our value chain. Scope 3 emissions refer to indirect emissions arising from both upstream and downstream of our value chain. In the context of the shipping sector, Scope 3 emissions encompass the entire lifecycle of maritime activities, such as the production and transportation of the fuel used by ships, as well as the construction and maintenance of the vessels themselves. Reducing Scope 3 emissions necessitates collaboration across the entire shipping value chain. This includes cooperation with fuel suppliers, shipbuilders and other stakeholders involved in the production and transportation of goods and services related to the shipping sector.

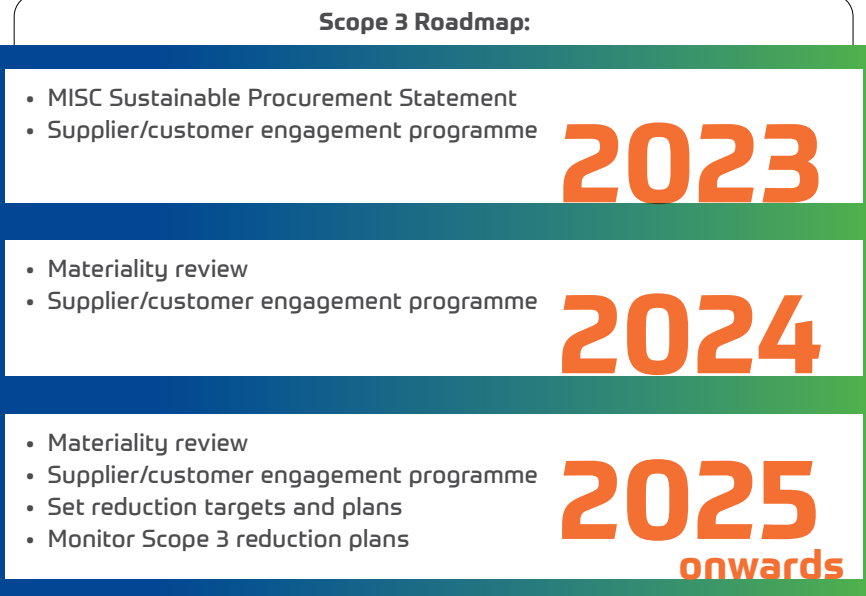
#### Scope 3 Inventory, Target and Reduction Plan

We are committed to address our Scope 3 emissions and this is only possible by working together with our suppliers in managing their emissions. This is crucial for us to achieve our Net-Zero ambition.

Hence, to start this initiative, we conduct regular engagements with our suppliers to raise awareness and understand suppliers' gaps and challenges. As we engage with our suppliers, we will continue to improve our Scope 3 inventory data quality by collecting more primary data from our suppliers. Subsequently, we will then progress towards identifying suppliers with whom we can have long-term partnerships and set targets for reduction.

### Beyond Value Chain Mitigation

Looking beyond our value chain is also a key building block for us to achieve our Net-Zero target. However, this will only be used as a secondary strategy to balance out our residual emissions. Only high-quality carbon credits certified by credible and internationally recognised standards will be used. Our Group's carbon offset strategy roadmap is being developed, which will establish our corporate ambitions for carbon offset and provide guidelines on our offset preference in terms of the types of offset projects, our preferred markets, co-benefits, timelines and commercial considerations.



### Other Abatement Efforts

#### Collaboration with Research Institution

MISC has jointly collaborated with Universiti Teknologi Malaysia (UTM) in these areas:

- Onboard vessel actual GHG (exhaust flue gas) measurements and analysis including a study of the nature of gas emissions on ships through a comprehensive qualitative study, which may lead to the development of measuring and monitoring systems.
- Business opportunities and catalyst development and production for bio-and electro-fuel for marine use.
- Business opportunities and product development on CO<sub>2</sub> utilisation.

The collaboration creates regional and international visibility of MISC's initiatives towards decarbonisation. It will offer coverage of other initiatives that would align with the other activities that we are currently pursuing.

## DECARBONISING THE MARITIME INDUSTRY

MISC is fully committed and supportive of global decarbonisation efforts to combat climate change through the implementation of technological solutions. Although many new technologies are still on the test bench, with their emissions-reducing potential yet unproven for large-scale use for international shipping, MISC's stance is to rise to the challenge. We recognise that establishing strategic partnerships is imperative to holistically drive this agenda forward and we have been actively demonstrating our support.

### 2019

#### Getting To Zero Coalition

The goal of the Getting to Zero Coalition is to have commercially viable ZEVs operating along deep-sea trade routes by 2030. The ultimate ambition of the Getting to Zero Coalition is to reach the full decarbonisation of global shipping by 2050.

### 2018

#### Global Maritime Forum

MISC is a strategic partner of the GMF and sits on its Advisory Council. We play an active role in shaping future maritime trade through collaborations to reduce GHG.

### 2021

#### The Call to Action (COP26)

Call to Action initiative was developed with more than 150 industry leaders and organisations urging governments and global shipping industry to commit to full decarbonisation of international shipping by 2050.

## Our Support for Climate Action Low-Carbon Economy Transition

We have been developing ammonia fuel pathways through the Castor Initiative JDP, with our value chain partners in the shipping industry to prove the viability of ULEVs and ZEVs capable of deep-sea and trans-ocean travel. Given a vessel's average operating life is between 20 to 25 years, these ULEVs must be developed now to enable us to meet our 2050 Net-Zero commitment.

In addition, MISC has been actively participating in several movements that promote decarbonisation in the shipping industry.

## Strategic Climate Partnership

MISC conducts various collaborations and partnerships to boost engagement and identify viable solutions to address climate risks. These collaborations reinforce the Group's commitment to finding sustainable and safe transition pathways to ultra-low and zero-emission shipping operations and training mariners to safely manage vessels built with new technologies and ammonia engines. The partnerships that took place in 2023 are listed below:

### Parties Involved

PETRONAS, Mitsui & Co. and MISC

PETRONAS CCS, MISC and MOL

AET, ALAM and WinGD

Global Centre for Maritime Decarbonisation (GCMD) and other LCO<sub>2</sub> stakeholders

GCMD and other ammonia maritime stakeholders

### Collaboration Objectives

To leverage each party's experience and identify the potential to develop Malaysia as a CCS hub.

To jointly develop, own and manage LCO<sub>2</sub> carriers.

To drive the development of ammonia engines for ammonia dual-fuel vessels and the enhancement of current syllabuses for training maritime professionals at all levels.

To conduct a Hazard Identification (HAZID) Workshop for a Concept Study on Offloading Shipboard Captured CO<sub>2</sub> followed by a simultaneous operations study.

To conduct a HAZID workshop for a concept study on offloading ammonia and bunkering.



# Greenhouse Gas Management

Effective GHG management ensures that MISC complies with current and future regulatory requirements, avoiding penalties and legal consequences. Staying ahead of regulatory developments is crucial for maintaining operational continuity. MISC has been measuring, monitoring and reporting our Scope 1 and Scope 2 GHG emissions since 2016 in accordance with the GHG Protocol. In 2022, we undertook a comprehensive materiality assessment to account for our Scope 3 emissions and began reporting Scope 3 emissions for our operations since then.

## MISC GROUP GHG INVENTORY

MISC Group's GHG inventory is based on our organisational boundary of the GHG Protocol Corporate Standard's financial control approach. MISC has financial control over an operation if MISC can direct the operation's financial and operating policies to gain economic benefits from the operation's activities. More information on reporting principles, data assumptions and emission factors can be found in the Additional Information section of this report.

**Scope 1 & 2**

All direct GHG emissions occurring on assets where MISC has financial control are accounted under MISC's Scope 1 GHG emissions. All indirect emissions from energy purchased for consumption on assets where MISC has financial control are accounted for under MISC's Scope 2 GHG emissions.

Scope 1 accounts for 99% of MISC Group's total Scope 1 & 2 GHG emissions with most of the emissions, i.e., 98% emitted from MISC's shipping operations. Scope 2 GHG emissions are from purchased electricity by yard and building operations, mainly from our non-shipping operations.

**Scope 3**

MISC Group accounts for and reports material Scope 3 emissions according to the following definition:

- Top Scope 3 categories covering at least 67% of the total Scope 3 emissions. This threshold shall be applied at the business/entity level of MISC's core businesses i.e., shipping, offshore and heavy engineering
- Operational emissions from assets not accounted as MISC's Scope 1 and 2, which fall under the following Scope 3 categories:
  - i. Category 8-Upstream leased assets and facilities where MISC has no financial control.
  - ii. Category 13-Downstream leased assets and facilities where MISC has no financial control.
  - iii. Category 15 – Investments not accounted for in MISC's Scope 1 and 2.

Based on this definition, the following Scope 3 categories were deemed material to MISC:

- i. Category 1 (Purchased Goods and Services).
- ii. Category 3 (Fuel-and Energy-Related Activities).
- iii. Category 8 (Upstream Leased Assets)-In-chartered vessels where MISC is the commercial operator only (neither the vessel owner nor has technical control).
- iv. Category 13 (Downstream Leased Assets)-Leased offshore assets such as our FSOs and FPSOs which are owned by MISC but leased out to our customers.
- v. Category 15 (Investments)-Vessels which are jointly owned by MISC and other parties, where MISC has equity ownership but does not have financial control.

MISC Group Scope 3 GHG emissions account for 40% of the Group's total GHG (Scope 1, 2 and 3) in FY2023. Fuel-related activities (i.e., emissions associated with upstream fuel production and transportation) are the primary source of Scope 3 emissions for MISC. Other main activities driving our Scope 3 emissions include operational emissions of our offshore assets which are leased out to customers and purchased goods and services by our Marine & Heavy Engineering segment.

**Carbon Intensity Measurement Metrics**

We measure our carbon intensity using the AER metric, which is aligned with IMO's mandatory scheme on operational CO<sub>2</sub> reduction known as CII. AER measures a vessel's total CO<sub>2</sub> per unit of transport work (unit: gCO<sub>2</sub>/t-nm). Transport work is calculated by multiplying the vessel's deadweight by the distance travelled.

However, the AER metric only measures CO<sub>2</sub> and does not include other GHGs converted into CO<sub>2</sub> equivalent (CO<sub>2</sub>e). Therefore, in addition to AER, we also track and report our vessels' GHG performance in units of gCO<sub>2</sub>e per t-nm which includes all relevant GHGs from our operations, i.e., CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. For our VLECs which consume ethane as fuel, GHG from ethane (C<sub>2</sub>H<sub>6</sub>) is also included in the CO<sub>2</sub>e calculations.

# Greenhouse Gas Management

**GHG Emissions Performance**

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**Scope 1 and 2 GHG Emissions (tonnes CO<sub>2</sub>e)**

2023	4,106,235	39,851
2022	4,184,243	40,570
2021	4,135,661	37,946

■ Scope 1 ■ Scope 2

MISC total Scope 1 and 2 GHG emissions range from 4.15 to 4.17 million tonnes CO<sub>2</sub>e between 2021 to 2023.

In 2023, we achieved a 24% reduction in our fleet average CO<sub>2</sub>e intensity (GAS and Petroleum) compared to 2008. Compared to our performance in 2022, our fleet average intensity improved by 7% in 2023. The improvement is largely due to new and higher efficiency assets introduced to the fleet and improved commercial and operational efficiency interventions in our existing fleet.

**Scope 1, 2 and 3 GHG Emissions (tonnes CO<sub>2</sub>e)**

2023	4,106,235	39,851	2,953,037
2022	4,184,243	40,570	2,846,785

■ Scope 1 ■ Scope 2 ■ Scope 3

In 2023, Scope 3 emissions on material categories accounted for 2.95 million tonnes CO<sub>2</sub>e. In comparison to 2022 performance, our Scope 3 emissions in 2023 slightly increased by 4% due to an increase in the purchase of goods and services from Marine & Heavy Engineering segment.

**Shipping GHG Intensity**

In 2023, we achieved a 7% reduction in our fleet average GHG intensity (GAS and Petroleum) compared to 2022 and 24% from 2008 levels.

**Shipping Fleet GHG Emissions Intensity (gCO<sub>2</sub>e/t-nm)**

2023	5.84
2022	6.30
2021	6.45

The improvement was due to:

- Introduction of new fleet assets with better fuel efficiency. In 2023, two new dual-fuel engine LNGCs *Seri Damai* and *Seri Daya* were introduced to the MISC GAS fleet while two new LNG dual-fuel EEDI Phase III compliant VLCCs, *Eagle Vellore* and *Eagle Ventura* were introduced by AET
- Ongoing commercial and operational excellence interventions on the existing fleet, predominantly:
  - Awareness and collaboration with charterers to optimise speed (slow steaming), improving voyage planning and maximising consumption of boil-off gas for propulsion;
  - Internal awareness of energy efficiency performance and operations;
  - Trade optimisation particularly vessels on STS trading;
  - Hull and propeller cleaning;
  - Application of ultra-low friction paint when vessels are in drydock; and
  - Increased use of biofuel

## Energy Management

The maritime sector uses a significant amount of energy to power ships and for the maintenance and upgrading of ships. Energy management is important to ensure our ships and activities are energy-efficient to reduce operating costs, optimise efficiency and minimise environmental impacts. As the maritime and shipping sector faces increasing pressure to reduce its environmental impact, adopting energy-efficient practices and transitioning to cleaner fuels contribute to environmental sustainability and compliance with emission regulations. Optimising energy performance, monitoring and controlling energy consumption and implementing best practices lead to more reliable and efficient operations.

With this, we have identified energy efficiency as one of the sustainability strategic pillars and aim to implement energy efficiency measures within the short and medium-term. One of the initiatives is the certification to the ISO 50001:2018 Energy Management System for our GAS and petroleum fleet. As part of the requirements under ISO 50001, internal and external audits are conducted annually to ensure compliance and identify areas for improvement. To support the implementation of energy efficiency initiatives, energy efficiency-related training is regularly organised for our seafarers and shore employees.

Other energy management initiatives are discussed in the section below.

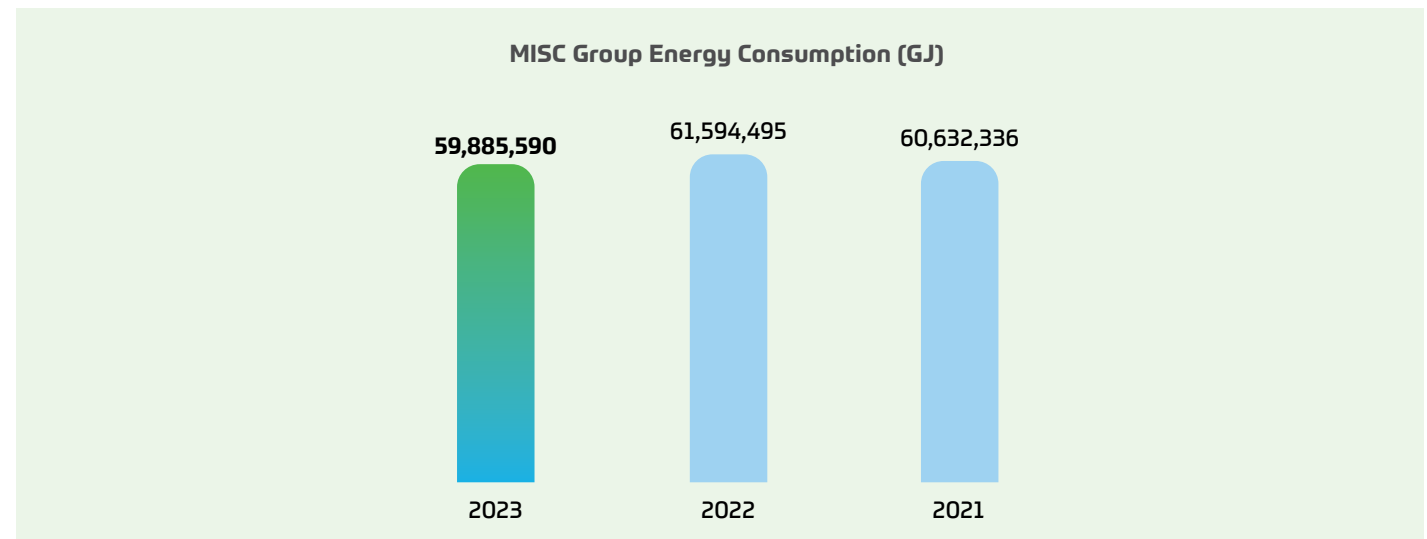
### Initiatives on Energy Management

Among initiatives under our Shipping operations are:

- Implementing controls under ISO 50001, including monitoring of energy consumption at discharge and loading ports; and audits and corrective actions under ISO 50001
- Commercial and operational efficiency interventions as described in the decarbonisation section, are collectively aimed at reducing energy consumption while delivering the same or higher work outputs

For non-shipping operations, some initiatives undertaken are:

- Fuel consumption monitoring for Marine Services support craft to identify and correct inefficiencies
- Installation of LED lighting and motion sensor lighting at selected facilities at ALAM, MHB and FSUs



## Promoting Circular Economy

### Our Commitment

- Promote the elimination of waste and the continual use of resources
- Increase the usage of renewable resources

### Our Initiatives

- Practise 4R – Refuse, Reduce, Reuse and Recycle (Waste-to-Value Concept)
- Practise ship recycling
- Greater utilisation of renewable resources

### Our Contribution to SDG

- Ensure sustainable consumption by promoting a circular economy (eliminating waste and the continual use of renewable resources) and sustainable procurement practices



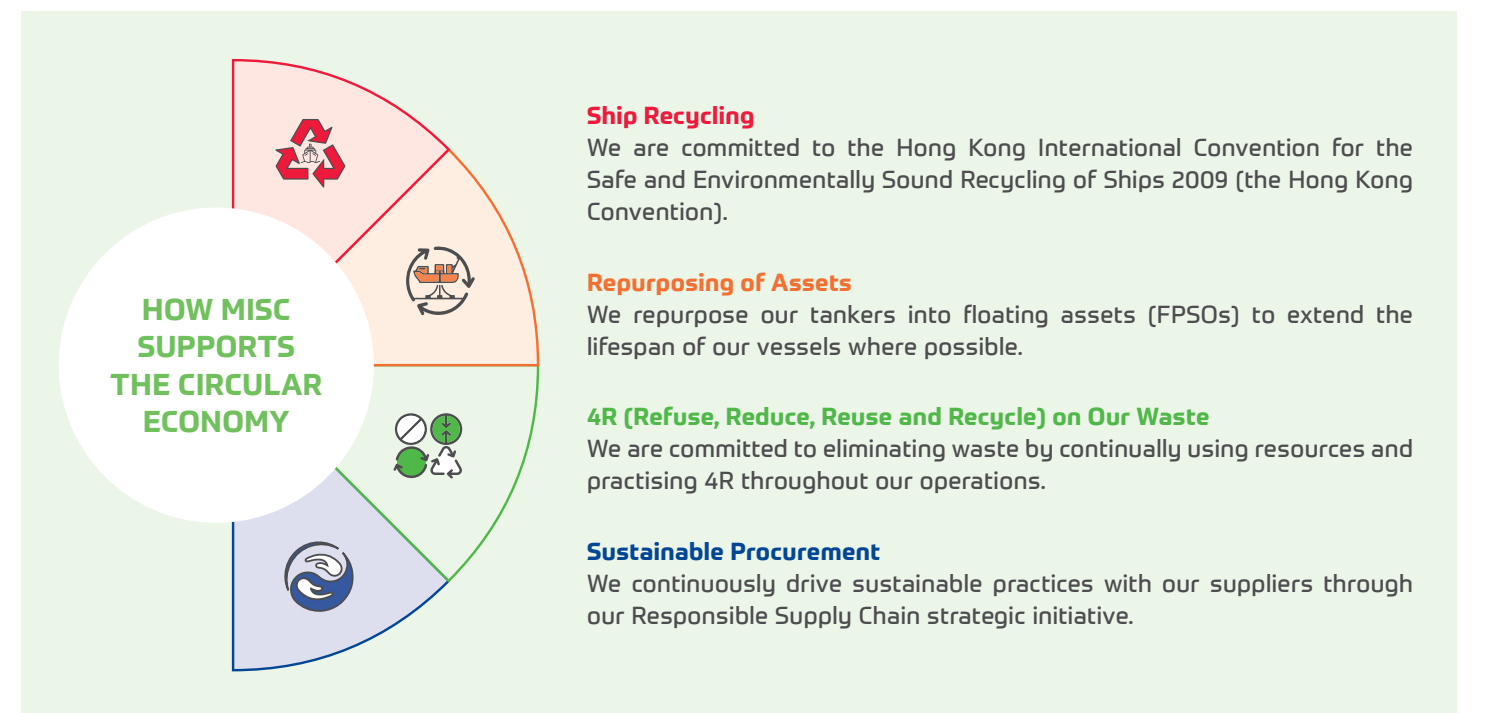
A circular economy leverages the Waste-to-Value (WtV) concept, which aims to process waste into a valuable product. Many industries and policymakers are exploring the switch from a linear to a circular economy based on the principles of eliminating waste and pollution, keeping products and materials in use and regenerating natural systems. As a result, the economy is restorative and regenerative by design.

The shipping industry is unique in many ways as most ships are made to order based on specifications of the necessary

activities to deliver a cargo product and in the case of time-chartered vessels, these specifications are based on specific customer needs.

Collaborations with suppliers across the value chain are essential, given that recovered materials are distributed as input raw materials for other products.

MISC promotes the concept of circular economy through the implementation of the following key initiatives:





## Promoting Circular Economy

### SHIP RECYCLING

Ship recycling is crucial in the lifecycle of a ship, as the average life for vessels is usually between 20 to 25 years. Vessels are required to be recycled or repurposed as every ship eventually reaches a point where it is not practical or cost-effective to maintain.

Ship recycling decreases the need for metal mining by supplying the steel and iron industries with a significant amount of scrap metal and lowering the requirement to extract virgin metals to meet demands. Ships contain high-quality iron, which is recyclable to around 90%. Thus, utilising scrap metals instead of raw iron ore in steelmaking also contributes to lowering greenhouse gas emissions. On top of that, energy

consumption decreases by 70% in steelmaking industries when scrap steel is used rather than iron ore. The recycling of steel scrap from end-of-life ships plays a crucial role in promoting sustainability by helping to reduce air and water pollution and simultaneously reducing energy consumption.

The Hong Kong Convention sets achievable, sustainable goals for ship recycling standards and is already making headway towards changing the industry. The Hong Kong Convention will enter into force on 26 June 2025. Once in force, it will provide a framework for the regulation of ship recycling activities on an international scale.

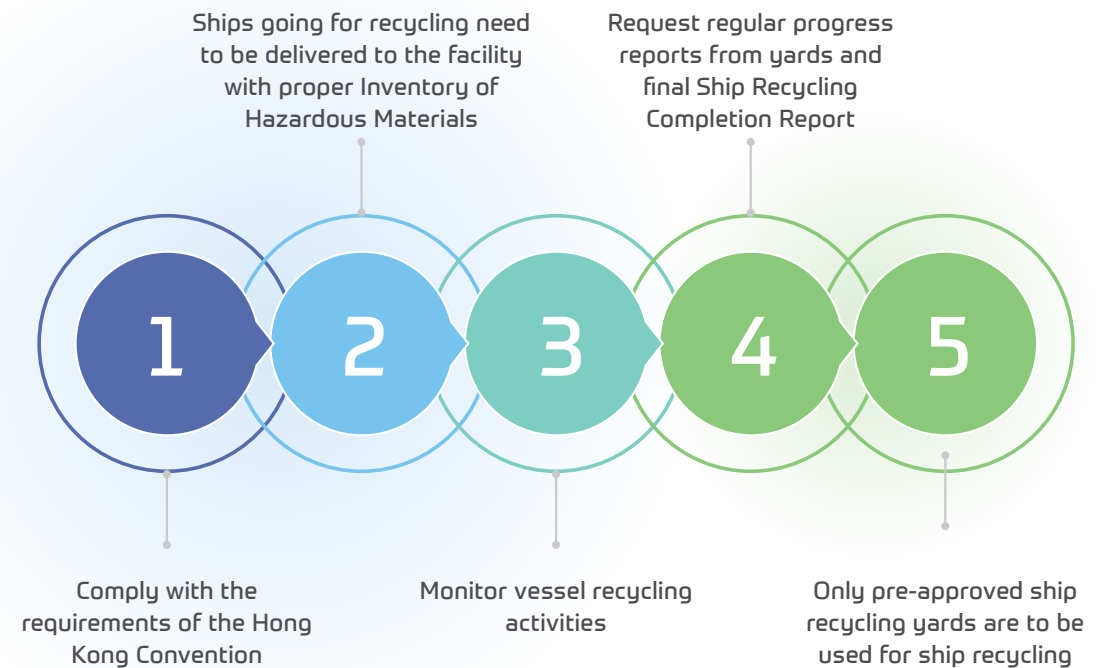
## Promoting Circular Economy

### MISC Group Ship Recycling Guideline

In 2022, the MISC Group Ship Recycling Guidelines were developed, which incorporated social and ecological responsibility to ensure safe and responsible ship recycling

globally. Several guiding principles should be followed when performing ship recycling for the benefit of workers, the environment and responsible yards and ship owners.

#### Ship Recycling Guiding Principles



### MISC Group Ship Recycling Policy

MISC Group issued the MISC Group Ship Recycling Policy in October 2022. The Policy is our Group-wide commitment to recycling our ship responsibly.

The MISC Group Ship Recycling Policy covers the following four areas:

#### Design and construction stage

- Constructing each ship with zero or minimal hazardous materials
- Documenting each vessel with an approved Inventory of Hazardous Materials (IHM)

#### Ship operations

- Generating minimal hazardous substances and waste onboard each ship
- Removing hazardous substances in a controlled manner and replacing them with non-hazardous material if practical whenever repairs or maintenance are carried out on equipment
- Producing and maintaining a ship specific IHM for each existing ship in our fleet

#### Repurpose or resold for further trading

- Updating the ship's IHM and passing it with other documentation before the sale of the ships
- Complying with the Hong Kong Convention and/or all applicable national and international law selling ships directly or indirectly to a yard for recycling
- Requiring buyers or yards for all MISC sale contracts to undertake safe and environmentally sound recycling per the Hong Kong Convention including using approved shipyards and monitoring rights to the ship-breaking process whether directly or indirectly via appointed agents

#### Sold to intermediary or directly to HKC approved yards for scrap

### MISC Group Ship Recycling Yard Assurance Programme

MISC has voluntarily supported the Hong Kong Convention, which will finally be coming into full force after being ratified 14 years after it was first adopted by the IMO in 2009.

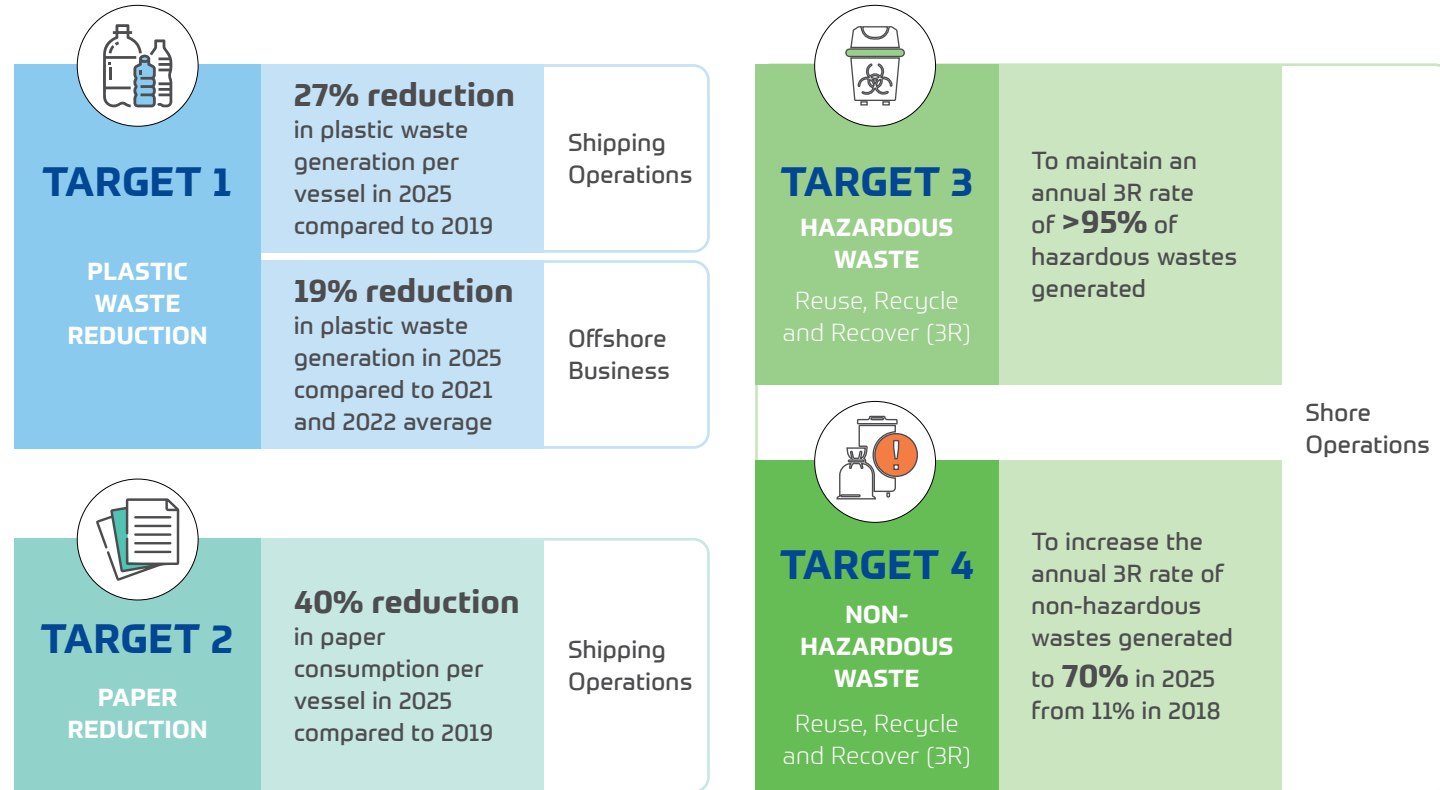
In the transitional period before the convention enters into force in June 2025, it is important for us to engage with ship recycling yards that comply with the Hong Kong Convention's requirements where ships can be recycled responsibly and sustainably. In 2023, four ship recycling yards in Turkey were visited to assess the conditions and suitability of the

yards in implementing safe and environmentally sound practices, providing sufficient facilities and infrastructure and upholding worker safety standards. Based on our assessment, we have shortlisted the preferred ship recycling yards that comply with the Hong Kong Convention and the European Union Ship Recycling Requirement (EU SRR 1257/2013). We also periodically monitor the European List of ship recycling facilities per EU 1257/2013.

## Promoting Circular Economy

### WASTE MANAGEMENT

We operate on land and at sea and our waste management complies with specific regulatory requirements in the geographical areas we operate. A set of 4R (Refuse, Reduce, Reuse and Recycle/Recover) targets was developed in 2021 for hazardous, non-hazardous, paper and plastic waste. Waste 4R targets, as illustrated below, were set with the aim to achieve the target by 2025.



MISC has adopted robust 4R practices aligning with our waste management target. The 4R concept promotes a circular economy approach, where resources are used more efficiently, waste generation is minimised and the lifespan of products is extended. These 4R practices are incorporated through various initiatives as part of our efforts to contribute to environmental sustainability, conserve natural resources and reduce the negative impacts of waste on our ecosystems. The various programmes to support this commitment are elaborated in the following section.



## Promoting Circular Economy

### Waste Management at Sea

Waste management at sea is governed by MARPOL. All our vessels are equipped with garbage management plans and waste is separated onboard in accordance with the regulations. Most of the waste produced onboard our ships is delivered to reception facilities on shore for onward recycling, treatment, recovery, or disposal. However, waste that is not sent to shore is incinerated onboard using type-approved shipboard incinerators while food wastes are discharged to sea in compliance with the requirements of MARPOL Annex V.

On the other hand, our efforts in reducing single-use plastic in our operations are continuously being implemented. The use of drinking water bottles was replaced with water filters and employees onboard are encouraged to bring their reusable water bottles. Suppliers are also encouraged to supply bulk packaging and use reusable packaging materials. Other initiatives include:

- Replace plastic shrink wrap used for boilersuit packaging with woven fabric reusable packaging. The woven fabric can be reused by crew members to store other items members
- Revisit purchase contracts to include clauses that encourage suppliers to reduce plastic packaging
- Bulk purchases of cooking oil
- Encourage suppliers to change from plastic shrink wrap to biodegradable shrink wrap
- Recycling of printer ink cartridges
- Explore a take-back system and reuse for chemical containers

Despite the various initiatives we have undertaken, we recognise the challenge posed by the limited alternatives currently available to replace single-use plastic packaging. We are dedicated to working closely with our suppliers to explore and implement effective strategies that minimise the use of single-use plastic packaging in the delivery of materials for our vessels.

### Target 1: Plastic Reduction

#### Shipping (m<sup>3</sup>/vessel/month)

2023	2.5
2022	2.4
2021	2.2
2020	2.3
2019 (baseline)	2.6

In our efforts to progressively reduce our paper consumption, a digitalised system was introduced for our paper-based work processes onboard our vessels. The permit-to-work (PTW) processes are digitalised through the implementation of the SOL-X system. As of December 2023, 72% of our vessels were installed with the application. With these ongoing initiatives, we have reduced the amount of paper used and simultaneously increased the effectiveness of our permit-to-work tracking and disclosure.

### Target 2: Paper Reduction

#### Shipping (ream/vessel/month)

2023	3.9
2022	3.9
2021	4.0
2020	4.1
2019 (baseline)	4.2



## Promoting Circular Economy

## Promoting Circular Economy

### Waste Management at Shore

Waste management at our shore operations is managed according to the waste hierarchy. Waste avoidance and reduction practices are prioritised in operations and final disposal to landfills is the least preferred method.

In 2023, almost 100% of hazardous waste generated from our shore operations, mainly from MHB, was recycled, reused, or recovered. Hence, this helps in maintaining a recycling rate of at least 95% for MHB's scheduled waste.

At MHB, A total of 11,857.64 MT of abrasive waste from blasting activity was generated where the use of copper slag as an abrasive material was largely based on project demand. Copper slag is a by-product of copper extraction by smelting and it is used for various purposes such as a replacement of fine aggregate in the cement industry. MHB initiated a joint initiative with a local cement factory to purchase the copper slag from the cement factory, use it for our vessels' services and the spent material is then sent back for co-processing. This initiative demonstrates the application of circular waste management principles in our operations. Major recycled scheduled wastes were spent copper slag and oil-water mixture.

Additionally, the use of durable abrasives for certain operations allowed the reusing of materials, reducing waste from blasting. Other types of recyclable hazardous waste are contaminated containers, contaminated rags/filters, oil sludge, tanker sludge and paint.

For other types of hazardous waste generated, recovery technology is applied at the appointed prescribed premises. The recovered product generated may be beneficial to other industries and minimise the waste ending up at landfills. For instance, at our operations, one of the options for producing quality steel surfaces during blasting processes is through the use of a crushed glass abrasive, DURAGRIT®. The spent DURAGRIT® is sent to the construction industry to be reused as an alternative to sand for road construction. MHB currently has ten appointed licensed prescribed premises to diversify options for 3R for scheduled waste.

#### Target 3: Hazardous Waste 3R (%)

##### MISC Group



With our continuous effort to improve non-hazardous waste for non-shipping operations, we have continued sending segregated recyclable waste such as paper, aluminium and glass to recycling facilities and used wooden pallets have been returned for reuse. Most importantly, we focused on improving waste segregation at source to enhance a more effective waste recycling and source for alternative packaging material to replace single-use plastic packaging.

#### Target 4: Non-Hazardous Waste 3R (%)

##### MISC Group



Since 2018, MISC has phased out disposable plastic drinking bottles in company-organised meetings or events and replaced them with reusable non-plastic alternatives or biodegradable options where possible. In 2023, we have widened our scope to also phase out other types of single-use plastic which includes disposable plastic cups, plastic containers and plastic cutlery.

### Waste Management at Shore

#### Other Waste Management Initiatives

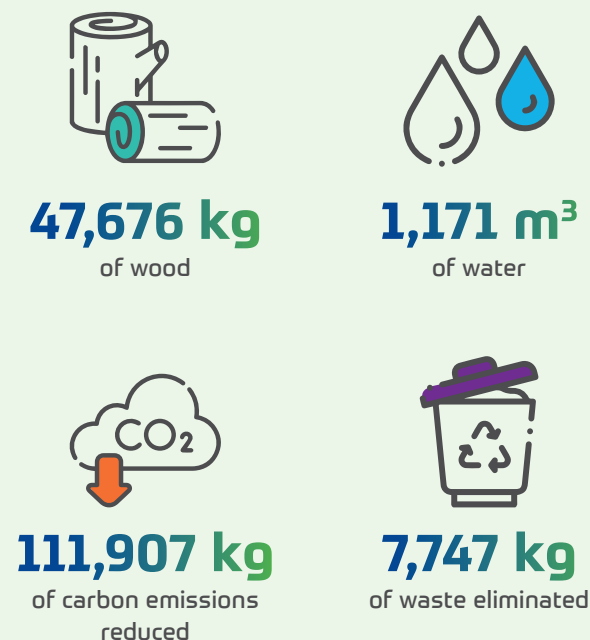
Apart from the waste management initiatives that focus on managing the bulk of waste generated by our sea and shore operations, MISC has embarked on other waste management initiatives to holistically complement 4R efforts.

#### Reduce Paper Consumption

MISC has transitioned from paper-based work to a digitalised system as an effort to reduce paper consumption where hardcopies of records and other documentation are replaced with digital formats, offering environmental benefits and increases efficiencies.

MISC adopted digital signatures for internal documents in which MISC, in partnership with DocuSign, allows employees to obtain and deliver digital signatures without printing the hard copy document.

#### RESOURCES SAVED BY DIGITAL SIGNATURE PROGRAMME SINCE 2020 TO DATE



#### Forest Stewardship Council® (FSC) Certified Paper

Since 2021, across the Group, we have switched to the purchase and use of paper certified by the FSC. By making this switch, we ensure that the paper we consume is sourced from responsible forestry practices.

#### Reducing Organic Waste

Organic waste, such as food waste, landscaping waste and wood waste makes up close to 60% of MISC's non-shipping operations' non-hazardous waste. We are taking steps to reduce food waste, such as implementing meal planning for our entities' in-house canteen involving ALAM and our LNG storage facilities.

ALAM has also commenced its composting project in 2022 to help manage waste generated from its kitchen, where kitchen waste such as eggshells, fruit and vegetable trimmings and food waste is turned into compost. An average of about 150 kg of food waste is generated daily from the kitchen. This project helps reduce the waste sent to landfills whereby the finished compost is used as fertiliser at ALAM'S onsite mini organic farm.

In addition, MHB has embarked on a food composting project to manage food waste from its canteen operators and the dining hall. On average, a total of 190 kg of food waste is generated daily, with an annual total of 62.04 MT. This project will improve waste management practices on its premises and on top of that, the organic compost generated can be used for in-house landscaping. The food composting machine is targeted to be installed in MHB's facilities by March 2024 and is estimated to increase the current estimated recycling rate of 3-6%.

At ALAM, landscaping waste is being contracted out and disposed of at a composting site in Port Dickson. Starting November 2023, 100% of the landscaping waste is sent for composting. The landscaping waste is turned into compost to produce multiple types of compost-based soil blends. This initiative not only promotes environmental stewardship but also reduces the burden on landfills.

Approximately 14.1 metric tons of landscaping waste have been successfully diverted from landfills through this initiative.

## Promoting Circular Economy

### Waste Management at Shore

As for wood waste, AET Offshore operations are continuously improving their waste reduction initiative by reusing wooden pallets. For pallets that are no longer in good condition to be reused, the wastes are collected separately and sent offsite for recycling into other useful products.

Currently, 100% of wooden pallets generated by AET Offshore operations are reused or recycled.

Wood waste is also generated in significant quantities by MHB, estimated at around 50% of their non-hazardous waste generation (excluding scrap metal). Initiatives to reduce wood waste in 2023 include the reuse of wood waste, which is still intact and in good condition, communication with area owners to facilitate reuse, segregation and recycling and sourcing of vendors that can recycle the wood waste.

### Waste Awareness Campaign

#### Trash-to-Cash Centre

MHB has established an in-house “Trash-to-Cash” centre as part of efforts to encourage non-hazardous waste recycling among MHB employees. The concept of waste to wealth will promote a sustainable lifestyle where waste is seen as a valuable resource.

#### Race to Zero Waste Contest

MISC conducted a group-wide campaign called “Race to Zero Waste” contest to promote the implementation of onsite waste reduction initiatives, raise awareness among employees by giving due recognition and rewards for collaborative efforts and encourage innovation and positive behavioural changes on the implementation of 4R.

In this contest, there were two campaign categories, namely Category A, which aimed to promote MISC’s Waste 4R targets and Category B aimed at promoting Sustainable Living among employees and their families. The campaign saw participation from our sea and shore operations, where 91 teams participated in Category A and 21 teams participated in Category B.

Throughout the contest period, a series of quizzes were conducted focusing on the topics of food waste reduction, sustainable lifestyles and the difference between recyclables and non-recyclables. In addition, we distributed e-posters, online articles and videos to promote waste management practices.

#### Type of waste

Type of wastes being focused on:

- Food
- Plastic
- Paper
- E-waste
- Glass
- Wood
- Cans
- Rags
- Cooking oil

#### Waste 4R at workplace

- Setting up a recycling collection point
- Repurpose and reuse wood pallet into tables and for storage
- Reduce paper waste by reusing single-sided paper
- Use own water bottle to reduce usage of plastic bottles
- Awareness sessions with employees on Waste 4R
- Bring own container to pack lunch

#### Waste 4R at home

##### Recycling & Repurposing old clothes

- Repurpose old fabrics into scrunchies and bucket hat
- Earned money from repurposing plastic and glass bottles

##### Rainwater harvesting

- Collect rainwater to water plants

##### Recycle the recyclables

- Recycle used cooking oil, boxes and plastic bottles

##### Waste Segregation

- Paper, plastic and food waste

#### Contest Impacts

The team’s efforts have positively contributed to the waste 4R performance

- 10 tonnes of waste reduce
- 18.2 tonnes of waste recycled
- 111.2 tonnes of GHG avoided

## Conserving Marine Biodiversity

### Our Commitment

- Conserve and rehabilitate marine biodiversity by implementing the Group’s Heart of The Ocean Programme

### Our Initiatives

- We introduced two signature marine biodiversity conservation initiatives under the Heart of The Ocean Programme:
  - Mersing Islands Reef Conservation Initiative
  - UMT-MMS Sea Turtle Conservation Initiative

### Our Contribution to SDG

- Sustainably manage and protect marine ecosystems by strengthening their resilience and take action for their restoration in order to maintain sustainable ocean health



Conserving marine biodiversity is crucial for maintaining the health of our oceans and ensuring the well-being of both marine ecosystems and human communities that depend on them. Our focus on conserving marine biodiversity contributes to SDG14. We aim to support the sustainable management and protection of marine ecosystems by strengthening their resilience and implementing restoration programmes to maintain ocean health.

### OUR BIODIVERSITY IMPACT

Utilising the seas, oceans and coastal regions has increased over the past few years, leading to the creation of the “Blue Economy,” an economic term associated with the sustainable use of the maritime environment. The Blue Economy encompasses a wide range of economic activities and sectors that directly or indirectly depend on the health of the oceans. It also emphasises the integration of economic development with environmental sustainability, social inclusivity and the responsible use of marine resources. Additionally, there is growing recognition of the interconnectivity between nature, biodiversity and financial risks.

As the world’s leading provider of international energy-related maritime solutions and services, we rely on the ocean to operate our business. Thus, we acknowledge that in the absence of controls, our operations may pose some level of risk and may have negative impacts on marine habitats.

In minimising our impact on the ocean biodiversity, we implemented the following initiatives:

- 1 Using low-sulphur fuel and LNG in our newer fleets in efforts to reduce air emissions from our vessels. We also comply with the IMO Global Sulphur Cap 2020;
- 2 Progressively transforming our fleet to cleaner fuel (LNG dual-fuel vessels) and aiming for ZEVs no later than 2030 as part of efforts to lower GHG emissions;
- 3 Complying with the IMO International Convention for the Safety of Life at Sea (SOLAS) 2012 requiring vessels to be constructed to reduce on-board noise;
- 4 Ensuring all vessel discharges comply with MARPOL regulations and discharges are tracked and recorded. Furthermore, for engine room discharges, a bilge water management programme is implemented to reduce oil contamination from leakages and subsequently reduce water/oil accumulation in the engine room;
- 5 Ensuring all vessels comply with IMO’s ballast water discharge standards to prevent marine alien species invasion into coastal areas through the use of Ballast Water Treatment System (BWTS); and
- 6 Reviewing the environmental performance of each vessel in a structured manner through established processes. The implementation of environmental management plans (e.g., garbage, sewage, bilges and cargo residues) is regularly reviewed and any issues raised from internal audits are discussed and tracked to ensure effective closure.



## Conserving Marine Biodiversity

### MISC GROUP HEART OF THE OCEAN (HOTO) PROGRAMME

MISC Group is committed to making a positive impact on biodiversity and aims to improve ocean health by conserving marine biodiversity and reducing the impact of human activities on the ocean.

The HOTO marine conservation programme was initiated in response to this in 2020 under the Biodiversity Conservation strategic initiative. The programme is in line with our commitment to ensure the sustainable use of the ocean

and the preservation of marine diversity as outlined in SDG 14 – Life Below Water.

Under the HOTO Programme, two signature marine biodiversity conservation initiatives were introduced:

- Mersing Islands Reef Conservation Initiative
- UMT-MMS Sea Turtle Conservation Initiative

#### KEY HIGHLIGHTS

#### Ecosystem and Organism

- Surveyed **36 coral reef sites** since 2023, contributing to a more holistic overview and data of reef health status in the Mersing Islands

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- Established **3 coral rehabilitation sites**

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- Installed **21 mooring buoys** since 2020 at the Mersing Islands for sustainable tourism

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- Achieved a **77% sea turtle nests hatching success rate** in 2023 against a 75% target

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- Conserved an annual average of **1,916 sea turtle nests** since 2020

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- Completed **2 recycling programmes at the Mersing Islands and set up 1 recycling corner at Chagar Hutang**

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- Collected **10,011 kg** of trash from land and underwater since 2020

**ESG 2022  
POSITIVE  
IMPACT  
AWARDS**

**ESG Positive Impact Awards 2023 by The Star-Sustainable Ecosystem Silver Award**

“This award recognises the organisation for their exemplary positive impact in the implementation of a project that rehabilitated and developed sustainable ecosystems that support existing terrestrial or aquatic ecosystems”

#### People

➤ Engaged **1,800+** individuals through awareness programmes and trainings on marine resource management and tourism-based supplementary livelihood since 2020

➤ **Significantly** improved the facilities at the Research Station at Chagar Hutang

➤ Fostered the participation of **247 employees** in the Employee Participation Programme since 2021

## Conserving Marine Biodiversity

### MERSING ISLANDS REEF CONSERVATION INITIATIVE

Climate change is a global threat affecting coral reef ecosystems where mass coral bleaching events and marine infectious disease outbreaks are becoming more frequent due to rising temperature. Additionally, the increased level of CO<sub>2</sub> concentration in the atmosphere causes more CO<sub>2</sub> to be absorbed into the ocean, reducing calcification rates in reef-building and reef-associated organisms due to ocean acidification. Reduced calcification rates will impact the growth of coral reef ecosystems that provide habitat for a vast array of species that live on coral reefs and protect tropical shorelines.

- Coral Reef Conservation and Management; and
- Plastic Waste Management.

Our collaboration with RCM aims to improve ocean health by supporting coral reef conservation, increasing reef resilience and reducing plastic litter in the ocean. Our work on the Mersing Islands involves a multi-level collaboration with multiple stakeholders including local communities, tourism operators, academicians, local government, the Department of Fisheries and local businesses.

➤ **MISC has committed to contribute RM250,000 annually towards this initiative for five years (2021 – 2025).**

The Mersing Islands Reef Conservation Initiative under the HOTO Programme is a five-year collaboration with our partner, Reef Check Malaysia (RCM) which focuses on:

### Key Activities Implemented

- Reef surveys;
- Reef rehabilitation;
- Reef clean-up;
- Reef monitoring and maintenance;
- Reef mapping;
- Green fins engagement;
- Stakeholder training in participatory management;
- Entrepreneurship training;
- Eco-snorkel guide training;
- Beach clean-ups; and
- School and community awareness programmes

#### Employee Participation Programme (EPP)

Through the HOTO Programme, we incorporated employee participation and/or volunteerism to enhance our employee’s environmental awareness as well as provide an avenue for employee relations and engagement.

In 2023, a total of 90 employees participated in four separate EPPs which took place twice in Pulau Sibul and once respectively in Pulau Aur and Pulau Tinggi, Mersing, Johor. Through EPP, employees are not only able to nurture their personal growth, but also able to engage with local communities, share knowledge and promote greater awareness about environmental issues.

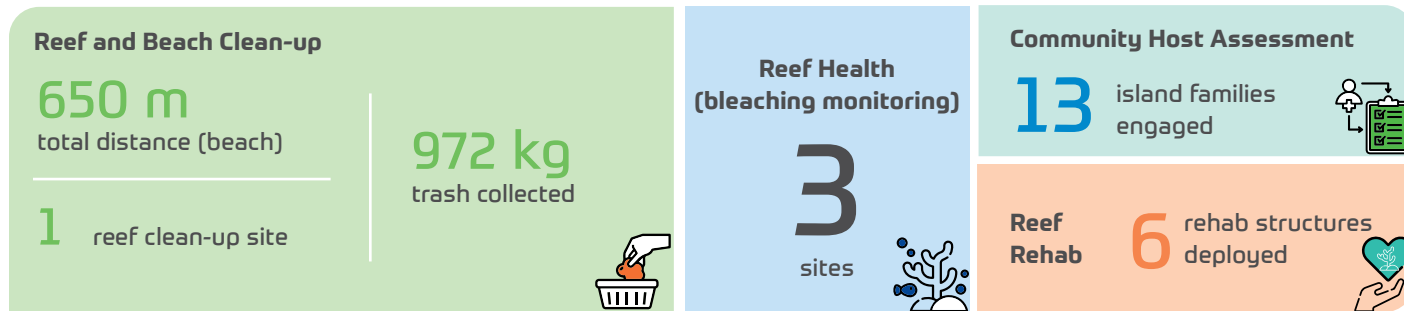
Location:	Location:	Activity:
Pulau Sibul	Pulau Aur	• Reef monitoring
Activity:	Pulau Sibul	• Beach clean-up
• Reef rehab	Pulau Tinggi	• Community host assessment
• Reef clean-up		
• Beach clean-up		

#### EPP ACTIVITIES



## Conserving Marine Biodiversity

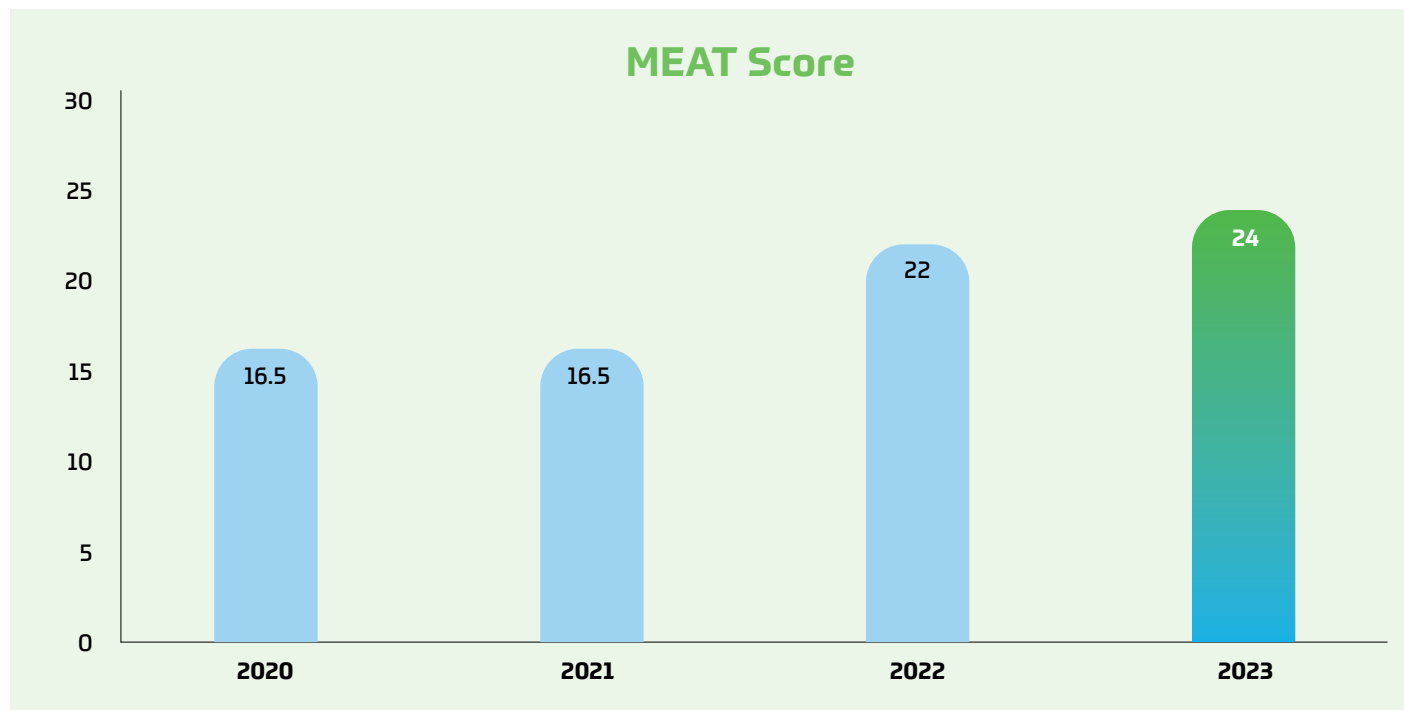
### EPP OUTCOME



### Marine Protected Area Management Effectiveness Assessment Tool (MEAT)

Since 2020, the Management Effectiveness Assessment Tool (MEAT) has been used to measure the effectiveness of conservation activities implemented in the Mersing Islands' marine parks through MISC's sponsorship. This assessment consists of elements such as governance policies, management structure, regulations, enforcement, performance monitoring and assessment of ecological

and social-economic impact. The assessment helps us to understand gaps that require interventions. In 2023, the MEAT score increased to 24. Moving forward, more engagements will be conducted to continuously improve this score and to address all relevant issues to further improve the level of management effectiveness.

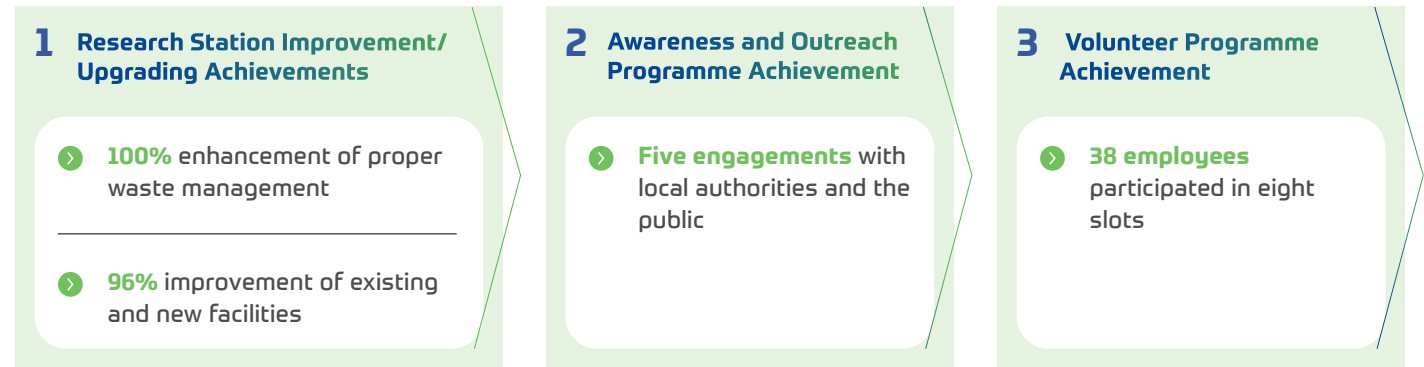


## Conserving Marine Biodiversity

### UMT-MMS SEA TURTLE CONSERVATION INITIATIVE

Sea turtles are a threatened species and at risk of extinction mostly due to habitat alteration caused by humans. Sea turtles are also vulnerable to ocean pollution at all stages of life, from eggs to hatchlings, juveniles and adults.

Recognising the needs of healthy sea turtle ecosystem and as a responsible corporate organisation, Marine Services has taken the initiative to protect this critically endangered species in partnership with UMT-SEATRU (Universiti Malaysia Terengganu-Sea Turtle Research Unit) focusing on three strategic areas:



Additionally, Marine Services has taken the initiative to embed awareness about sea turtles by sharing monthly information on the office portal, to ensure employees have the required information about sea turtles and their conservation methods and subsequently ensure the continuation of this initiative.

### Volunteer/Outreach Programme

Through educational day trips to the research station and *Kem Prihatin Penyu*, SEATRU's outreach programme continues to raise awareness of sea turtles among the public and participating employees.

In 2023, Marine Services continued to provide volunteering opportunities for employees across the Group, in which 38 employees participated, an increase from the previous years. Through this volunteering programme, participants were able to gain knowledge about sea turtles, their life cycle and ways to conserve their population.

	2019	2020	2021	2022	2023
<b>Number of Nests</b>	1,523	1,731	1,825	2,181	<b>1,927</b>
<b>Hatching Success (%)</b>	71	62	72	70	<b>77</b>
<b>Numbers of Volunteers from MISC Group</b>	-	11	6	25	<b>38</b>

### Our Achievement

**77%** hatching success rate of sea turtle nests in 2023, versus 70% in 2022.

**1,927** turtle nests protected in 2023.



## Conserving Marine Biodiversity

### ▼ MISC Group Heart of The Ocean (HOTO) Forum

In upholding the spirit of HOTO, Marine Services collaborated with GHSSE in organising the HOTO Forum 2023 on 25 July 2023 at Menara Dayabumi with the theme of “The Climate-Ocean Intersection”. The programme aimed at:

- i. Raising awareness among employees regarding MISC’s HOTO Programme and its connection with MISC’s commitment to sustainability.
- ii. Educating employees on issues related to the impact of climate change on marine biodiversity.
- iii. Encouraging employees to conserve the environment.

The forum covered diverse topics, including the impact of climate change on marine biodiversity, MISC Group’s decarbonisation efforts, the function of coral reefs in climate change mitigation, community involvement in conservation and sea turtles as climate change indicators. The forum panellists were from Hong Kong University, GHSSE, RCM and UMT whose insights enriched the discussion on the climate-ocean intersection.



### NATIONAL BUSINESS ADVISORY GROUP FOR THE KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK

MISC Group is a member of the National Business Advisory Group, a working group established by the Malaysia Platform for Business and Biodiversity (MBPP), to develop a national Strategic Roadmap and Business Biodiversity Action Plan. These documents are part of Malaysia’s National Policy on Biological Diversity, to implement business-related targets for the Kunming-Montreal Global Biodiversity Framework at the national level. By participating, we are strengthening our position in the biodiversity agenda for and beyond the maritime industry.

### RAISING BIODIVERSITY AWARENESS

Other than the initiatives under the HOTO Programme, there were other environmental and biodiversity-themed initiatives carried out by various entities under the Group.

#### ▼ Beach Clean-Up

MHB organised a Beach Clean Up Day at the yard’s coastal area on 19 September 2023 in conjunction with the annual International Coastal Clean-up Day celebrated in September. This programme encouraged the employees to keep the surrounding areas clean and tidy and at the same time to prevent waste from entering marine ecosystems.

#### ▼ MHB River Rehabilitation Programme

In 2022, MHB launched its long-term River Rehabilitation Programme with the adoption of Sungai Buluh, Pasir Gudang in Johor, Malaysia. The programme is a collaboration with Majlis Bandaraya Pasir Gudang (MBPG) and UTM, held together with local communities within the Sungai Buluh vicinity.

The MHB River Rehabilitation Programme aims to improve river health through ecological rehabilitation while raising local communities’ awareness through engagement and environmental education and ensuring sustainable development and improvement in their quality of life.

In 2023, various activities were completed as part of the MHB River Rehabilitation Programme such as river plogging, water quality demonstrations, awareness of waste management and tree planting, among others. A total of 140 volunteers participated in these activities. From the waste management activity, a total of

➤ **2,271 pieces of waste were collected from the river and surrounding areas.**

On the other hand, the tree planting programme was conducted at the

➤ **Laman Sungai Buluh with 160 trees successfully planted by the volunteers.**

## Conserving Marine Biodiversity

### ▼ Mangrove Conservation Programme

The mangrove conservation programme aims to protect and restore mangrove ecosystems, which are vital for coastal habitats. ALAM has embarked on the conservation of its mangrove forest that is part of ALAM’s land concession with the State Government of Melaka and this area is located 4.5 km away from the ALAM campus in the Kuala Linggi district.

In 2022, a baseline assessment was conducted by the Global Environment Center to understand the health and degradation level of the mangrove. The assessment included biological, ecological and community baseline studies. Findings from the assessment indicated that the mangrove plot has high biodiversity value and the mangrove ecosystem is productive and healthy.

Building on this, ALAM has continued to protect the mangrove area from any human disturbance and in 2023, ALAM has improved the security of the mangrove area by installing a gate and signboard to prevent trespassing that may lead to disruption of the ecosystem and its biodiversity.

In addition, MHB also conducted the Technology Transfer Workshop. As part of the workshop, MHB built 10 Hügelkultur beds at its employees quarters for employees to plant vegetables. This activity recorded:

- **100 kg of landscape compost and 40kg of food waste collected**
- **360 kg organic soil used**
- **5 litres of Green Waste Vinegar samples were made**
- **1,500 litres of Green Waste Vinegar to be made**
- **4,000 litres of Green Waste Vinegar to be stored**

Green Waste Vinegar is a technology or mechanism that will be used for the River Revitalisation project. This will help enhance the water quality of the identified river segment based on the special study conducted.

To ensure that the activities and targets set for the programme are on track and aligned, MHB is proactively engaging with key stakeholders through a series of strategic workshops.





## Other Environmental Matters

Apart from GHG emissions, energy management, waste and biodiversity, MISC closely monitors other environmental performance parameters to ensure compliance with all applicable local and international regulations.

### AIR EMISSIONS

MISC’s air emissions inventory indicates that our shipping business is the largest emitter, contributing significantly to MISC Group’s SOx and NOx emissions. The IMO 2020 Global Sulphur Cap, effective from 1 January 2020, stipulates that the sulphur content in fuel oil used by ships must not exceed 0.50% m/m. Since its implementation, we have introduced several initiatives in our shipping operations to reduce SOx emissions and to comply with regulations, including:

- Ensuring newbuild ships run on high-efficiency dual-fuel LNG engines. LNG reduces SOx emissions significantly by about 99%
- Switching to low-sulphur fuel oil
- Retrofitting selected vessels with scrubbers

#### MISC Group SOx Emissions (tonnes)



**Note:**

<sup>1</sup> The above reported data exclude all vessels fitted with scrubbers due to ongoing system configuration.

The increase in SOx emissions in 2023 compared to previous years was due to the higher use of high-sulphur fuel compared to low-sulphur fuel.

Furthermore, MISC also introduced several initiatives to reduce NOx emissions which include:

- Equipping newbuild ships with low NOx emissions engines.
- Implementing fuel and energy performance monitoring such as monitoring of fuel consumption of machinery/equipment on ships, vessel trim, draft speed and weather conditions which helps with the identification of inefficiencies and energy-saving measures, consequentially reducing fuel consumption and related emissions.

### OZONE DEPLETING SUBSTANCE

We are committed to phasing out Ozone Depleting Substances (ODS), under the provisions of the Montreal Protocol.

➤ **Almost 100% of the refrigerants used on our vessels are non-ozone-depleting with zero ozone-depleting potential.**

We switched to non-ODS refrigerants on vessels and offshore floating assets, implemented Refrigerant Management Procedures onboard vessels and offshore assets and regularly monitored refrigerant consumption.

➤ **In 2023, we recorded a 27% reduction in ODS compared to 2022.**

Besides our shipping operations, our non-shipping entities have a refrigeration equipment inventory with a phase-out plan established for refrigeration systems containing ozone-depleting substances. One of the initiatives was at MHB where they replaced R22 refrigerant with R32 refrigerants for the air conditioning systems. The R32 refrigerant was chosen for its significantly lower global warming potential, which is three times lower than that of R22.

➤ **As of 2023, MHB completed the refrigerant replacement for 68% of their air conditioning units.**

Besides ODS, we are also committed to gradually phasing down the use of hydrofluorocarbons (HFCs) in our operations to support the Kigali Amendment to the Montreal Protocol. Although HFC is not an ozone-depleting substance, it is a potent greenhouse gas with significant Global Warming Potential (GWP) up to 15,000 times more than CO<sub>2</sub>.

### WATER MANAGEMENT

We utilise water in our sea and shore operations and recognise that water use is tied to water withdrawals from the environment. However, as a Group, the consumption and management of water has not been identified as a material matter due to the nature of our operations.

#### Water Use at Sea

Water used onboard our vessels is sourced from the sea and processed by onboard freshwater generators to produce potable water. Depletion of freshwater resources is not considered material for our shipping operations.

#### Water and Effluents Management for Non-shipping Operations

In 2023, our non-shipping operations recorded an 11% increase in water withdrawal compared to the previous year. This was mainly attributed to our Marine & Heavy Engineering operations.

#### MISC Group Total Water Withdrawal (m<sup>3</sup>)



In terms of effluent management, a performance monitoring programme has been implemented at our marine and heavy engineering yard to ensure the quality of discharges is within the permissible limit as set in the relevant water quality standards.

Additionally, surface water and marine water sampling and analysis are conducted periodically at our yard to ensure it complies with the relevant surface water and marine water quality standards. Concentration trends are monitored and any unusual trends will be investigated to identify potential root causes and mitigation measures.

## Other Environmental Matters

#### Ballast Water Management

Since the introduction of steel-hulled vessels, water has been used as ballast to stabilise vessels at sea. Ballast water is essential for safe and efficient modern shipping operations. Unfortunately, when ballast water is not properly managed, it can cause adverse ecological and economic impacts due to bacteria, microbes, small invertebrates, eggs, cysts and larvae that have been transported into new areas.

In 2023, we completed the installation of BWTS on four additional vessels, *Eagle San Diego*, *Eagle San Pedro*, *Lerici* and *Puteri Nilam Satu*. One more vessel, *Puteri Intan*, is scheduled for retrofitting in 2024. Our newbuilds are all equipped with BWTS in compliance with IMO’s ballast water discharge standards to prevent the introduction of invasive species into new areas. By 2024, 100% of our vessels will be equipped with BWTS.

### ENVIRONMENTAL AWARENESS PROGRAMMES

Environmental awareness programmes are a way to increase employee knowledge on current environmental issues and how they can contribute toward minimising environmental impacts both at individual and organisational levels. With this aim, several initiatives and awareness programmes were conducted across the Group.

#### Yard in the Garden Project

“Yard in the Garden” is an environmental project led by MHB, which corresponds with MHB’s sustainability strategy and contributes towards achieving SDG13-Climate Action. The project involved the planting of trees within MHB’s West Yard, which will purify the air, sequester carbon dioxide from the atmosphere and contribute to a cooler microclimate. Since its inception, significant strides have been made towards the goal of planting 500 trees annually until 2030.

➤ **As of December 2023, a total of 1,000 trees have been successfully rooted in the yard.**



## Other Environmental Matters

### Environment Month Celebrations

Our Marine and Heavy Engineering operations celebrated Environment Month, which ran from June to July 2023 to create and spread awareness among employees about environmental issues. Various activities conducted during the one-month programme, including:

#### Yard Clean-up Day

The Yard Clean-up Day was conducted on 16 June 2023 at various areas within the MMHE yard.

#### Carbon Neutrality vs Net-Zero Awareness Talk

The talk was conducted virtually on 17 July 2023 with the purpose of enhancing employee understanding of Net-Zero emissions and ensuring a common understanding of MISC's Net-Zero carbon emissions target by 2050. It was delivered by the Dean of Resource Sustainability Research Alliance, UTM.

### Marine Services Household E-Waste Campaign

E-waste refers to discarded electronic devices such as smartphones and laptops, where improperly disposed could negatively impact the environment and human health due to the presence of hazardous materials. Proper disposal and responsible recycling are crucial to address the increase and management of e-waste.

In conjunction with Earth Day 2023, Marine Services, through its subsidiary, Sungai Udang Port Sdn Bhd (SUPSB) collaborated with Malaysia Refining Company Sdn Bhd (MRCBS) and RGTSU to successfully organise the Household E-Waste Week from 10 to 18 April 2023. The campaign was conducted to enhance awareness among employees on the proper management of household e-waste.

A dedicated location was set up for all employees and contractors to drop off their household e-waste and redeem attractive vouchers.

**A total of 581 units of e-waste, weighing approximately 1.2 metric tonnes was collected throughout the programme.**

### Environmental Quizzes and Competitions

Corporate HSE organised crossword competitions in conjunction with World Environment Day and MHB Environment Month.

### HSSE and Sustainability Week 2023

HSSE and Sustainability Week was held on 12 July 2023 at MHB's Multipurpose Hall, which saw the attendance of over 500 employees and was launched by the former MHB MD and CEO, Pandai Othman.

The activities conducted include a blood donation programme, free health screenings by PERKESO, used cooking oil collection in collaboration with PETRONAS, tree planting activities and interactive exhibitions.



## Our Approach

MISC Berhad believes that a comprehensive approach towards social performance management is important to demonstrate our commitment to responsible business practices, contribute to societal well-being and pave the way for a more sustainable and inclusive future. In line with this commitment, we have outlined the company's initiatives, strategies and processes to ensure that our operations positively impact employees and communities and are aligned with broader sustainability goals.

To achieve this, we regularly engage with our wider stakeholders to understand their expectations and concerns. This is carried out through our robust stakeholder engagement processes, involving dialogues with employees, customers, local communities and others which enables us to identify and address relevant social issues that matter most.

[Read more in Our Stakeholders' Universe section of this report](#)

In ensuring robust social performance is embedded within our organisation, we employ various monitoring and reporting mechanisms to track overall performance. KPIs related to social initiatives are regularly assessed and the results are transparently reported in the Company's sustainability reports. We also monitor and actively work toward improving employee satisfaction through surveys and feedback mechanisms to reflect the Company's dedication to creating long-term value not only for shareholders but also for employees, communities and society at large.

In this section, we disclose our strategies and initiatives toward providing a conducive work environment, upholding human rights and ethical conduct and engaging the communities.

# Operating Safely

# Operating Safely

## Our Commitment

- Provide a safe and healthy environment for employees, contractors and communities
- Achieve Generative HSSE Culture

## Our Initiative

- **Strengthen Health and Safety Culture through the adoption of:**
  - Integrated Health and Safety Framework
  - Contractor Health, Safety and Environment (HSE) Management
  - Process Safety Management
  - Health and Safety Competency

## Our Contribution to SDG

- Promote good health and well-being of employees, contractors and communities



With a workforce of over 10,000, we are committed to maintaining a safe and healthy work environment for our employees and contractors. Our HSE policy is the primary anchor of our approach and management system in this respect, safeguarding the well-being of our employees, contractors and the broader community while upholding our reputation and legal standing.

A secure working environment for our employees and contractors where occupational hazards are minimised and safety is ingrained into work culture is a priority.



We aim to institutionalise a Generative Culture within MISC Group where everyone is **“doing the right thing right all the time, even when no one is watching”**.

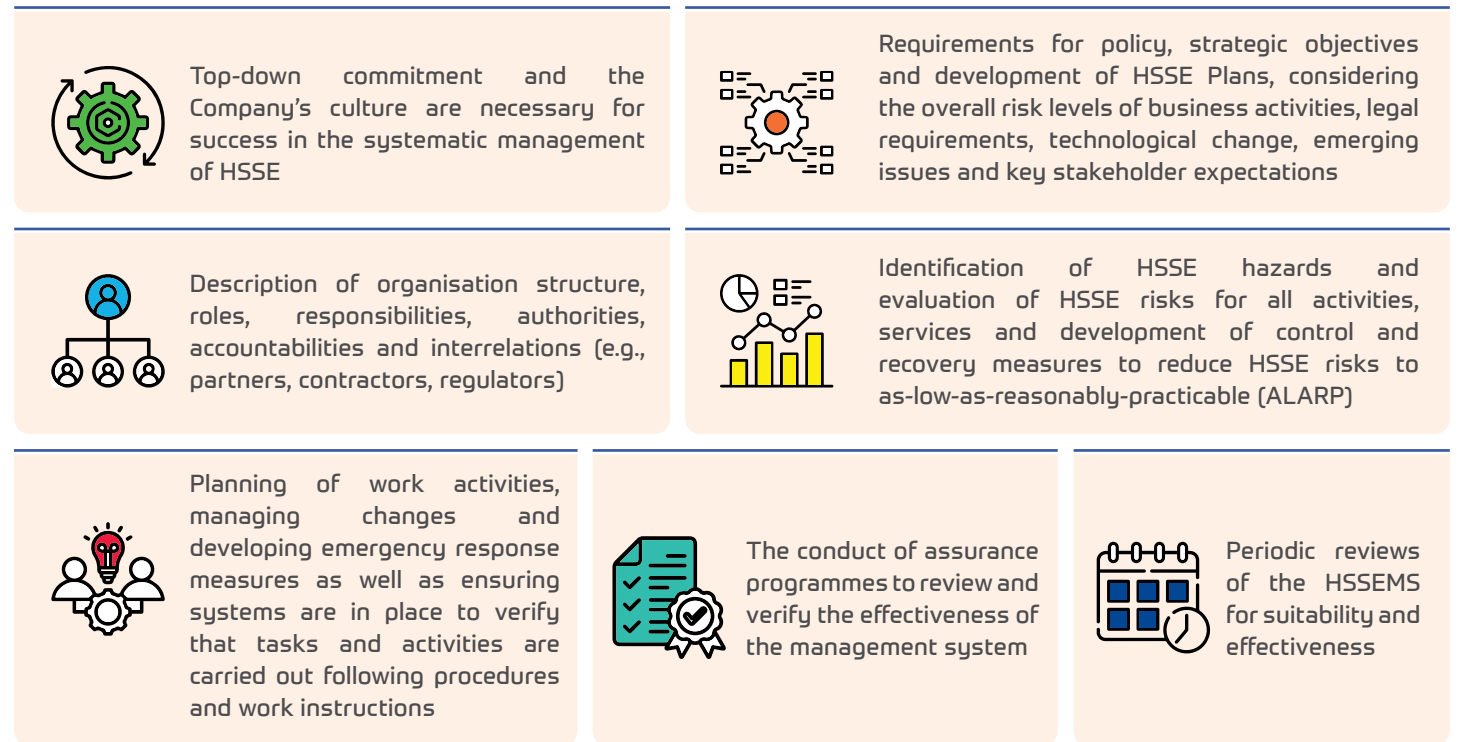


## HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL MANAGEMENT SYSTEM

MISC’s Health, Safety, Security and Environment Policies are the guiding principles for our internal Health, Safety, Security and Environment Management System (HSSEMS). The HSSEMS was created based on relevant international standards, legislative requirements and other recognised industry best practices towards achieving the commitments stated in our HSSE Policies. The management of the health and safety of employees, contractors, communities and the environment are guided by the HSSEMS.

Our Offshore, Marine & Heavy Engineering and Marine Services segments are certified with the ISO 45001:2018 Occupational Health and Safety Management System, which signals our efforts in the pursuit of excellence.

## Key Elements of MISC’s HSSEMS



MISC’s HSE Policy which is available at <https://www.miscgroup.com/awcontent/Web/Documents/ComplianceLawRegulations/misc-health-safety-environment-policy.pdf>

MISC Security Policy which is available at <https://www.miscgroup.com/awcontent/Web/Documents/ComplianceLawRegulations/misc-security-policy.pdf>



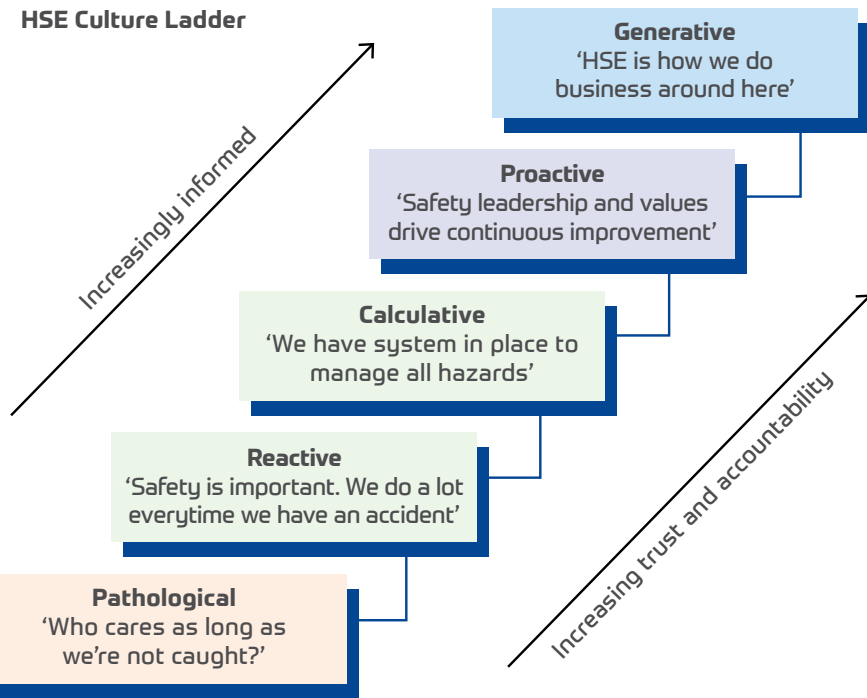
# Operating Safely

## SHAPING GENERATIVE HSSE CULTURE

We believe that HSSE is everyone's responsibility where the culture of an organisation encompasses individual and group values, attitudes, perceptions and competencies of the entire workforce and patterns of behaviour. At MISC, we aim to institutionalise a Generative Culture (GC) where everyone is doing the right thing all the time even when no one is watching.

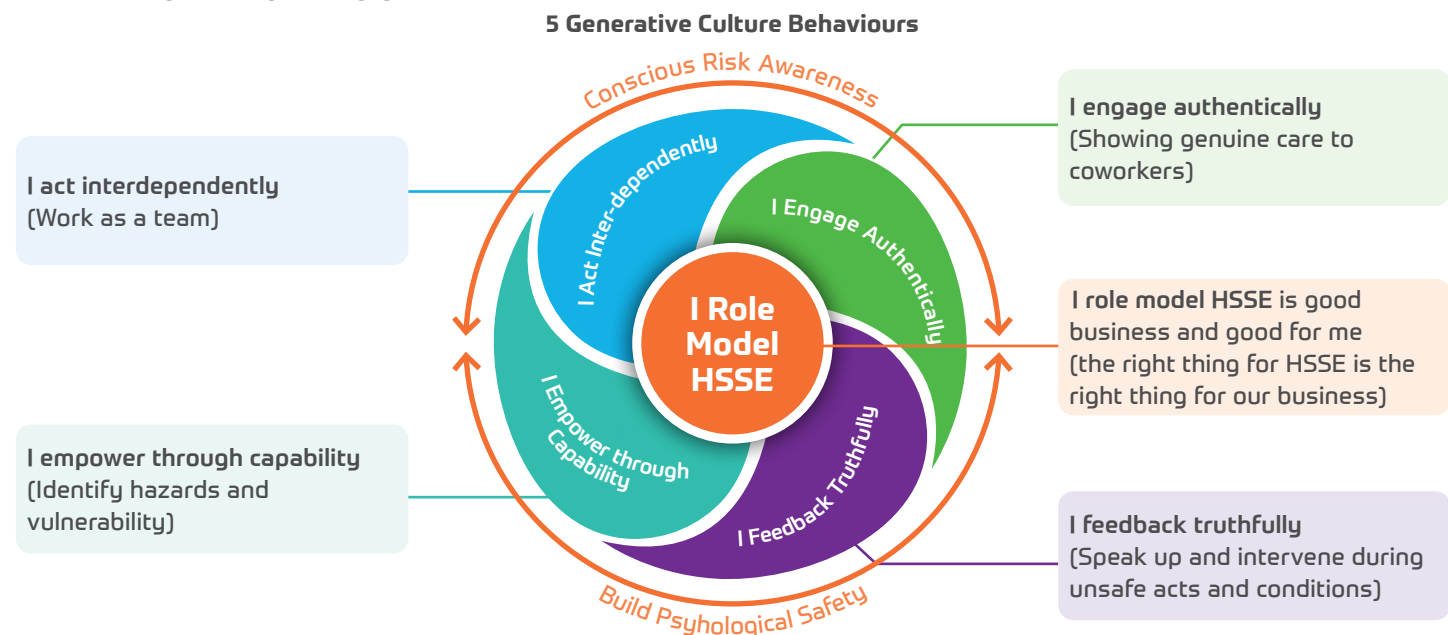
MISC Group embarked on a journey towards achieving GC in 2018 and has identified five focus areas for interventions.

- Communication, Visible Leadership, Compliance, Capability Development and Recognition



Our shift towards embracing Generative HSSE culture focuses further on Generative HSSE Culture Behaviours (GCBs), which are a set of behaviours that drive the actions of employees and contractors by enhancing two focus areas, "Build Psychological Safety" and "Conscious Risk Awareness" towards achieving zero safety incidents. It is imperative that our leaders uphold these two focus areas that set the tone of GC across MISC and demonstrate the five GCBs in their day-to-day activities.

The GCB can be described as follows:



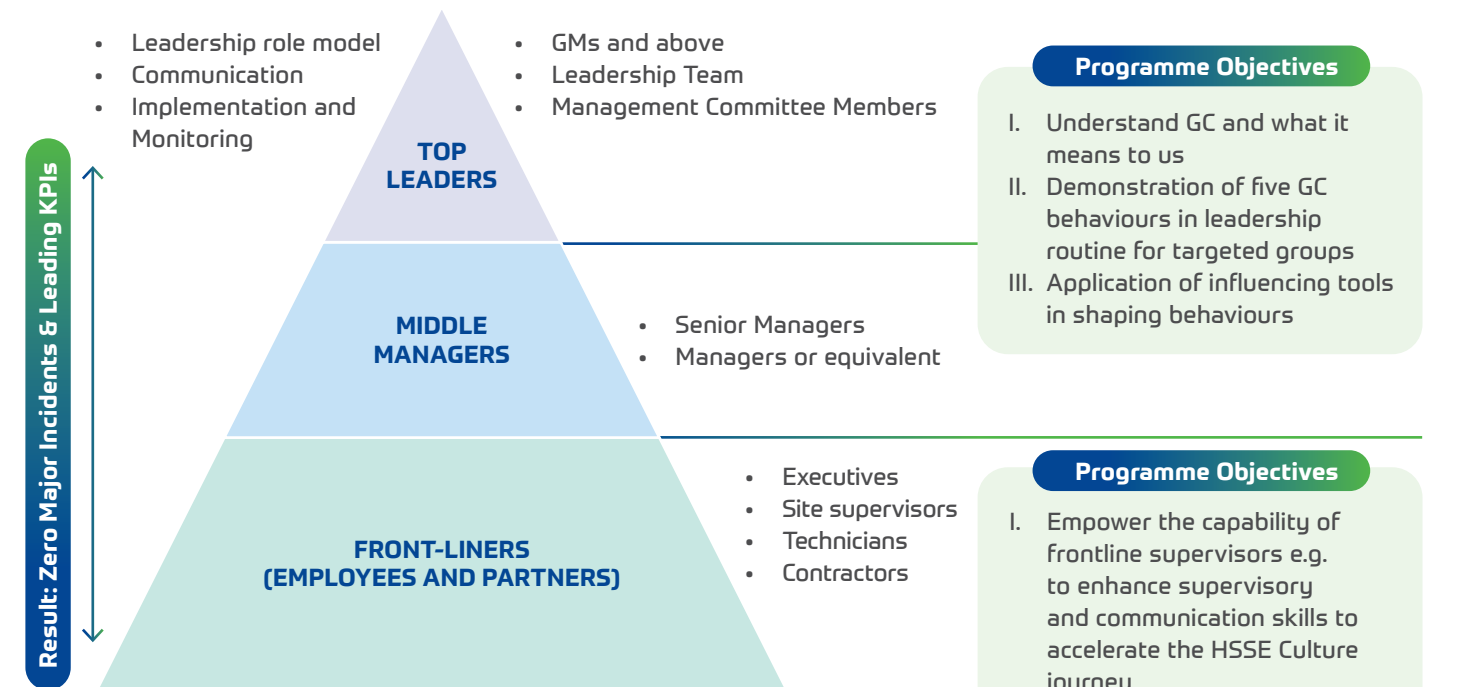
During the year under review, we conducted GC leadership training and coaching for various levels of employees, such as front liners, middle managers and top leaders. The objective of these sessions was to establish stronger relationships with employees and, most importantly, to inspire them by demonstrating the GCBs.

# Operating Safely

## Generative Culture Leadership Programme

The Generative Culture Leadership Programme is designed for all levels of employees, where 689 employees have been trained since 2019.

### Levels of Generative Culture Leadership Programme



GC leadership programme for various levels of employees  
Source: PETRONAS

- Programme Objectives**
- Understand GC and what it means to us
  - Demonstration of five GC behaviours in leadership routine for targeted groups
  - Application of influencing tools in shaping behaviours

- Programme Objectives**
- Empower the capability of frontline supervisors e.g. to enhance supervisory and communication skills to accelerate the HSSE Culture journey
  - Identify, understand and be able to describe GC behaviours towards achieving GC as our way of work

### i. Generative Culture for Top Leaders (GCTL)

GCTL was launched in 2019 targeting senior management to ensure they are equipped with the right HSSE knowledge and skills they need to drive routines, build experiences, shift beliefs and set foundations for GC. A total of 41\* leaders have been trained in GCTL.

### ii. Generative Culture for Middle Managers (GCMM)

GCMM focuses on selected middle managers to accelerate the GCBs and drive mindset shifts together with the adoption of GC Frontline tools. A total of 51\* employees have been trained in GCMM.

### iii. Generative Culture for Frontliners (GCFL)

GCFL aims to strengthen the capability of frontline supervisors to enhance supervisory skills and communication skills to accelerate the GC journey. A total of 597\* employees have been trained in GCFL.

\* As of February 2024

Moving forward, we will continue to strengthen GC by developing leaders at all levels with the right attitude and skills to promote this and ensure accountability across the Group.

# Operating Safely

# Operating Safely

## Generative Culture Leadership Programme

### MISC HSSE Partners Summit 2023

The HSSE Partners Summit 2023 organised by MISC is aimed at strengthening the collaboration between MISC Group and its business partners towards enhancing HSSE, sustainability, quality, work efficiency and contractual performance. It is a platform to highlight our expectations and commitments from our partners to uphold the highest standard of HSSE performance and operational excellence towards building GC. The Summit also served as a platform to celebrate our business partners' achievements in 2022 and highlighted HSSE & Sustainability Best Practices in achieving safe and efficient operations.

The event was attended by 235 participants and more than half of them were represented by our business partners. The HSSE Excellence Recognition were presented to eight business partners who demonstrated exceptional performance in health, safety, environment and sustainability practices.



### MISC HSSE CULTURE MATURITY SURVEY 2023

The MISC HSSE Culture Maturity Survey (CMS) is conducted every two years to gauge the perception of HSSE culture maturity in our operating businesses, provide an understanding of our strengths and areas for improvement and direct the recalibration and validation of our HSSE strategies and interventions. CMS questionnaires are based on the five levels of the Culture Maturity Ladder which is aligned with HSEMS and Occupational Safety and Health (OSH) Culture and Behavior Elements, recognised by the Energy Institute, UK.

employees and contractors. The engagement sessions were held to share the importance of the survey and to create awareness among employees that their feedback is crucial in achieving GC.

#### HSSE CMS 2021 Results

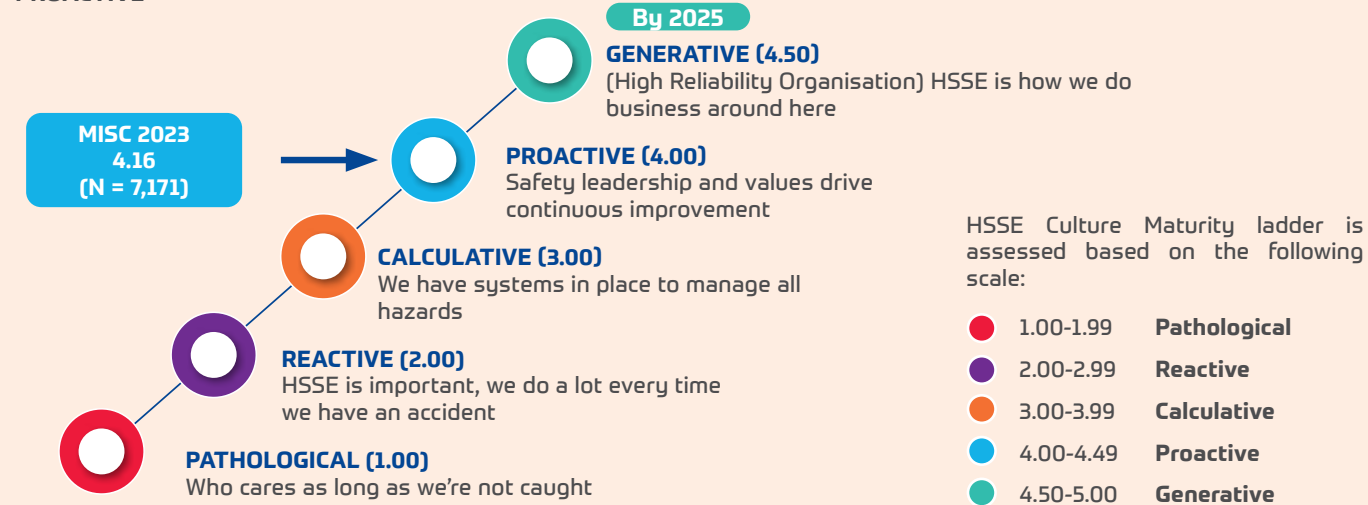
Based on the 2021 CMS, results indicated that MISC Group has attained a proactive culture.

#### HSSE CMS 2023 Results

The latest CMS was conducted in September 2023 and the results indicated MISC attained a proactive culture with a score of 4.16, an increase in score compared to 4.02 in 2021.

Following the announcement of the MISC HSSE CMS 2023, Group HSSE & Sustainability conducted nine engagement sessions with

### OVERALL MISC HSSE CULTURE PROACTIVE



## SAFETY

Safety is paramount in the maritime industry to protect human lives, prevent environmental damage, safeguard property and cargo, maintain infrastructure, comply with regulations and uphold the Company's reputation. Thus, strict measures are implemented at the workplace to minimise risks and ensure the well-being of everyone involved.

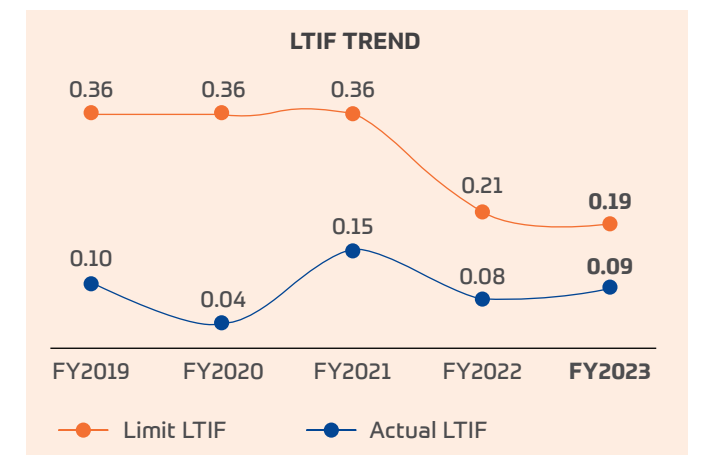
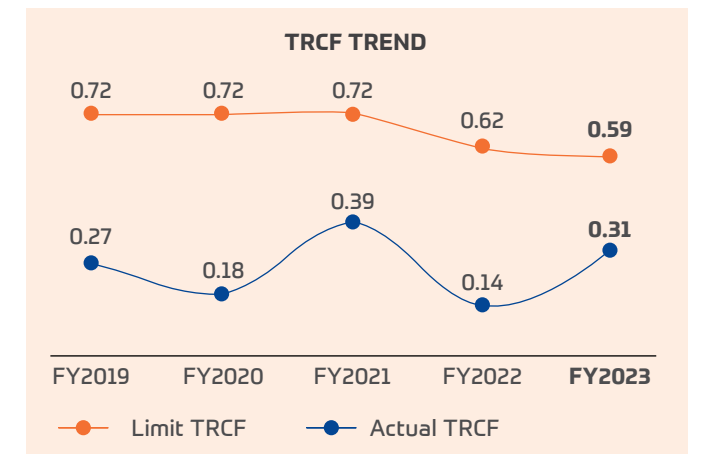
We have adopted an integrated approach to safety that covers two main areas namely, occupational safety and operations safety. Our approach is based on the following principles:

- Compliance with all applicable laws, regulations, standards and procedures, which often go beyond legal requirements
- Adoption of the IOGP Life-Saving Rules, designed to prevent the most common causes of serious injuries and fatalities in our industry
- Monitor and measure safety performance using indicators such as LTIF, TRCF and process safety events
- Learn from incidents and near misses and share lessons learnt internally and with our vendors and suppliers
- Foster a culture of care and intervention to speak up and stop work during unsafe or potentially hazardous conditions
- Engage with our stakeholders to understand their expectations and concerns and to collaborate on improving safety outcomes
- Improve our safety performance through the adoption of best practices, new technologies and enhancing training and development. We participate in industry initiatives and forums to share and to learn from others
- Demonstrate our commitment to safety to earn the confidence of our stakeholders and society

## MISC Group Safety Performance

MISC Group's safety performance was generally within the set limits for 2023. Our shipping and fabrication yard businesses were in the top quartile for safety performance benchmarking in their respective industries.

In 2023, MISC Group recorded a LTIF of 0.09 and a TRCF of 0.31 which were well below the set limits of 0.19 and 0.59, respectively. Compared to 2022, results in 2023 indicated an increase in the number of lost time injuries and recordable cases.





## Operating Safely

## Operating Safely

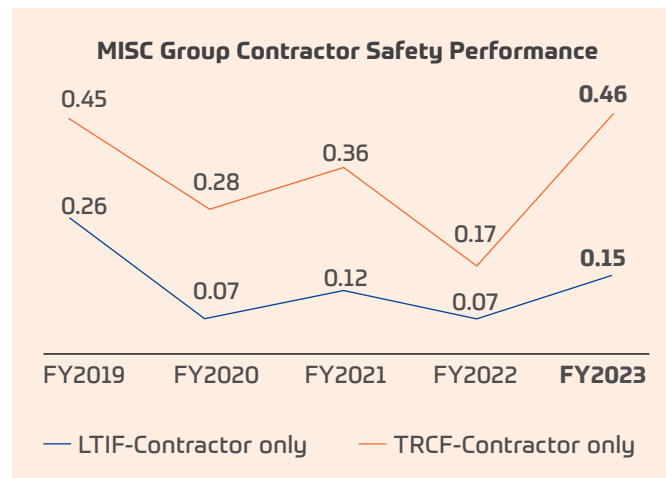
### MISC Group Contractor Safety Performance

Our foremost objective for contractor safety performance is to ensure a secure work environment that prioritises the well-being of all individuals involved. We set stringent safety targets and ensure our contractors align with our safety standards and practices.

Compliance with our safety requirements is embedded into contractual agreements, ensuring a clear framework for adherence to safety protocols. This underscores our dedication to a safe working environment and communicates our expectation of shared responsibility for safety measures.

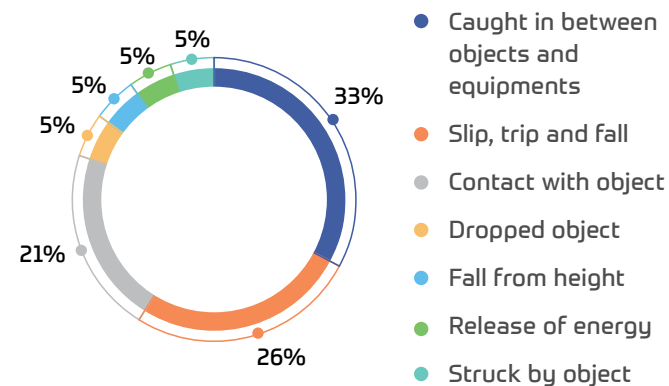
Regular training, assessments and audits for our contractors underscores our holistic approach to maintaining a safe and secure workplace.

In 2023, contractors' safety performance via the LTIF and TRCF was recorded at 0.15 and 0.46, respectively. This is due to the higher number of lost time injuries and recordable cases recorded in 2023 compared to 2022.



### Main Type of Work-Related Injuries

In 2023, MISC Group recorded three fatalities and three Lost Workday Case incidents involving two employees and four contractors. The fatalities were associated with falls from height and pressure release and the injuries were associated with being hit/struck by objects. Regrettably, the recent safety performance at our workplace has been disappointing; however, MISC has implemented remedial measures and protocols to address and significantly reduce safety accidents.



Thorough investigations were conducted and remedial measures were identified to prevent incident recurrence. These include:

- To brief employees and contractors on safety Do's and Don'ts;
- To inculcate and strengthen enforcement of stop work policy for any unsafe condition/unsafe act on scaffolding/working at height;
- To enhance the job method statement and ensure the correct method is applied;
- To conduct a pre-assessment of the work area and equipment before use;
- To conduct regular awareness or refresher sessions on safe work culture;
- To formulate a structured training module for high-risk tasks;
- To redesign or incorporate new designs at the work and/or equipment that eliminate hazards;
- To enforce strict compliance with personal protective equipment (PPE);
- To review and improve processes on the management of machineries and periodic inspections; and
- To ensure all personnel who are working are healthy and fit to work.

### Incident Prevention

An incident mitigation plan is a strategy that aims to reduce the impact or likelihood of an incident. The plan addresses safety fundamentals such as improving onsite leadership visibility, emphasising risk evaluation and effective communication, heightening intervention, stopping work for unsafe behaviour and conditions and increasing employee engagement. MISC has been actively addressing incident prevention through a variety of methods.

### Focus Areas in 2023

- Focusing on personal safety through MISC Life-Saving Rules.
- Strengthening behavioural safety through HSSE Rules and Commitments.
- Promoting change management with the establishment of guidelines.

MISC Safety Rules were first introduced in 2015 to mitigate risks and reduce incidents within the operations. In 2023, MISC adopted IOGP Life-Saving Rules to enhance safety awareness, prevent accidents and ultimately save lives by promoting strict adherence to these rules within the industry. The MISC Life-Saving Rules apply to all employees at MISC Group, but especially to our frontliners.

### TOGETHER TOWARDS GENERATIVE HSSE

#### HSSE Life-Saving Rules

- Bypassing Safety Controls**  
Obtain authorisation before overriding or disabling safety controls
- Confined Space**  
Obtain authorisation before entering a confined space
- Driving**  
Follow safe driving rules
- Energy Isolation**  
Verify isolation and zero energy before work begins
- Hot Work**  
Control flammables and ignition sources
- Line of Fire**  
Keep yourself and others out of the line of fire
- Safe Mechanical Lifting**  
Plan lifting operations and control the area
- Work Authorisation**  
Work with a valid permit when required
- Working at Height**  
Protect yourself against a fall when working at height

### Incident Prevention

We also introduced new HSSE Rules and Commitments in 2023, which are designed to create a secure and healthy workplace, prevent accidents, protect the environment and comply with relevant workplace policies and requirements. The HSSE Rules and Commitments are applicable to all employees of the MISC Group who work in an office setting.

#### HSSE Rules

- Do not look at mobile devices while walking
- Do not use mobile phone while driving. Wear seatbelt and follow speed limit
- Comply with Substance Misuse Policy
- Do not smoke outside designated areas
- Comply with workplace cybersecurity requirements

#### HSSE Commitments

- Ensure our workplace is safe and hazard free
- Report unsafe conditions, unsafe acts and incidents
- Segregate and dispose waste responsibly
- Adopt behaviours that promote stress management and mental health
- Practise journey management

Reflective learnings are carried out for high-risk incidents to ensure lessons are learnt to prevent recurrence. The HSSE Incident Management process has been translated into a mandatory e-learning module to be completed by all employees to ensure they understand the implications of any HSSE incidents. The HSSE Lessons Learnt process has been improved by translating it into interactive learning through a series of videos.

# Operating Safely

# Operating Safely

## HSSE Non-Compliance Management

The HSSE Non-Compliance Management has been implemented to consider human factors in the incident and Safety Rules violations investigations. It intends to identify the failures and provide support in terms of training and mentoring or rectification of behavioural concerns to prevent the recurrence of incidents. Major incidents are reviewed at the HSSE Council, chaired by the PGCEO of MISC Group and subsequent actions to be taken for any identified non-compliance by employees and contractors are endorsed.

As an outcome of major incident investigations, 22 personnel from both MISC and third-party contractors were subjected to HSSE Non-Compliance Consequence Management, including corrective counselling and temporary restriction of entry to worksite.

## Process Safety

Process Safety Management (PSM) is a systematic approach to managing the risks associated with processes and operations that involve hazardous materials.

PSM at MISC is guided by the Process Safety Management Manual and as part of the PSM, Loss of Primary Containment (LOPC) and Fire Mitigation Prevention Framework were implemented to manage process risks. We actively identify and bridge the gaps in the existing technical safety standards and procedures against international standards such as the comprehensive framework provided by the American Petroleum Institute (API) 754 Process Safety Performance Indicators (PSPI).

Both leading and lagging Process Safety Indicators of MISC's assets, including events of slight release are consistently reported and monitored promptly. The metrics portrayed per API 754's Process Safety Indicator Pyramid are presented in top management meetings for a thorough review, facilitating informed decision-making at every level of the organisation.

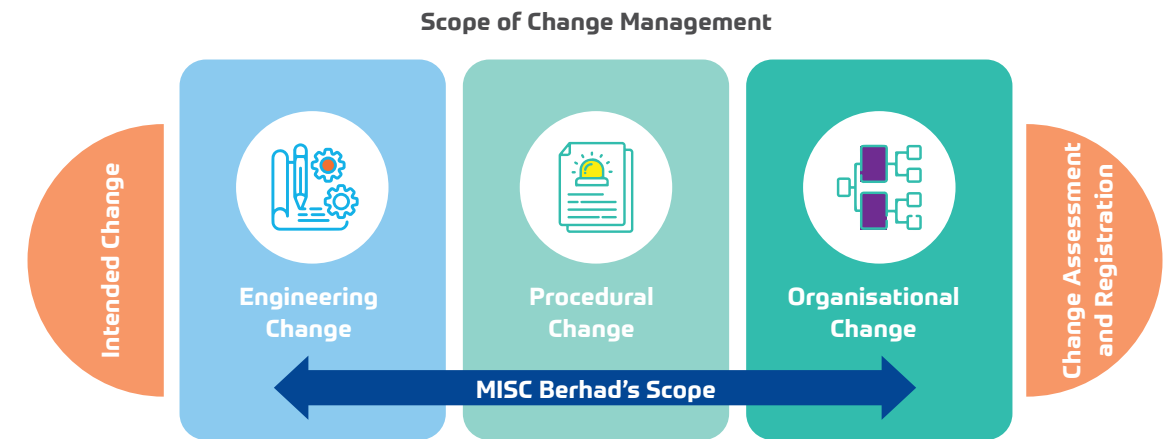
MISC Group Process Safety Performance Indicator (PSPI)

2022		2023	
Lagging Indicators	0	LTI	0
	1	Major LOPC	0
	1	Major Fire/EX	1
	0	RWC/MTC	0
Leading Indicators	1	Minor LOPC	2
	8	Minor Fire/EX	7
	10	Slight Releases	8
	0	IPF Failed on Demand	0
	0	PRD Failed on Demand	0
	0	SCPD Bypass Overdue	0
	4	Temporary EMOC Overdue	4
	0	SCE CM Overdue	0
	0	SCE PM Overdue	0

## Management of Change (MOC)

MISC Group, including all our entities, are dynamic and are exposed to changing requirements, which may be both major and minor in the current business environment. An integrated MISC Group MOC Guideline has been developed in line with the principles described in the MISC HSEMS and PETRONAS HSE Mandatory Control Framework (MCF), incorporating respective MISC entities' unique approach to managing change on site.

In addition to addressing operational risks, the MOC practice is also being integrated into corporate change initiatives within MISC's headquarters at Dayabumi Complex in Kuala Lumpur. This implementation involves well-defined layers of organisational and building management, ensuring that changes in the corporate setting are effectively managed and controlled to mitigate potential risks and ensure the smooth transition and operation of the Dayabumi facility.



## Enhancing Safety Culture through Effective Communication

Effective communication is a foundational element of fostering a strong safety culture within an organisation. Regular and open dialogue facilitates understanding, awareness and compliance with safety rules and regulations, ultimately contributing to a safer working environment and the well-being of individuals.

### HSSE Committees

Our employees may raise any HSSE matters with their respective HSSE committees, which are established across MISC Group. The Committees ensure appropriate measures are in place for concerns, investigate and resolve any matters raised by employees and regularly discuss overall HSSE performance and initiatives. The committees convene quarterly and are chaired by the respective business heads. Matters of concern are escalated upwards to the HSSES Council.

### Unsafe Condition Unsafe Act (UCUA)

MISC has an established a UCUA reporting channel for employees to raise their concerns. The UCUA reporting and analytics have been enhanced using a digital UCUA application, to proactively address HSSE concerns and ultimately prevent incidents. The mobile and web applications are accessible to all employees and contractors, providing efficient reporting capabilities where the data is analysed daily.

In 2023, we received 102,342 UCUA reports from employees and contractors, all of which have been addressed by the relevant onsite functions. We communicate UCUA analysis findings to employees during daily Toolbox Talks and relevant HSSE campaigns. HSSE Alerts and Lessons Learnt are regularly disseminated through employee portals, the MISC intranet portal and email.



## Operating Safely

## Operating Safely

### Stop Work Authority

The Stop Work Authority is one of several initiatives developed to promote safe behaviour amongst all employees both at sea and shore. In 2023, we recorded a total of 3,053 stop work at Marine Services and all concerns were resolved before recommencement of work.

### MISC Group HSSE Recognition Day 2023

We conducted MISC Group HSSE Recognition Day with over 1,000 employees from across the world joining us to honour team and individual HSSE achievements. The HSSE Recognition Day is the main event of the HSSE and Sustainability Month organised in July 2023. During the event, we celebrated excellence in various categories in 2022, i.e., Walking Challenge, Best Unsafe Condition Unsafe Act Submission and Waste 4R Champions. These achievements underscore the multifaceted approach we take to fostering a culture of HSSE and sustainability consciousness.

### Safety Training

The maritime industry involves various hazards, including heavy machinery, handling of hazardous materials, adverse weather conditions and navigation challenges. Regular, targeted and comprehensive safety training equips personnel with the knowledge to identify and mitigate these risks effectively.

#### Tripod Beta Certification Training

This training is a part of functional competency development to equip employees with the necessary skills to conduct an effective investigation using structured tools and techniques. Employees learn to analyse incidents accurately, identify root causes and provide recommendations for improvements that focus on the barriers and the underlying cause to prevent recurrence.

This accreditation programme enables learners to use the Tripod theory of incident causation and learners who have been satisfactorily assessed will be accredited. For 2023, we accredited Bronze and Silver for 18 employees and three employees, respectively.

#### Basic First Aid, CPR and AED Training

This programme consists of a comprehensive two-day course to train appointed Floor Safety Managers to become competent first aiders. The training course emphasises basic life support skills such as CPR, choking first aid and other measures that can be carried out immediately if any injury or sickness occurs at the workplace. A total of 21 employees were trained from 4 to 5 September 2023.

### Safety Awards and Recognitions 2023

We were honoured with various awards as a testament to the various achievements and comprehensive safety programmes and initiatives within our business operations.

#### 41<sup>st</sup> Malaysian Society for Occupational Health and Safety (MSOSH) 2023

MSOSH Award is an annual award presented to organisations in Malaysia that have achieved commendable OSH records and have demonstrated continuous improvement in their OSH management system. The award assesses the implementation of the HSE Management System in managing safety and health risks within the workplace. Participating organisations will undergo rigorous document and site verification by MSOSH-appointed auditors and be further evaluated by the MSOSH Technical Committee for the respective awards.

There is a total of seven categories where the highest is Platinum, followed by Grand, Gold Merit, Gold Class 1, Gold Class 2, Silver and Bronze.

In 2023, MISC was conferred with the following achievements:



#### Awards 2023

##### GRAND

**ENTITY:**  
Maritime Services Sdn. Bhd.  
(Sungai Udang Port)

**SECTOR:**  
Petroleum, Gas, Petrochemical and Allied Sectors

##### GOLD MERIT

**ENTITY:**  
Eaglestar Shipmanagement (L)  
Pte. Ltd.

**SECTOR:**  
Petroleum, Gas, Petrochemical and Allied Sectors

##### GOLD CLASS 1

**ENTITY:**  
Akademi Laut Malaysia (ALAM)

**SECTOR:**  
Educational Sectors

##### GOLD CLASS 1

**ENTITY:**  
MISC Berhad-FPSO Ventures  
Sdn. Bhd (FSO Puteri Dulang)

**SECTOR:**  
Petroleum, Gas, Petrochemical and Allied Sectors

##### GOLD CLASS 1

**ENTITY:**  
MISC Berhad-Malaysia Vietnam  
Offshore Terminal (L) Limited-  
FSO Orkid

**SECTOR:**  
Petroleum, Gas, Petrochemical and Allied Sectors

##### GOLD CLASS 1

**ENTITY:**  
Malaysia Marine & Heavy  
Engineering Sdn Bhd

**SECTOR:**  
Petroleum, Gas, Petrochemical and Allied Sectors

### Chamber of Shipping of America (CSA) Awards

A total of 48 of MISC's vessels were awarded the CSA Jones F. Devlin Award for Safety which recognises ships and their crews for the excellent health and safety record they attained.



### Safety Programmes

#### MERO 3 Project: 26 million man-hours without LTI

On 13 July 2023, the MERO 3 Project site achieved an impressive milestone of 26 million man-hours without any Lost Time Injury (LTI). To commemorate this remarkable achievement, MISC's PGCEO visited the project site at Yantai CIMC fabrication yard to extend his congratulations and express appreciation for the dedicated efforts of the entire team.

Several safety awards were presented to workers and teams in recognition of their dedication and commitment to consistently upholding safety practices and contributing to the project's safety record. The MERO 3 Project's achievement is a testament to MISC's unwavering commitment to safety.

## Operating Safely

### HSE Lessons Learnt Workshops

HSE Lessons Learnt Workshops were held by the Group with JV companies and partners. It provided a platform to discuss strategies to prevent similar incidences and overcome challenges in implementing safety improvements.

### FPSO Bunga Kertas Demobilisation Project

FPSO Bunga Kertas Demobilisation Project team organised a Lesson Learnt Workshop to assess the project's strengths and weaknesses and identify opportunities for improvement. The workshop was focused on evaluating safety measures, incidences and environmental considerations during the demobilisation activity. Other areas discussed during the workshop included project management, procurement and contract management and other technical areas. It is expected that these insights will lead to enhanced project management, improved safety measures and more successful demobilisation projects in the future.

Additionally, PETRONAS, MOFT and MMHE management teams conducted a site visit on 13 September 2023. Discussions ranged from welfare to business matters, providing a platform for discussions and ensuring alignment with the company's desired objectives and targets.

## OCCUPATIONAL HEALTH

Our sea and operations employees frequently work in physically demanding environments, which involve tasks such as manual handling, heavy lifting and navigating challenging conditions. The isolation, confinement and extended durations at sea can significantly impact the mental health of seafarers. Occupational health considerations also encompass the design of workspaces, seating arrangements and equipment to promote optimal health and safety.

At MISC, occupational health management is guided by the HSE Policy, including the MISC Substance Misuse Policy. Our occupational health measures aim to prevent and control accidents and diseases related to specific work environments.

### Occupational Health and Industrial Hygiene (OHIH) Programme

At MISC, our OHIH Programme is our commitment to fostering a safe and healthy work environment for all. Through this programme, we have implemented key initiatives that cover a spectrum of measures aimed at preventing occupational hazards, managing infectious diseases and enhancing the overall well-being of our workforce.

#### NURSING ROOM



We provide mothers room in Menara Dayabumi. These accommodations are available throughout the day for nursing mothers.

#### GYM



Working out at the gym releases norepinephrine hormones which results in reduced stress, enhanced mood and better brain function. In 2022, we reopened our newly revamped gym in our Menara Dayabumi office. We also have a dedicated instructors to help guide our employees in their working out routine.

#### JAMMING ROOM



Another way of destressing is through music. Our jamming room in Menara Dayabumi is accessible to our employees, complete with a jamming equipments such as guitar, drum, sound systems and others.

#### POWER NAP ROOM



A power nap is a short sleep that terminates before deep sleep. Research shows that short afternoon nap can help us feel less sleepy and lead to improvements in our mood, alertness, reaction time as well as focus and concentration. To encourage the benefits of power nap, our GAS Business segment has embarked on initiative to support the well-being of its employees by launching a pilot power nap room for our employees based at Menara Dayabumi. The convertible meeting room to power nap room was equipped with four reclining beds.

## Operating Safely

### Occupational Health and Industrial Hygiene (OHIH) Programme

In 2023, we have significantly advanced our commitment to OHIH through a series of strategic initiatives as follows:

#### Occupational Health

**New Guidelines:** To ensure health and safety of our employees and contractors, MISC has introduced guidelines pertaining to the Food and Water Safety Programme, Infectious Disease Management and Health and Well-being Programme.

**Document Revision:** In compliance with legal requirements and industry best practices, MISC has revised the Medical Standards for Fitness to Work to maintain document accuracy and relevance.

**Training for Awareness:** To promote health awareness and cultivate safer work practices, MISC consistently conducted various training programmes led by consultants and subject matter experts throughout the year. General awareness sessions were open to all employees across the Group, while more specialised awareness programme or certification trainings were attended by the OHIH focal personnel within the MISC Group.

**Fatigue Risk Management Guidelines:** Prolonged exertion and insufficient sleep quality can result in fatigue, leading to a decline in both mental and physical performance, which can contribute to workplace accidents. The guidelines offer a systematic and structured approach for identifying, assessing and mitigating fatigue risks within MISC operations.

**Substance Misuse Programme:** In 2023, a total of 22,283 substance misuse tests and 22,507 alcohol tests were administered. From this, 29 employees tested positive and were consequently managed according to established protocols.



### Industrial Hygiene

**New Guidelines:** New guidelines focusing on ergonomics were released.

**Ergonomic Awareness:** To raise awareness among employees about ergonomics, a general ergonomic e-learning module was developed. To enhance the well-being of our office employees, an automatic pop-up reminder system, "Eyes Guard", was introduced. It is designed to encourage and support regular recovery breaks during work hours.

**Revised Guidelines:** The Chemical Management Programme aims to ensure the safe handling of chemicals in the workplace.

### Health and Well-being Programme

#### Promoting Healthy Lifestyles

Health promotions remain ongoing across the Group, covering active living, healthy eating and mental wellness. Throughout the year, we conducted many initiatives and activities such as health talks, advisories, campaigns/roadshows, mindfulness classes, group workout classes and health challenges.

#### Health Passport, Health Screening Programme

The Health Passport Programme is a health screening programme to assess employees' risk of cardiovascular disease using Framingham's score. This initiative was reinstated after being paused from 2020 to 2022 due to the COVID-19 pandemic. In 2023, a total of 1,442 employees across the Group participated in this programme.

#### MISC Group Walking Challenge

The MISC Group Walking Challenge is a team-based challenge designed to promote active lifestyles and encourage employees to achieve 10,000 steps per day. This challenge engaged team members in a collective step-counting target, involving 84 teams and 420 employees across the Group.



## Operating Safely

## Operating Safely

### Occupational Health and Industrial Hygiene (OHIH) Programme

#### Mental Health Awareness Month

In conjunction with World Mental Day on 10 October, a series of activities promoting mental wellness were organised throughout the month of October, including:

- Mindfulness workshops
- Health talk on Holistic Well-being
- Release of Mental Wellness Toolkit
- Release of Health in 5 videos on Mental Wellness
- A 1.5-day training programme on Building Mental Toughness

#### Mind Guardian Programme

Marine Services takes pride in maintaining its steadfast commitment to employee well-being through the successful continuation of the Mind Guardian programme. This distinctive initiative developed in-house, aims to empower our Top 4 officers and shore employees with the knowledge and skills needed to identify signs of depression and anxiety. Additionally, it provides essential counselling skills to enable them to act as first responders onboard.

Building on the success of the Mind Guardian programme, Marine Services has taken a significant step forward by transforming it into a Computer-Based Training (CBT) platform. The CBT platform presents the Mind Guardian programme through a storytelling video and interactive format, fostering awareness of mental health issues. Through real-life scenarios and interactive elements, employees are guided on how to recognise symptoms of anxiety and depression in themselves and their colleagues.

Our seafarers are also offered 24/7 access to the Psychological Counselling Programme by Mental Health Support Solution. Currently, this programme has covered 71% of our Fleet Senior Officers and shore-based Superintendents.

#### Prioritising Employee Well-being

AET introduced initiatives targeting four pillars of well-being: physical, social, mental and financial. Under the mental pillar, not only do we have trained mental health first aiders and Employee Assistance Programme resources in our offices, our managers also participated in a workshop to help them recognise and respond to individuals experiencing emotional distress. Throughout the year, several other activities were organised to boost our employees' well-being, including a microgreen workshop to promote mindfulness and

relaxation, financial workshop on planning for the future, yoga sessions and the annual health screening.

**“Health in 5” Video Series:** To further enhance health awareness amongst employees, “Health in 5,” was introduced. It is a series of bite-sized informative videos covering various health topics in less than 5 minutes.

**“Ask OHIH” Virtual Clinic:** Recognising the importance of employee engagement, MISC established “Ask OHIH,” a virtual clinic that allows employees to seek guidance from subject matter experts in health and industrial hygiene through virtual consultations. Employees can contact the OHIH team at askOHIH@miscbhd.com.

#### Offshore Business e-Sport Tournament

As part of a line-up of exciting activities under the Behavioral HSSE (BhS) 2023 Campaign, the BhS e-Sports Tournament was held on 22 July 2023 at Quill City Mall, Kuala Lumpur. This inaugural e-Sports event in Offshore Business segment gathered more than 200 participants, including employees and their family members, where 108 players took part in various e-Sports games. This programme provided a platform to strengthen relationships among our employees, promote teamwork and communication and provide an alternative way of relieving stress.

#### How Are You (H.A.Y) Programme

The H.A.Y Programme is an important element of MHB's Monthly HSE Management Committee Walkabout. This programme emphasises elements of understanding and listening to each other, recognising positive behaviour and expressing gratitude. This programme demonstrates HSSE leadership and promotes a safe and conducive working environment where employees are encouraged to speak up.

#### Spine and Posture Analysis

In collaboration with DBC Physiotherapy Malaysia, a series of spine and posture screenings was conducted at various MISC premises, namely Menara Dayabumi Kuala Lumpur, MMHE Pasir Gudang and ALAM Melaka. Employees were able to have functional risk assessments, spine profile identification, consultations and receive post-screening reports and exercise suggestions. This programme provided a platform to raise awareness of proper posture care and exercise techniques according to individual needs and to assess and detect early musculoskeletal disorders.

## SECURITY

Shipping infrastructure, including ports, terminals and offshore installations, represents critical components of the global supply chain. International regulations, such as the International Ship and Port Facility Security (ISPS) Code, mandate the implementation of security measures to enhance the overall security of the maritime sector.

MISC has implemented adequate security measures, including monitoring systems, access controls and surveillance, which help prevent unauthorised access and security breaches throughout our operations. We are guided by the MISC Security Policy which outlines our approach to managing security across the Group.

### Human Rights on Security

MISC Group is responsible for developing and sustaining a culture of security awareness and compliance within our businesses. The management of our security operations' management is guided by the following principles:

- MISC Human Rights Commitment
- MISC Modern Slavery Policy
- Part IV of MISC Code of Conduct and Business Ethics for Third-parties
- Voluntary Principles on Security and Human Rights

Security matters are regularly highlighted within MISC's overall operation to ensure business continuity, especially when it involves human rights elements.

### Security Commitment towards Human Rights

Certain shipowners use armed personnel onboard ships, subject to flag state law, as part of security measures taken during business operations when sailing through High-Risk Areas (HRA). The IMO developed an interim guidance for shipowners, ship operators and shipmasters on the use of Privately Contracted Armed Security Personnel (PCASP) on board ships in HRAs to address the need for extreme caution in matters relating to liability, jurisdiction, sovereignty, ships in transit and rights of innocent passage, among other issues. PCASP is recognised as an effective strategy for combating piracy and protecting registered vessels.

Many countries have refused to allow PCASP because of the alleged geographical location of previous incidents. Piracy occurrences in countries that have prohibited PCASP typically occurred in their territorial or internal waters, as opposed to how piracy has been defined by the United Nations Convention on the Law of the Sea (UNCLOS) and applied by the IMO, which occurred in high seas.

Obtaining authorisation from the flag states is the first requirement for a merchant vessel to use PCASP. Meanwhile, flag states, port states and coastal governments have begun to implement and publish warnings or laws related to vessels with PCASP onboard, considering the increased risk of piracy and the placement of PCASP onboard merchant ships transiting and entering ports.

### Standardisation of Human Rights Approach

Maritime security risk management applying such outsourcing does not exempt flag states from their obligations under international law regarding PCASP when they have full authority to delegate the task of providing security. However, there is a need to control PCASP-equipped vessels to protect national security and sovereignty.

Weak regulatory frameworks provide an avenue for a lack of monitoring that enables human rights abuses of seafarers committed by PCASP. Furthermore, strengthening Private Military Security Company hiring following quality management indicators such as ISO 28007, an International Code of Conduct for private security providers, minimises risk to those involved, mainly for the crew, ship and cargo.

MISC utilises the services of PCASP according to flag state law but only on vessels that traverse HRAs. This practice aligns with the IMO Revised Interim Guidance to Ship Owners, Ship Operators and Ship Masters on the Use of Privately Contracted Armed Security Personnel Onboard Ships in High-Risk Areas.

The existence of PCASPs on ships may lead to security risks for the crew onboard, as these PCASPs are armed. To ensure that the crew are not exploited, ethical recruitment practices are implemented. MISC conducts human rights due diligence in a risk-based and adequate manner in relation to their potential and actual impacts.

## Operating Safely

## Operating Safely

### ▼ Sustainable Security Culture

Sustainability is a key element in implementing an effective security programme and contributes to GC. This can be achieved through the consideration of security risks in business activities along with other risks, the promotion and integration of security awareness and compliance into everyday activities at all levels of management and when all employees and contractors comply with security and reporting requirements.

To assess the security risk of existing or planned assets, the Asset Classification Tool is used and this tool complies with the Mandatory Minimum Security Standard, which provides a minimum acceptable level of facility security. Security audits are conducted to assess security risk levels and to determine appropriate security mitigation measures. For assets located in high to extreme security threat environments, we shall conduct a Security Risk Assessment to identify additional security measures to be taken.

### ▼ Security Awareness Programmes

A series of security programmes focusing on personal safety towards enhancing GC was held in conjunction with HSEES Month in 2023. Based on a global survey conducted by Ipsos, 85% of respondents stated that their safety and security were a source of happiness for them. However, only 45% of Malaysian respondents stated the same. Thus, ensuring personal safety at the workplace is crucial and this could boost self-confidence to effectively manage unsafe situations.

A total of 383 employees attended a talk on scams entitled 'The Scams Among Us: Who Falls Prey and Why' on 17 October that shared about scams, the harm they cause to victims, how it is important to immediately report scams to enforcement authorities and how scams can be prevented.

### ▼ Collaboration with the Royal Malaysian Navy on Naga Emas Exercise

Following the National Security Council Directive No.18 on Terrorism Crisis Management and Execution Mechanisms, MISC regularly collaborates with the RMN to conduct an annual exercise known as Naga Emas. This exercise aims to strengthen the cooperation and coordination between both parties in dealing with maritime security issues, especially in the event of ship hijacking incidents, kidnapping and terrorism. Exercise Naga Emas 69/23 is a tactical exercise that has been conducted since 1987 involving MISC vessels and the Navy special forces unit called PASKAL, in preparation for hostage and rescue operations at sea.

This programme involved Emergency Response Tabletop exercises in anticipating piracy or kidnapping incidents. An LNG-type vessel, *Puteri Delima Satu*, located off the Federal Territory of Labuan, was selected as the vessel for the exercise.

### ▼ Strategic Engagement

MISC Security Department has fostered a strategic partnership with the RMN that is rooted in respect, goodwill and steadfast commitment. This partnership provides an opportunity to exchange insights and reinforce collaborative efforts through engagement. In a meeting held in August 2023, MISC's PGCEO and the Chief of Navy discussed collaborative strengths for mutual industry and national interest.



## AUDIT AND ASSURANCE

The operations of MISC's assets, including our HSSE practices, are internally audited and assured by GHSSE. Our goals are to accentuate the importance of ships/floating assets safety, verify and evaluate risk controls and identify any issues that could hinder their successful implementation. Our business partners and third-party service providers' activities are also subjected to these audits and assurances which aim to promote transparency and business excellence.

The audit and assurance processes also include assessing the adequacy and efficiency of the implemented controls and compliance with laws and regulations. The findings from the audit and assurance exercises help us and our business partners to identify potential areas for improvement.

### ▼ Condition Survey and Focus Audits for All Floating Assets

#### 1. Condition Survey

Condition surveys are conducted on vessels and offshore assets managed by third-party ship managers, including FPSO, FSO and Floating Storage Regasification Unit (FSRU). Inspections are conducted every two years and the scope of the inspection is based on the 12 Elements of the OCIMF Ship Inspection Report (SIRE) 2.0 Vessel Inspection Questionnaires, Company's Operations Manuals and all relevant legislations applicable to the vessels/offshore assets.

#### 2. Focus Audit

Sampling is conducted on company-managed vessels with specific focus areas/issues where the scope of the audits is based on the 12 elements of the OCIMF SIRE 2.0 Vessel Inspection Questionnaires. A total of 10 to 16 vessels per year are subject to focus audits.

### ▼ HSSEMS Assurance

This assurance is conducted on MISC Group entities and third-party service providers. For MISC Group entities, HSSEMS assurance is conducted regularly to assess the adequacy and effectiveness of the HSSEMS. On the other hand, for third-party service providers, assurance is conducted every two to three years rotationally.

### ▼ myAssurance

myAssurance is a self-assessment tool to assess our compliance status and potential areas for improvement. This is an integrated assurance platform that captures all lines of assurance throughout the business to ensure we comply with all laws governing our business.

➔ Please see the Operating Responsibly section for more information about the myAssurance platform.

**This platform has incorporated both the HSSEMS and HSSE Functional Assessment. The scopes covered are:**

- Food and Water Safety
- HSE Competence Assurance
- Hearing Conservation Program
- Management of Change
- HSSE Non-Compliance Management
- Health Assessment for Fitness to Work
- Emergency & Crisis Management
- Operating Procedure
- Organisational Management of Change
- Control of Ignition Sources for Non-Process Area
- Driving Safety
- Cybersecurity for IT
- Incident Management
- Process Hazard Analysis
- Fire Protection
- Process Safety Information
- Substance Misuse Control
- Chemical Management
- Video Surveillance System
- Workplace Security
- Security Risk Management
- Access Control Procedure
- Security Pass Management



# Operating Safely

# Operating Safely

## GHSE Audit and Assurance in 2023

GHSE conducts HSSE audits and assurances on MISC’s assets and the HSSEMS. These audits and assurances are also extended to our business partners and suppliers. HSSE audit and assurance are vital for the Company to assess HSSE risks and the effectiveness of risk control measures which ultimately aim to safeguard our people, environment, assets and the Company’s reputation.

At MISC, there are various audit and assurance categories, elaborated as follows:

Category	Description	No. of audit and assurance conducted in 2023
Focus Audit	<ul style="list-style-type: none"> <li>Focused on specific issues of vessels</li> <li>Scope of audits is based on the identified elements of the OCIMF Vessel Inspection Questionnaires</li> </ul>	6
Condition Survey Audit	<ul style="list-style-type: none"> <li>Conducted on vessels managed by third-party ship’s managers, FPSO, FSO and FSRU</li> <li>Inspections are conducted at two-year intervals and the scope of the inspection is based on the 12 Elements of the OCIMF Vessel Inspection Questionnaires, Company’s Operations Manuals and all relevant legislations applicable to the assets</li> </ul>	10
HSSEMS Assurance	<ul style="list-style-type: none"> <li>Conducted on MISC Group entities (annually) and business partners/suppliers (every two to three years rotationally)</li> <li>Covers topics such:                             <ul style="list-style-type: none"> <li>Leadership and Commitment</li> <li>Policy and Strategic Objectives</li> <li>Organisation, Responsibilities, Resources, Standards and Documents</li> <li>Hazards and Effects Management Process</li> <li>Planning and Procedures</li> <li>Implementation and Monitoring</li> <li>Assurance</li> <li>Management Review</li> </ul> </li> </ul>	24*
Ship Recycling Yards Assurance	<ul style="list-style-type: none"> <li>Conducted to assess conditions and suitability of ship recycling yards that comply with health, safety and environmental standards</li> </ul>	4








[Read more in the Promoting Circular Economy section](#)

\* Total for Group Entities, Contractors and Third-party Ship Managers

From the audit and assurance exercise conducted, a total of 135 observations and 140 findings were generated. The observations and findings are tracked and monitored until they are positively closed out.

## CRISIS MANAGEMENT AND BUSINESS CONTINUITY PLANNING

The Strategic Crisis Management Guideline (SCMG) was established in 2023 for MISC Group and replaced the previous Group Crisis Management Plan. The purpose of the SCMG is to ensure that MISC can effectively respond to and recover from operational and non-operational crises, while also reducing the potential impact on the organisation’s reputation and operations and maintaining financial stability. This guideline also promotes preparedness, response coordination and continuous improvement in crisis management practices. The SCMG covers the following seven categories of risks that could escalate to a crisis:

-  Health, Safety and Security
-  Environment
-  Financial
-  Operational
-  Governance and Compliance
-  Cybersecurity
-  Human Resource

As of December 2023, 60 emergency drills were conducted throughout MISC Group.

## Strategic Crisis Management Guidelines (SCMG) Familiarisation and Advanced Crisis Communication Training 2023

MISC Group is constantly exposed to potential crisis incidents due to the nature of our business. Unpreparedness and lack of foresight in emergency response and crisis management can be costly and detrimental to the organisation. The MISC SCMG establishes leadership response, organisation, communication and priority of measures to be taken during a crisis by the Crisis Management Team (CMT). The objective of this programme is to ensure all CMT members have the skill and knowledge to perform and provide resources to meet their crisis management role in the event of a crisis by familiarising themselves with the plan, training and drill exercise.

The programme was conducted in two separate sessions:

- **Session 1**
  - Date: 3 October 2023
  - Participants: 25 persons from the technical team consisting of the CMT support team
- **Session 2**
  - Date: 4 October 2023
  - Participants: 12 persons from the strategic team consisting of the Management Committee and key CMT personnel



## Operating Safely

### ASSET INTEGRITY MANAGEMENT

At MISC, there are two types of critical assets: petroleum and gas vessels and offshore facilities. Due to the different nature of these assets, the asset integrity is managed respectively as indicated in the following section.

#### Integrity of Vessels

MISC is subject to applicable IMO Conventions such as SOLAS, MARPOL and the International Convention of Load Lines. We are also guided by the contract terms to manage our assets. Vessel integrity management is under the purview of the ship managers.

Part of ensuring vessel integrity is through risk management which is managed through the vessel's annual Planned Maintenance System (PMS). The PMS also acts as the asset management plan where the PMS on all our vessels is approved by the appointed Classification Societies. This enables our ship manager to plan, perform and document vessel maintenance at intervals complying with Class and manufacturer requirements, in ensuring safe and reliable vessel operations.

We ensure the robustness of vessel integrity management through various regulatory and industry audits such as:

#### i. Mandatory regulatory surveys:

- Conducted by the appointed Classification Society on behalf of the flag state where the frequency is specified according to relevant regulations

#### ii. Tanker Management and Self-Assessment (TMSA) Programme and SIRE Programme developed by the OCIMF, which our customers are also members of.

- TMSA assesses our ship manager's safety management system against set KPIs and minimum standards
- SIRE assesses shipboard quality and safety standards

#### iii. Audits by ship managers:

- Conducted annually for all our vessels per the regulatory requirements by the vessel's flag state and relevant ISO standards on quality, environmental, safety and energy management

Findings from these audits and assessments are used for continual improvement in ensuring the integrity and efficiency of our vessels.

#### Integrity of Offshore Facilities

The Offshore Business segment is certified with the ISO 55001 Asset Management System. To maintain compliance with this standard, we established the Asset Management Policy and Asset Management System Manual. These documents guide us in ensuring compliance with relevant regulatory requirements, meeting customer expectations and industry standards and enhancing safety and security measures. The offshore facilities integrity management is under the purview of the Director of the Asset Management Department, Offshore Business segment.

To ensure identified risks are managed and minimised for our offshore facilities, we conduct PRA to identify risks and develop mitigation or corrective action plans. The PRA processes and outcomes are reviewed by the Offshore Business Council. Furthermore, any risks arising from our Offshore Business segment operations are also monitored through the ERM platform.

Through the ISO 55001 certification, surveillance audits are conducted yearly and recertification audits are conducted in three-year intervals, by an external auditor. Internal audits are also performed before these audits to ensure readiness for surveillance and recertification. Findings from these audits are used for continual improvement in ensuring the integrity of our offshore facilities.



## Our People, Our Strength

### Our Commitment

- Futureproof talents and drive leadership agenda by accelerating talent potential in a high-performing organisation

### Our Contribution to SDGs

- Promote female participation in the maritime industry and ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making
- Promote equal opportunities in the workplace irrespective of age, gender, nationality and cultural background



At MISC, our people are key assets towards delivering our strategy as well as realising our 2050 ambition. We focus on establishing strong employee engagement with a diverse workforce, creating an engaging and inclusive work environment, future-proofing our talent and building a sustainable and robust leadership bench strength to support a Just Transition where we seek to protect our employees from climate risks.

Furthermore, we place a high priority on the well-being and development of our employees through robust human resource policies, fair labour practices and a safe and inclusive work environment. Through ongoing training programmes and career development initiatives, we aim to enhance the skills and capabilities of our workforce, encouraging a culture of continuous learning and professional growth. The company is also committed to fostering diversity and inclusion within our workforce. We value diversity and strive to create an inclusive workplace that celebrates differences.





# Our People, Our Strength

## HUMAN CAPITAL VALUE CREATION

**Career Management Framework**

- Career Management Portal TMS Internal Vancancy

**Succession Planning**

- Building a sustainable talent bench strength
- Leadership Pathway Leader+Series

**Mentoring Programme**

- Shadow learning from experience mentor to expedite successor readiness

**Agile Policy**

- Up-to-date policy to support strategy and initiatives

**Leadership and Functional Competency Framework**

- Synergy with Talent Management System and Career Management Framework

**Leadership Pathway-Signature and Leader+Series**

**Structured Functional Curriculum**

**Talent Management System (TMS)**

- 10% Formal, 20% Learning from Others, 70% On-The-Job
- Self-driven development
- E-learnings
- Learning recommendations tailored to you

**Coaching Culture**

- Timely, quality development conversations



**Differentiated Reward**

- Higher variable pay for outstanding talent

**Flex Reward**

- Innovative packages that 'match market'

**Total Reward**

- Beyond monetary rewards

**Agile Policy**

- Up-to-date policy to support strategy and initiatives

**Enhanced Performance Management Process**

- Transparent, honest and fair performance review

**Coaching Culture**

- Timely, quality career conversations

**Driving High-Performance Culture**

- Reward the best manage the tail

**Agile Policy**

- Up-to-date policy to support strategy and initiatives

# Our People, Our Strength

## CULTURAL BELIEFS AND SHARED VALUES

Our Cultural Beliefs and Shared Values influence individual and team behaviours, which help us sustain a solid and committed workforce. In addition to being results-driven, these also establish shared success, accountability, collaboration, trust and transparency. Our Shared Values defines our talents' unique characteristics, one that embodies Loyalty, Integrity, Professionalism and Cohesiveness.

**Cultural Beliefs**

- Results Matter** (Icon: Target) - I stretch my limits to deliver superior results
- Own It!** (Icon: Document) - I own the results and don't blame others
- Focused Execution** (Icon: Handshake) - I plan, commit and deliver with discipline
- Nurture Trust** (Icon: Handshake) - I always keep my promise and build mutual trust
- Tell Me** (Icon: Speech bubble) - I seek, give and act positively on feedback
- Shared Success** (Icon: Group of people) - I collaborate for the greater good of MISC Group

**Shared Values**

- Loyalty** (Icon: Medal) - Loyal to corporation
- Integrity** (Icon: Heart) - Honest and upright
- Professionalism** (Icon: Graduation cap) - Strive for excellence
- Cohesiveness** (Icon: Handshake) - United, trust and respect for each other

**ECHO+**

The ECHO+ online feedback platform helps to promote a culture of feedback exchanges to strengthen cultural beliefs among employees. Real-time feedback provided by mobile apps enables managers to have insightful and proactive discussions with employees regarding their professional growth, which fosters more engagement and boosts productivity.

**PETRONAS Organisational Cultural Survey (POCS)**

POCS is one of MISC's engagement tools that was initiated to understand what matters to our people, what drives them and ways we can improve to develop an even stronger workplace culture that powers our business growth.

As part of continuous engagement across the organisation, POCS Pulse 2023 was conducted in May 2023 as a timely temperature check on psychological safety within the MISC Group.

In November 2023, the full POCS was carried out in line with our aspiration to have a more frequent engagement survey. The survey garnered a record response rate of 95%.

The recent survey showed engagement favourability of 81%, with two questions scoring above the global benchmark which related to collaboration and action-taking. The survey results also denote that MISC Group scored high in skills growth mindset (79 out of 100 points), sense of larger purpose (78) and employee engagement (78). In addition, employees are supportive of our efforts in sustainability (78) and business improvement (76).



## Our People, Our Strength

### PLAN AND RECRUIT

Workforce planning and recruitment ensure that our human resources strategies align with the overall business and sustainability strategies. It helps us understand the workforce implications of strategic decisions and ensures that our human capital is positioned to support our long-term goals. By doing so, we can ensure that MISC Group remains agile and adaptable to changing demands, as well as identify and mitigate potential human capital risks.

#### Strategic Workforce Planning

Our strategic workforce planning aligns human capital needs with the business direction and optimises our manning requirement and manpower cost. The five-year strategic plan allows us to look at future resource requirements, skill gaps and development needs. In addition, we can determine the right intervention plan to ensure manning sustainability, specifically whether to build, buy, borrow or bridge talents.

We have also started to collect and articulate data to identify skill gaps, evaluate recruiting channels, screen candidates and assess talent supply and demand, as well as monitor our attrition rate and competitive intelligence. On top of that, the monitoring of various human resource-relevant metrics such as recruitment efficiency, attrition rate, manpower cost utilisation and learning and development, among others, are executed via our quarterly HR Dashboard utilising application transforming a pool of data into interactive insights.

This work process will be useful to further improve employee experience, better inform employee training and development efforts, promote fair treatment of employees and eliminate bias.

All our hiring policies are compliant with local and international labour regulations as applicable. The Group does not condone the hiring of child labour or forced labour and all third-parties who conduct work for or on behalf of the Group are subject to applicable regulations.

### CAREER AND MOBILITY

MISC aspires to be an inclusive workplace that values equal opportunity, celebrates talent diversity and allows employees to chart their career paths. Regardless of gender, age, ethnicity, nationality, or religion, our remuneration structure is based on the pay-for-job principle and merit. Our differentiated rewards programme drives a high-performance culture that recognises efforts and results, which helps retain our talent.

We also develop employee leadership and functional qualities through robust training programmes, short- and long-term assignments and mobility between the many roles in the MISC Group.

#### Career Management Framework

The Career Management platform aims to promote employees' self-driven career paths. Employees are provided with the tools they need to explore the many career opportunities within MISC Group, assess their readiness based on the established Leadership and Functional competencies, plan and execute their development needs and ultimately apply for available positions within the Group.

In 2023, Group-wide employee movement and new hire information were added to the platform which supports our career management by creating visibility on the movement, triggering the need for skills development, fostering networking and mentorship, as well as facilitating career planning through internal mobility. To date, a total of 1,161 employees have leveraged on this platform which underscores meaningful engagement among employees, particularly in response to new hire and employee movement announcements in 2023.

In addition, we established the Technical Management Development Committee (TMDC) to focus more on developing our technical professionals and engineers.

## Our People, Our Strength

#### Succession Planning

Succession planning is necessary for all organisations to have a consistent and dependable pipeline of talented professionals ready to fill critical roles. Our robust succession planning exercise and talent development earmarks potential successors and high potentials, which enable business continuity. We ensure that our pool of talent is equipped with the necessary leadership and functional competencies, through our Leadership and Functional Competency Framework.

#### Retention and Successor Ratio Targets

High-Performing Talent Retention

92.6%

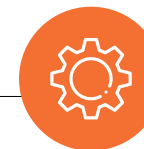
2023 Target: 95%



Successor Ratio (MC Position)

2.25 : 1

2023 Target: 2 : 1



Successor Ratio (Critical Position)

1.56 : 1

2023 Target: 2 : 1



We thoroughly map the competency requirements for each role and evaluate incumbent employees. Each position will require both leadership and functional competency, resulting in a holistic approach to the quality that we seek for each role. The competency assessment outcomes are translated into learning and development programmes to fulfil current and future developmental needs.

MISC has also introduced Leadership Pathway which is a structured leadership development programme based on the established Leadership Competency. The programme aims to build and develop a pool of enterprise leaders and strengthen leadership bench strengths in MISC. Leadership Pathway was developed in collaboration with renowned learning providers and business schools such as INSEAD, Leaderonomics and Asia School of Business (ASB), consisting of two unique tracks – Leader+ Series and Signature Series.

- Leader+ Series, a six-month accelerated development programme that aims to equip MISC Group's Successors and High Potentials with new skills, experience and perspective, enabling them to immediately drive impact at work, close their gaps and increase their readiness to take bigger roles. The programme was delivered in a blended format that combines experiential and cognitive elements such as engaging lectures, exercises, case studies, simulations, role play and action learning projects
- Signature Series caters to large groups to provide our employees with critical leadership competencies. Throughout the one-year programme, participants engaged in a variety of activities, lectures and role play

Several functional curriculums were established based on the Competency Framework that complements the Leadership Pathway programme. Other than providing a baseline understanding of each employee's role, the functional curriculum also aims to upskill employees on technical and emerging skills such as digital fluency and low-carbon transition.

**In 2023, 6,672 of our shore employees attended training programmes with an average of 26.5 training hours per employee.**

### LEARNING AND DEVELOPMENT

Our Capability Building agenda is premised on the following three foundations:

- Competency Framework;
- Leadership Pathway and Functional Curriculum; and
- Career Management Framework

In 2023, MyWisdom, a knowledge retention initiative, was introduced to align with our aspirations for effective knowledge retention in ensuring sustainable technical capability building towards talent excellence.



## Our People, Our Strength

We strongly believe in supporting our employees' career progression.

MISC filled 27% of shore vacancies internally in 2023.

This demonstrates the success and agility of our competency and career progression programmes.

Our seafarers are also steadily moving up their career ladder with 58 Senior Officers, 105 Junior Officers, 3 Other Officers, 65 Trainees and 24 Ratings promoted in 2023.

### Talent Management System (TMS)

TMS serves as an online learning platform that addresses the developmental requirements of employees while automatically assigning Group-driven e-learning content, which includes sustainability, compliance and safety to each employee. Furthermore, MISC has subscribed to LinkedIn Learning, boasting over 22,000 modules, to further foster flexible skill development, allowing employees to access information anytime, anywhere and on any device to enhance their performance.

Our Leadership and Functional competency assessments are conducted via TMS and the results are leveraged to identify employees learning and development opportunities. With the ability to track, review and analyse the competency gaps, employees are encouraged to self-drive their development.

Apart from that, we have centralised succession planning in TMS, which acts as a data repository and helps potential successors track their progress.

#### TMS four main modules



### Key Development for Seafarers

As a leading global provider of international energy-related maritime solutions and services, a significant portion of our human capital consist of seafarers who work on the high seas. Marine Services is responsible for managing our pool of seafaring employees.

To ensure a sustainable pool of seafarers with the right skill sets and knowledge to perform their job well, Marine Services has a comprehensive human resource management programme in place that specifically focuses on seafarers. Employee training and re-training programmes, talent development and succession planning are among the initiatives in place to boost employees' competency levels, while simultaneously improving and expanding their proficiency and capabilities across various aspects of the business and operations.

In 2023, Marine Services invested a total of RM33.1 million in training and development programmes for seafarers, where 2,780 seafarers attended training with an average of 40 training hours per employee.

Our approach to multiskilling focuses on building and expanding our crews' capabilities to ensure that they can operate more than one type of vessel. At present, Marine Services seafarers are operating and managing a wider range of vessels including VLECs, LBVs, LNGCs, LNG dual-fuel petroleum tankers, DPSTs, LNG FSUs and MCVs.

### Seafarers Development Programmes

Our seafarers are being trained in their technical and non-technical skills to be future-ready and to support the growing number of specialised vessels within MISC's fleet.

#### 1. Shipman's Agreement Training

To better equip employees for changes arising from operating under the Agency Model, the Shipman's Agreement training was conducted for all shore-based employees. The programme highlighted the concept of Shipman, its best practices and risks, along with the importance of rights, obligations and care.

#### 2. Competency Enhancement Training

In the current year, Marine Services has been working on upskilling and reskilling our sea and shore employees to have them future-ready to manage alternate fuel vessels. At the same time, the focus has been on employee well-being through workshops and training.

The following are key trainings conducted in 2023.

##### A Core and Technical Skills

- i. **ME-GI Online Seminar** – Introduction session to ME-GI engine on the Two-Stroke Dual-Fuel concept and detailed explanation of the ME-GI engine setup, parts and starting procedure.
- ii. **Tripod Beta Practitioner Training** – An investigation framework and method for incident analysis leading to proactive process control measures. This programme aims to provide superintendents and nominated employees with skills on how to investigate and analyse operational disturbances.
- iii. **IGF Code Training** – The specific learning objectives address the essentials that provide a level of understanding in the subject of LNG Bunkering.
- iv. **Asset Reliability Practitioner (Engineer)** – A broad range of technical subjects are covered to enhance engineering skills and competency in preventive maintenance, asset component conditioning and reliability. The programme has been launched for fleet operations and technical managers as well as for the Master and the Chief Engineers from the sea employees.
- v. **Theoretical UNIC/WICE Controlled X-DF Engines Course** – With the arrival of new vessels, participants were nominated for this programme to better equip them with knowledge and understanding of dual-fuel engines that will be in operation. Our first group of seafarers training was conducted at ALAM, equipping them to manage and understand the operability of ammonia-fueled vessels.
- vi. **Navigation Assessor** – This programme aims to improve the abilities of the senior deck officers in performing navigation verification assessments or audits on fleet vessels using a human-centred approach.

##### B Profession Development:

- i. **Mastering Vetting** – Designed to provide participants with the opportunity to critically evaluate the development, aims and application of vetting in accordance with the new SIRE 2.0 Inspection regime.

## Our People, Our Strength

- ii. **Fundamentals of Contracting Newbuilding** – Designed to provide an understanding of the use of contracts and the legal aspects in the shipbuilding industry.
- iii. **Microsoft Excel and PowerPoint (Intermediate and Advanced)** – This programme is designed to enhance the knowledge and practical uses of Microsoft Excel and PowerPoint.

##### C Employee Well-being

- i. **Effective Communication & Relationship Building** – This programme teaches skills that boost personal productivity and relationship building through increased understanding and effective implementation of the communication processes.
- ii. **Building Mental Toughness Through Emotional Intelligence (EQ)** – This programme provides an understanding of the self-management of emotions and techniques to promote EQ and psychological well-being at the workplace.
- iii. **Mind Guardian programme** – An ongoing programme focused on ship and shore interaction and building a rapport and understanding to manage any mental well-being concerns of seafarers.

##### D Others

Through a variety of focused programmes, Marine Services is enhancing its people's capability and competencies, especially in enriching technical and non-technical skills. These include, among others:

- i. **Project Management Professional (PMP) Certification Training** – An industry recognised credential for project managers that demonstrates the experience, education, skills and competency required to lead and direct projects.
- ii. **Tripod Beta Practitioner Training** – An investigation framework and method for incident analysis leading to proactive process control measures. This programme aims to provide superintendents and nominated employees with skills in how to investigate and analyse operational disturbances.
- iii. **Theoretical UNIC Controlled X-DF Engines Course** – With the arrival of new vessels, participants were nominated for this programme to better equip them with knowledge and understanding of dual-fuel engines that will be in operation.

Additionally, during the year, Marine Services launched its micro-learning tool, Q stream which is currently utilised for compliance modules embedment within the office employees and is subsequently to be extended to shipboard employees in 2024.

## Our People, Our Strength

### Facilitating Sea to Shore Career Advancement

On top of that, opportunities for our seafarers to transition onto a shore-based career are available as they are also exposed to shore development training, where they undergo a six-month to a year-based training in office-based tasks to understand the requirements of shore management of vessels and other related functions. This training effectively prepares seafarers for the transition from sea to shore careers. Unified Terms and Conditions are in place across our fleet to ensure high retention rates, which covers compensation packages that adequately remunerate our employees.

### Sustainable Pool of Future Seafarers Talent

MISC is developing a pool of dedicated and specialised crew to create a sustainable pool of future seafaring talent. In 2023, we provided cadet sponsorship for a total of 829 students at ALAM, where 157 were new recruits.



Read more in the Community Investment Section.

### PERFORMANCE MANAGEMENT

In our aspiration of building a high-performing workforce, we introduced a refined performance rating scale that is commensurate with our rewards programme. The rating scale acknowledges employees who demonstrate excellent performance within their peer group, delivering high-quality results and displaying outstanding behaviour as required for the role.

#### High-Performance Culture

To ensure that employees are aligned with the organisation's goals, an expectation-setting conversation is conducted at the start of each year. In addition, we conduct quarterly check-ins, mid-year and year-end performance reviews and competency conversations to ensure that all employees (both permanent and on contract) self-assess, reflect on their progress to date in the developmental plan and close any potential gaps.

### REMUNERATION AND REWARDS

In line with our talent attraction and retention strategy, we are steadfast in our commitment to compensate employees equally regardless of gender, race, age, ethnicity, religion or other characteristics. To ensure this, our remuneration is reviewed annually to make sure employees are offered remuneration packages that are competitive in the market. We believe that robust employee benefits differentiate us from other industry peers.

Employee remuneration structures abide by all applicable laws such as working hours, minimum wage, minimum living wages, overtime hours and legally mandated benefits, according to local jurisdictions where we operate.

### DIVERSITY AND INCLUSION

MISC strives to have an inclusive workplace by removing barriers and creating equal opportunities for all our employees. Our three strategic priorities of Diversity and Inclusion (D&I) are to grow our diversity in gender, nationality and multi-generations, build an inclusive culture and work environment and drive leadership accountability.

We have made progress in our commitment to D&I. In October 2021, we established our D&I Statement. Subsequently, our D&I Policy was approved by the Board in April 2022. We have also established the overall D&I Journey Map and Aspirational Target, which looks at the following areas:

### Grow Our Diversity (Gender, Nationality & Multi Generations)



#### FOCUS AREAS

- Gender
- Multi-Nationals
- Multi-Generations

#### 3-YEAR ASPIRATION

- Women in Senior Leadership (GM and above)
- Multi-nationals in Senior Leadership (GM and above)
- Managers in Successors' Pool

### Build an Inclusive Culture and Work Environment



#### FOCUS AREAS

- Culture

#### 3-YEAR ASPIRATION

- Differences in perspectives are respected and valued

### Drive Leadership Accountability



#### FOCUS AREAS

- Leadership Effectiveness

#### 3-YEAR ASPIRATION

- Leaders at all levels who are inspiring and inclusive

Our D&I journey map encompasses all facets of the employee life cycle, from recruitment up to exit management. Aside from promoting diversity in the application process, our hiring managers and recruiters are trained to identify unconscious biases and how to address them. Employees undergo D&I awareness programmes, courageous conversation programmes and sharing sessions that promote psychological safety at the workplace. They are also empowered to drive their career progression through our Career Management Framework, ensuring equal opportunities for all. Our D&I aspirational target ensures that our talent bench strength is diverse, inclusive and sustainable.

## Our People, Our Strength

Following on from the D&I activities and awareness session in 2022, we continued our journey in 2023 with Embedment Programmes to promote conscious inclusion amongst our leaders and further provide a psychologically safe workplace. This has been done through D&I workshops as well as leveraging on The Platform series.

As of 31 December 2023,

**we have 10,435 employees coming from 46 nationalities. At shore, MISC Group has 23% female employees, with MISC Berhad, AET and Marine Services recording 42%, 44% and 30%, respectively.**

This is above the recommended industry average of 30%.

**Our shore employees' male-to-female gender ratio stands at approximately 3.26:1.**

We also have a significant number of

**female leaders at the management level, with 25% in junior management, 28% middle management and 18% in senior leadership (shore employees only).**

In terms of our officer's strength, there are 69 females across our fleet, fortified by the recruitment of three female Ratings through targeted initiatives to amplify female representation at sea, specifically in traditionally designated roles for female Officers rather than Ratings. Significantly, two promoted female Captains actively assumed command in 2023, bringing the total to three female captains, reinforcing our unwavering commitment to active diversity and inclusive leadership practices within our organisation.

On top of that,

**Marine Services welcomed the first two highly skilled and accomplished female pilots to the team in Sungai Udang Port.**

Additionally, Marine Services is also proud to welcome

**the first female Offshore Vessel Inspection Database (OVID) Inspector.**

These new additions underscore our dedication to fostering an inclusive workplace where talent knows no boundaries and where diversity thrives at every level in our organisation. These accomplished professionals not only bring their exceptional skills and expertise but also contribute to the rich tapestry of backgrounds, experiences and perspectives at the workplace.



## Our People, Our Strength

## Our People, Our Strength

### Well-being

At MISC, we acknowledge the importance of promoting a healthy, inclusive and productive workforce which we believe contributes greatly to achieving business objectives. Our well-being initiatives go beyond physical well-being and are supported by leaders who inspire, are inclusive and provide psychologically safe workplaces.

In addition, MISC also allow our employees the right to work flexibly, balancing between reasonable business and personal needs. Since 2021, a working committee has looked at various flexible working arrangements.

#### Flexwear

Introduced in January 2021, employees are allowed to come into the office in neat and professional business casual attire. The initiative was intended to enable our employees to project an aligned professional image, that is positive and inclusive whilst not compromising comfort, safety and the environment that we operate in.

#### Flexwork

This allows employees to determine their work arrangements according to their preferred needs while meeting the Company's requirements. Those eligible to opt for Hybrid Working may arrange for a mix of office-based work and working from home, while those eligible to opt for Compressed Work Week (CWW) may compress their work schedule and take the tenth day off.

#### FlexBenefit

The Enhanced Flexible Medical benefits and Revised Leave were introduced to promote a more family-centric, diversity-friendly environment and contribute towards a more positive work experience with the Company.

#### Flexcareer

As part of MISC's Talent Strategy, this allows the Company to attract talents who prefer to work as a contingent workforce for corporate and non-corporate functions.

In addition, we have several employee groups established to promote networking and manage employees' welfare such as:

- i. MISC Sports & Recreational Club: A sports recreational society that is open to all employees;
- ii. Badan Islam MISC: MISC Islamic Society that organises Islamic-related functions and this is open to all employees;
- iii. Toastmasters Club: A networking group that is open to all employees.

### Celebrating International Women's Day and International Men's Day

IMO marked 18 May as the International Day for Women in Maritime across the world. To mark this occasion, we featured seven incredible colleagues and their bold experience as women at sea across the Group.

In addition, AET celebrated International Women's Day in March by organising lunches across its offices globally to show appreciation to the women in the organisation, recognise the social, economic, cultural and political achievements of women and to raise awareness of the aims of gender equality. Later in the year, we also celebrated International Men's Day in November to promote awareness of men's well-being and to celebrate the positive contributions that men make to society. In the Singapore office, we invited the Singapore Association of the Visually Handicapped to provide massages to employees. Both celebrations are a testament to AET's commitment to embracing diversity in the workplace and creating an inclusive environment for everyone to work together as one team.

### EMPLOYEE ENGAGEMENT

There are various communication channels at MISC Group for employee engagement on a variety of subjects such as business performance, HSE, personal performance, leadership, organisational culture and more. Employee engagement is important because it enhances productivity, reduces turnover, fosters innovation, improves customer satisfaction, promotes employee well-being, contributes to a positive culture, facilitates adaptability and provides a competitive edge in the marketplace.

### Engagement with the Leaders

At the start of the year, MISC's PGCEO unveiled our Townhall 2023 theme, "Shifting Gear: Accelerating to 2030" with more than 2,200 MISC employees from all around the world attending the hybrid event.

Following this, a mid-year Townhall was also held announcing the launch of MISC Life-Saving Rules and HSSE Rules and Commitments. The session also highlighted the need to accelerate pace, work purposefully and focus on timely delivery with best-in-class quality while remaining attractive and relevant to seek new partnerships and collaborations

➔ Refer to the Stakeholder Engagement section for more details on MISC's Townhall.

Furthermore, engagement sessions between the Managing Director/CEO of Marine Services and our seafarers continued with several events organised both virtually and physically. Multiple engagements were structured; strategically focusing on operational excellence and placing a significant emphasis on mental well-being. This approach reflects our commitment to maintaining high operational standards while prioritising the mental health and well-being of our seafaring team.

1 Various seminars involving groups of Senior and Junior Officers as well as Ratings were also held physically in Kuala Lumpur, Chennai, India and Manila, Philippines as part of Marine Services Management's commitment to have open and transparent engagement with employees where a total of 291 employees participated.

2 80 seafarers gathered ashore to celebrate the Day of The Seafarers with Marine Services' leaders and a beach cleanup and CSR activity carried out at the Turtle Information and Conservation Center, Pengkalan Balak, Melaka.

3 On 6 November 2023, we celebrated our 55<sup>th</sup> anniversary, where celebrations were held at various locations throughout the Group to commemorate this significant milestone. A message from PGCEO was telecasted where he announced a token of appreciation for all employees.

4 In December 2023, our Managing Director/CEO of Marine Services engaged our 100 Filipino seafarers, including both Officers and Ratings, during his visit to Eaglestar Marine (Philippines) Corporation (EMPC) to commemorate the momentous inauguration of the new office in Makati City, Manila, Philippines. Additionally, he attended the office's annual Christmas dinner celebration, creating a meaningful opportunity to interact with the seafarers as well as their spouses.

This intentional involvement reflects our commitment to building a sense of community, recognising the dedication of our seafaring team and sharing in the joy of the holiday season.

### Employee Assistance Programme (EAP)

Our EAP provides holistic support encompassing physical, mental and emotional well-being. In collaboration with Naluri, employees have access to personalised support and guidance from professionals, to effectively take charge and monitor their health and well-being. They have access to a selection of self-help lessons and can connect external health devices to sync progress tracking.

- **Digital Coaching App** – A tool to guide and support employee's holistic health and well-being.
- **Wellness Website** – A one-stop hub for the myFriends EAP resources and services.
- **Remote Therapy** – A one-to-one video consultation with a clinical psychologist.
- **24/7 Careline** – A 24/7 careline to support our employees remotely for their psychological safety.

These efforts complement our occupational health programmes and provide a holistic approach towards mental health and psychological safety.

### HR Dialogues

MISC conducts a series of talks and programmes to ensure our employees remain engaged. The Platform talk series focuses on topics of D&I. TGIF: Take a Break with Our Leaders serves as an informal sharing session where employees get close and personal with their Leaders, many of whom share their personal experiences dealing with their lives outside of the office and their career stories. HR Quarterly Engagement updates employees on policies and initiatives and promotes transparency.

### Safeguarding our Mental Health

HSSE has also taken a proactive approach to promote well-being by introducing many programmes that promote psychological and physical health. This includes Mental Health Framework (Assist, Breathe and Care), Mindfulness Programme, Virtual Walking Challenges, Workout Wednesdays and Quarterly Health Talks.

In addition, Marine Services continued with its Mind Guardian programme. More details of this programme are found on page 134.

More details on our wellness programme can be found in the Operating Safely section.

## Our People, Our Strength

### MAINTAINING SOUND LABOUR RELATIONS

We support fair labour practices, such as ensuring equal remuneration and supporting freedom of association in accordance with international standards on labour and human rights. Our policy on labour standards has been set in the Code of Conduct and Business Ethics under the Workplace Culture and Environment section of our Employee Handbook which is made available on their first day of work.

Our collaborative and consultative approach guides employees in achieving corporate and personal goals. We support workers' rights to exercise freedom of association or collective bargaining. In 2023, 1,302 unionised employees and management held engagement sessions with employee representatives on remuneration.

We apply the principles of the Basic Conditions of Employment Act, the ILO and the MLC. We have adopted these principles in our Human Rights Commitment and Modern Slavery Policy, Whistleblowing Policy and Grievance Mechanism Procedure. These documents are available on the company website.

Our whistleblowing channel provides a mechanism for employees to report any mismanagement and our grievance mechanism platform allows employees to raise any work-related grievances.

**In 2023, we recorded zero non-compliance with labour standards.**

[Read more on Respecting Human Rights at Sea and Shore section of this report.](#)




## Partnering With the Community

- Our Commitment**
  - Foster youth development towards becoming future leaders through education
- Our Initiatives**
  - Establish multi-stakeholders' community investment programmes aimed at upskilling the entrepreneurship skills of youth
  - Continuation of maritime cadet sponsorship programme

**Our Contribution to SDG**

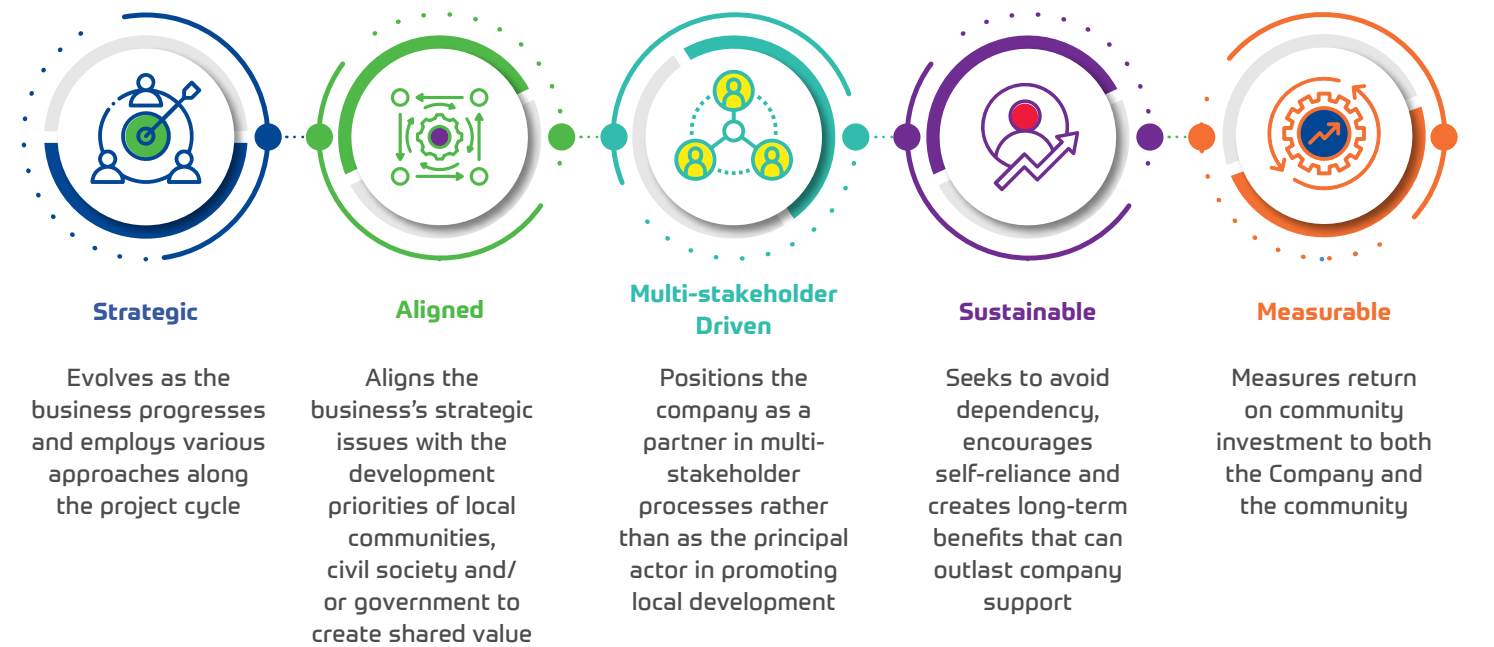
- Promote skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship



### OUR APPROACH TO COMMUNITY INVESTMENT

As a Group, we aim to make a positive impact on the communities in the areas where we operate. We regularly undertake community engagement initiatives and contributes to wider social and economic development where possible. Our community engagement initiatives not only contribute towards society but also to the environment.

Community investment is strongly guided by our Sustainability Community Investment Strategy, which is anchored on the areas of education, environment, health, safety and well-being. We have also established the MISC Group Community Investment Guidelines which detail how to plan and implement effective programmes that could enhance the socio-economic aspect of local communities in the areas where MISC operates.



Our strategic community investments are aligned with the SDGs and our investments have positively benefitted both the community and MISC.



## Partnering With the Community

### STRATEGIC COMMUNITY INVESTMENT

Strategic community investment helps MISC foster positive relationships with various stakeholders, including customers, employees, local governments and community members. It is beneficial as it aligns with societal expectations, enhances reputation, fosters positive relationships, mitigates risks and contributes to long-term sustainability and success.

#### Education

MISC has been investing in education through ALAM since its establishment in 1977. With this, MISC has promoted seafaring as a significant and respected professional vocation that is crucial in global trade, transportation and the economy.

The maritime profession involves specialised skills and knowledge related to navigation, maritime laws and regulations, safety procedures and the operation of marine equipment. Many seafarers undergo formal education and training to acquire the necessary qualifications for their roles, often obtaining certifications issued by maritime authorities.

#### Cadet Sponsorship

We continued our efforts to give back to the community through the cadet scholarship programme at ALAM. A total of RM29.6 million was collectively sponsored for 829 cadets in 2023 to maintain our strong commitment in providing a highly skilled workforce to meet the demands of the international shipping industry and simultaneously provide employment to local youth.

**Out of the 829 cadets, 157 new Malaysian students were sponsored comprising 139 males and 18 females to further their studies in Diploma Nautical Studies and Diploma Marine Engineering in ALAM.**

The sponsorships were provided to these cadets upon passing the competency assessment and interviews. Through this education sponsorship programme, MISC can have a sustainable pool of future talent for the maritime industry and simultaneously provide educational and employment opportunities to the students.

#### Maritime Scholarship

AET continued its dedication to nurturing the development of young talent in the maritime industry through scholarship programmes in locations where we operate. By awarding these scholarships, we aim to equip students with the required skills to become valuable members of the global maritime community.

For a fourth consecutive year, AET awarded two three-year scholarships to students enrolled in a three-year Diploma in Maritime Business with the Singapore Maritime Academy at the Singapore Polytechnic. Our Global Director of HR and Facilities presented our scholars their certificates at the MaritimeONE Scholarship Award Ceremony hosted by the Singapore Maritime Foundation.

We also continued our collaboration with the Texas A&M Foundation by awarding six scholarships to support undergraduate students who are majoring in Maritime Transportation and Marine Engineering at Texas A&M University at Galveston during their practical summer semester.

In addition, AET partnered for the first time with Newcastle University in the UK with a scholarship for a one-year full-time Master of Science in Shipping and Logistics. Through these initiatives, we remain committed to nurturing talents and developing future leaders through education.

Location/ Country	Scholarship	No. of Students
Galveston, Texas, US	Texas A&M Foundation	6
Singapore	AET-MaritimeONE	2 (new) 4 (existing)
London, UK	Newcastle University	1



#### Environment

Environmental health and human well-being are interdependent and while MISC conducts conservation and environmental-focused programmes, there are inherent social impacts and benefits to these as well.

For example, preserving natural ecosystems, clean air and water quality directly influences the physical and mental health of individuals. Additionally, many communities depend on natural resources for their livelihoods. Sustainable environmental practices ensure the long-term availability of these resources, supporting local economies and creating job opportunities. Conservation programmes also provide opportunities for environmental education and awareness.

#### Heart of The Ocean (HOTO) Programme

The HOTO marine conservation programme aims to improve ocean health and reduce the impact of human activities on the ocean. It was initiated in 2020 under the Biodiversity Conservation strategic initiative.

[Read more in the Conserving Marine Biodiversity section.](#)

#### Mersing Islands Reef Conservation Initiative-Employee Participation Programme (EPP)

The Mersing Islands Reef Conservation Initiative was carried out in collaboration with Reef Check Malaysia which aims to improve ocean health by supporting coral reef conservation and undertaking proactive action to prevent and reduce plastic litter in the ocean. We launched our EPP as part of the Mersing Islands Reef Conservation Initiative under the HOTO programme where employees contribute positively to our planet but also give back to society through engagements with the local communities.

Employees can engage directly with the local community through the community hosting activity, where 13 local community families participated. It was an eye-opening experience for most of our employees as local villagers shared their local delicacies and products while employees witnessed the reality of island living. The reef conservation initiative also provided the island community with ideas for alternative livelihood opportunities through recreational activities and workshops.

## Partnering With the Community

### UMT-MMS Sea Turtle Conservation Initiative

Honoring our commitment to the sea turtle conservation programme through the UMT-MMS collaboration, we have upheld our continuous support for the initiative through three main pillars: improving facilities of the research station, enhancing involvement in outreach programmes and encouraging employee participation in volunteering programmes. These efforts include the modernisation and revitalisation of living quarters, as well as the installation of solar power at the facilities. Furthermore, in 2023, various engagement activities were conducted to promote awareness and provide opportunities for the community engagement and participation. We have also observed a significant increase in the number of volunteers within MISC Group since the inception of this programme in 2020. Marine Services will remain dedicated to fostering this collaboration and continuously playing our part in the effort to conserve marine life.

#### Beach Cleaning Programmes

In realising our dedication to sustainability and environmental conservation, Marine Services through its subsidiary, SUPSB in collaboration with MRCSB, RGTSU and Integrated Regional Satellite Office (IRSO) West Coast joined forces in organising a Beach Cleaning Programme in May 2023 at MRCSB Coastal Area.

**The programme saw the attendance of 200 participants.**

This programme aims to address the growing concern of marine pollution, to preserve the environment, while raising awareness about the importance of waste management, phasing out single-use plastics, responsible consumption and protecting biodiversity by preserving the ecosystem.

**The participants successfully collected 1,073 kg of waste along the coastline of MRCSB.**

In addition, our GAS Business organised a beach cleaning programme in December 2023 at the Turtle Conservation and Information Centre in Melaka to elevate awareness among our employees about the significance of environmental conservation and to actively promote efforts to conserve turtle species. Other than beach cleaning, clean-up activities were conducted at the turtle sanctuary and a mural was also painted.



## Partnering With the Community

Our Petroleum & Product Shipping segment continued to raise awareness among our employees on the importance of doing our part to keep our environment clean and marine ecosystems healthy by organising the annual beach clean-ups which saw our colleagues volunteering from across our offices in Rio, London, Houston and Singapore.



The beach cleaning programmes are part of our ongoing sustainability journey, encouraging employees, partners and the wider community to actively contribute towards a cleaner and healthier environment.

### Tree Planting

Our Offshore Business segment in collaboration with Free Tree Society conducted MISC's Tree Planting Programme where 60 employees participated in planting a tree each. The programme aimed to promote sustainable development, conserve the environment and nurture our local communities.

### Eco Walk 2023

ALAM in collaboration with its maintenance contractor and the local community had successfully organised ALAM Eco Walk 2023 with the objective of creating awareness of sustainability and 4R practices among ALAM's employees, students, contractors and the local community. The programme took place at the beach along the ALAM coastline and the cemetery at the villages nearby the campus.

**This programme successfully collected a total of 328 kg of waste where 231 kg was non-recyclable waste and 97 kg was recyclable waste.**

This initiative helped to increase awareness about environmental conservation along the coastline as well as building the relationship with the local community through collaborative efforts in maintaining the cleanliness of the beach and their villages.

### Eco River Cleaning

In March 2023, a total of 83 students and nine lecturers from ALAM joined the Melaka State in organising a river-cleaning activity along the Melaka River.

**The programme successfully collected 1,000kg of trash.**

This programme aimed to elevate awareness among the students about illegal waste dumping in rivers and the importance of proper waste disposal to conserve the environment.

## PHILANTHROPY

Apart from strategic community investment, the MISC Group regularly participates in philanthropy through the donation of time, money, resources, or expertise to support various charitable causes that are aligned with our values and mission.

### Donation Drive

#### Donation Drive for the Pasir Gudang Community

MHB continued to aid underprivileged residents in Pasir Gudang, Johor through a donation drive. Fifty-five families from three villages in Pasir Gudang were given grocery items amounted to RM150 as well as financial assistance of RM300 per family.

#### MHB Back to School

On top of that, MHB's Back to School programme was introduced where MHB provided school uniforms and supplies for school-going children. This programme enabled MHB to strengthen its relationships with various stakeholders, including government agencies, local communities, suppliers and investors.

#### MHB Free Market

As part of MHB's effort to help the local communities of Pasir Gudang, MHB organised a Free Market event for more than 125 families across four villages in the area. Approximately five tonnes of new and pre-loved items were donated by MHB employees ranging from clothes, shoes, blankets, bags and many more. Grocery items were also distributed to 125 families who attended the event. MHB aimed to demonstrate the power of collaboration and a commitment to working closely with community stakeholders and not only business stakeholders.

### Donation Drive for the Homeless and Poor Urban Families

As part of ALAM's effort to help people in need, the Student Affairs Department organised a donation drive to collect food and drinks, clothes and toys where the collected items were distributed to homeless people and poor urban families. The distribution of goods was conducted in various locations in Kuala Lumpur City Centre, where the students of ALAM had the opportunity to interact and complete some fun activities with the children. This programme has helped to nurture good values among the students and encourage them to contribute to vulnerable communities.

### Volunteerism

#### The Felix Project, London, UK

AET continued their quarterly engagement with The Felix Project in London volunteering in Felix's Kitchen, preparing over 4,000 cooked meals for beneficiaries. Another group of employees volunteered at the foodbank's warehouse to help organise donated food, which was then distributed to individuals and charities facing food insecurity. Our partnership with The Felix Project exemplifies our ongoing efforts to make a positive impact and create a more equitable and inclusive society for all.



## Partnering With the Community

### Volunteerism

#### Target Hunger, Houston, US

In an effort to give back to the community, our AET colleagues in the US dedicated their time by volunteering at Target Hunger, a not-for-profit organisation providing food assistance to those in need in the Houston neighbourhood. During the volunteering, they assisted in packing fruits and vegetables which were then distributed to households in need. The volunteers also assisted in growing produce in the community garden.



#### Sekolah Kebangsaan Sedili Kecil, Johor, Malaysia

AET's leaders traded suits for sneakers for a fun-filled afternoon engaging with over 30 primary students through games at the Sekolah Kebangsaan Sedili Kecil, in Johor, Malaysia. One of the most memorable activities was the "Wheel to Dream" bike-building challenge where teams transformed loose pieces into dream machines, which were then given to the needy students for their daily commute to school. Apart from spending time interacting with the students, AET also sponsored new sports equipment and stationeries to further enrich the students' activities and learning.





## Partnering With the Community

### Keeperku Programme at Zoo Negara

In October 2023, ALAM organised the Keeperku Programme at Zoo Negara with multiple activities conducted such as preparing food for animals and cleaning animal cages and common areas. Through this programme, we encouraged our students to contribute to society and learn about animal care.

### Sponsorship

### Singapore Children's Society – Sunbeam Place

AET continued to work with the Singapore Children's Society supporting the residents and employees at the Sunbeam Place, a residential home and gazetted place of safety for up to 60 children aged between two and 21 who have been abused or neglected and are in need of protection, or for those whose parents are unable to provide proper care.

In May, we organised a donation drive among our AET and Marine Services' colleagues and sponsored an upcycling workshop. Over 870 stationery, toiletries, household items and food items were donated by our employees, which the company matched. The upcycling workshop for residents and our 10 volunteers provided insights into the 4R approach towards responsible waste management and the concept of upcycling where participants had the opportunity to transform disused milk cartons into useful pouches.

In December, over 20 colleagues volunteered as part of an AET-sponsored refurbishment project aimed at improving the facilities at Sunbeam Place which also included the replacement of 82 bed frames, mattresses and other furniture. Some of the volunteers took on the task of transforming an existing storeroom into a study room and cleaned and organised the home's ration room while the other volunteers brought residents and employees from Sunbeam Place to the movies for a much-needed break from their daily routine, bringing joy and smiles to their faces.



### Supporting Seafarers, Houston, US

AET was a bronze sponsor of The Mission to Seafarers' Flying Angel Campaign. Our contribution supported the Seafarers Centers Fund which is used to modernise and enhance green spaces at over 120 Flying Angel Centers worldwide – a dedicated space for seafarers during their limited time ashore. In addition, we continued our support of the Houston International Seafarers Center (HISC) as a table sponsor at their Annual Houston International Maritime Gala. The HISC provides humanitarian services to seafarers that visit Houston daily on commercial seagoing vessels and no-cost transportation for seafarers on liberty from their ships to the center and local area.



### Majlis Berbuka Puasa with Orphanage Homes

MHB continued its efforts in giving back to the community and the underprivileged children, whilst strengthening relationships with stakeholders by organising "Majlis Berbuka Puasa & Meraikan Anak-Anak Yatim Bersama Stakeholders" for the children from the orphanage of Rumah Kebajikan Ar Rayyan and Darul Hanan in Johor. The event was held in collaboration with the Management team of the orphanages to bring cheer to the children during the month of Ramadan. Apart from *Berbuka Puasa* (breaking fast), MHB also took the chance to distribute Raya packages with new clothes for the children.

## Respecting Human Rights at Sea and Shore

As an international provider of energy-related maritime solutions and services, MISC upholds the universal standards of human rights that are vital to our social and economic values. We refer to the United Nations Guiding Principles on Business and Human Rights, which provides the global framework to uphold and address business impacts on human rights. We also comply with the guidelines of the International Labour Organisation (ILO) Declaration and the Maritime Labour Convention (MLC).

We have established policies and procedures to prevent human rights abuses and unethical behaviour. Through our Human Rights Risk Assessments (HRRRA), we assess and manage MISC's impact on local communities, considering both positive and negative effects. Regular audits and assessments, including HRRRA, are conducted to ensure compliance and continuous improvement, which include risks within our supply chain.

### HUMAN RIGHTS MANAGEMENT

#### OUR COMMITMENT

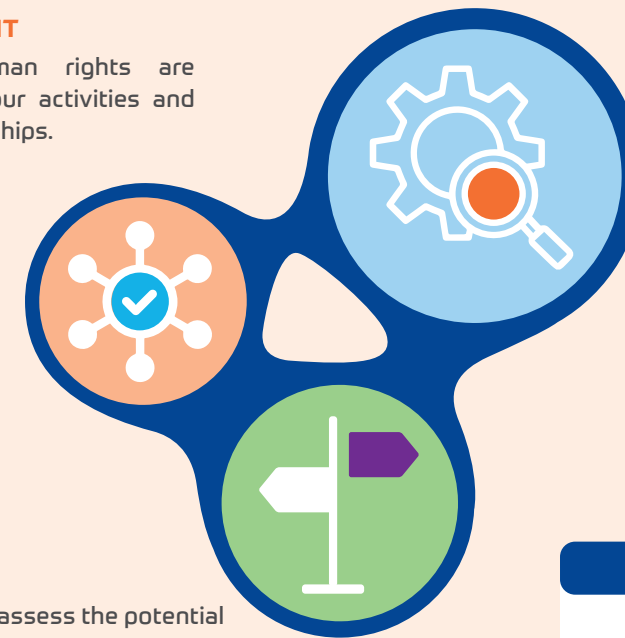
We ensure human rights are respected in all our activities and business relationships.

#### DUE DILIGENCE

- We identify and assess the potential impacts on human rights on an ongoing basis
- We conduct a human rights impact assessment and mitigation to avoid and prevent human rights issues

### COMMUNICATION, REPORTING AND ACCESS TO REMEDY

- Human rights expectations are clearly communicated to all stakeholders including business partners
- We establish processes for communication, questions, complaints and reparations available to people affected by our activities



### MISC Human Rights Commitment

**MISC is committed to respecting internationally recognised human rights in areas of its operations, complying with our CoBE and all relevant legal requirements.**

With strong governance, forward-looking advocacy and leading transparency, the following policies and statements have been established to support us in this area:

- Modern Slavery Policy and Statement
- Code of Conduct and Business Ethics (CoBE)
- Code of Conduct and Business Ethics for Third-Parties (CoBE Third-Party)
- ESG Supply Chain Assurance Programme
- Health, Safety and Environment Policy and Safety Rules
- Diversity & Inclusion Statement

## Respecting Human Rights at Sea and Shore

### MISC GROUP MODERN SLAVERY POLICY

The Modern Slavery Policy applies to all jurisdictions where MISC operates and covers all individuals working onshore and offshore at all levels throughout the MISC Group. MISC is committed to conducting business ethically and with integrity in all our business dealings and relationships and implementing and enforcing effective systems and controls to ensure modern slavery is not practised anywhere within our business and supply chain.

Our Modern Slavery Policy and Statement is aligned with our disclosure obligations under the UK Modern Slavery Act 2015, which sets out our commitment to prevent and/or respect, among others, the following matters:

- Human trafficking
- Forced labour
- Child labour
- Freedom of association
- Equal remuneration
- Discrimination

We endeavour to embed our human rights commitments into corporate practice by communicating the human rights expectations to all stakeholders, including business partners.

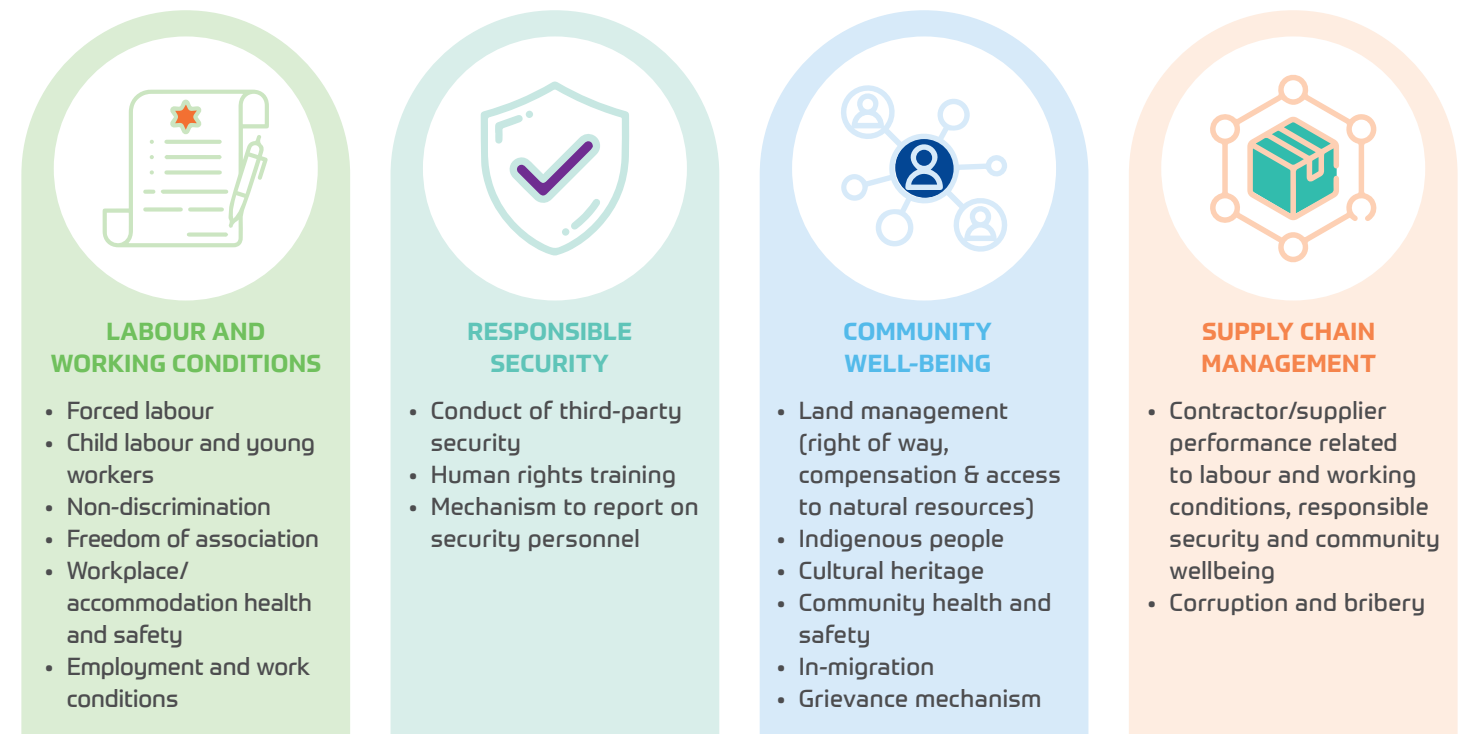
The following table summarises our activities in 2023:

Event	Topic/Description	Participants	No. of Participants	Total Training/Engagement Hours
Third-party Compliance Due Diligence in MISC	Third-party Compliance Due Diligence Operational Guidelines' (TPCDDOG) requirements in MISC operations.	All MISC Group's employees (Executive and above).	2,481	1,860
Human Rights Management e-Learning Module	Provides an overview of the UN Guiding Principles on Business and Human Rights and MISC Group's Human Rights Commitments.	Employees of MISC Group of Companies.	2,801	2,801
Annual CoBE training for third-parties	Understanding the requirements of the CoBE which include human rights elements.	Representatives from 136 third-party companies, out of which 44 companies were critical suppliers identified under the MISC Group's Supply Chain ESG assurance programme.	147	73
HSSE Partners Summit 2023	Annual engagement with business partners and contractors where communication on Human Rights in the supply chain is emphasised to these stakeholders as part of our sustainability practices.	Representatives from business partners, contractors and business units.	235	1,880

## Respecting Human Rights at Sea and Shore

### ADOPTING A RISK-BASED APPROACH TO HUMAN RIGHTS DUE DILIGENCE

To further understand human rights impacts in MISC Group, we have identified the human rights topics and issues which are material to our business. We conducted a workshop with our internal stakeholders to deep dive into the human rights risks and impacts of each business unit and subsidiary. The following diagram illustrates the material matters and how they are relevant to our business:



### Material Human Rights Across MISC Group of Companies

	Community Well-Being	Security	Labour and Working Conditions	Supply Chain
Gas Assets & Solutions		✓	✓	✓
Petroleum & Product Shipping		✓	✓	✓
Offshore Business		✓	✓	✓
Marine & Heavy Engineering	✓	✓	✓	✓
Marine Services		✓	✓	✓
Maritime Education & Training	✓	✓	✓	✓



## Respecting Human Rights at Sea and Shore

### HUMAN RIGHTS DUE DILIGENCE

MISC acknowledges the human rights risks within our business. To identify and mitigate these risks, we implemented following initiatives:

1. Conduct HRRRA and Human Rights Due Diligence across the MISC Group in phases;
2. Establish human rights and labour condition indicators in our due diligence checklist based on the scope of business; and
3. Ensure effective communication, awareness and training on human rights matters by enhancing engagement with key stakeholders and regular knowledge-sharing sessions.

### HUMAN RIGHTS RISK ASSESSMENT

Since 2019, HRRRA, which was previously known as social risk assessments have been conducted on material human rights matters for our business operations covering both our shore and sea operations. The HRRRA encompasses a review of human rights and modern slavery elements on labour/working conditions, supply chain, security and livelihood of impacted communities.

- Identify and address risks and impacts;
- Develop and prioritise the appropriate mitigation measures;
- Develop a monitoring and reporting programme;
- Develop effective and systematic stakeholder engagement;
- Contribute towards a robust social baseline;
- Enable the allocation of resources to manage social impacts; and
- Determine if further assessment is required to mitigate the risks

The assessments were conducted by using methodology adapted from the PETRONAS Technical Standards on Social Risk Assessment. The identification and mitigation of human rights risks enable us to manage actual or potential impacts arising from our business activities, including through our business relationships with partners and contractors. Our human rights risk assessment processes enable us to:

The figure below illustrates the human rights risks assessment process:



## Respecting Human Rights at Sea and Shore

We completed the first cycle of HRRRA in 2022, which covered our main subsidiaries and business unit, focusing on all human rights and modern slavery elements, in line with MISC's Sustainability Strategy. Based on the outcomes of the HRRRA, action plans were established to mitigate the identified risks. The timeline summary of the previous HRRRA is indicated in the following:

2019	2020		
<p><b>Business Unit/Subsidiaries</b></p> <p>MHB</p> <hr/> <p><b>Scopes</b></p> <p>Labour/working conditions, supply chain, security and livelihood of impacted communities</p>	<p><b>Business Unit/Subsidiaries</b></p> <p>Marine Services</p> <hr/> <p><b>Scopes</b></p> <p>Labour/working conditions of seafarers</p>		
<p><b>Business Unit/Subsidiaries</b></p> <p>AET MISC Berhad ALAM Marine Services</p> <hr/> <p><b>Scopes</b></p> <p>Labour/working conditions for shore employees</p>	<p><b>Business Unit/ Subsidiaries</b></p> <p>Offshore Business</p> <hr/> <p><b>Scopes</b></p> <p>Labour/working conditions on FSO and community</p>	<p><b>Business Unit/ Subsidiaries</b></p> <p>ALAM</p> <hr/> <p><b>Scopes</b></p> <p>Livelihood of impacted communities</p>	<p><b>Service Units</b></p> <p>GHSSE</p> <hr/> <p><b>Scopes</b></p> <p>Security</p>

In 2023, we completed the second cycle of HRRRA for our subsidiaries, namely MHB and Marine Services to assess the human rights risk within their operations. The HRRRA for MHB covered all human rights elements; labour and working conditions, community well-being, security and supply chain management. Meanwhile, for Marine Services, our focus was on human rights risks related to labour and working conditions for our employees at both shore and sea. Based on the outcome of the HRRRA, action plans were drawn to mitigate the identified risks.

Moving forward, we will be embarking on supply chain human rights assessments and will continue with the second round of HRRRA on our business unit and subsidiaries as part of the assessment of the implementation of the Group's human rights commitments within our operations.

## Respecting Human Rights at Sea and Shore

### RESPONSIBLE SUPPLY CHAIN MANAGEMENT

Guided by the MISC Human Rights Commitment and the Modern Slavery Policy, we seek to work with third-parties who share the same values of integrity, who are committed to fighting bribery and corruption and contribute to sustainable development. We also requires our third-parties to respect internationally recognised human rights standards, complying with MISC CoBE for Third-parties and all relevant legal requirements. In ensuring responsible and sustainable supply chain management, various initiatives were carried out as follows:

- MISC CoBE for Third-parties includes specific requirements to comply with MISC's Modern Slavery Policy which is available at <https://www.misc.com.my/compliance-business-ethics/>. MISC's third-parties are also required to declare their commitment to abide by the highest standard of integrity expected by MISC and compliance with the MISC's Human Rights Commitment and Modern Slavery Policy through the signing of the Declaration and Integrity Pledge (DIP)
- CoBE training for third-parties has been conducted annually since 2019 as part of enhancing Responsible Supply Chain Management to ensure that our third-parties understand and comply with MISC's CoBE which includes the Modern Slavery Policy requirements. In 2023, 147 representatives from 136 third-party companies attended the annual CoBE training for third-parties
- Third-parties Compliance Due Diligence assessment is conducted to ensure that all pre-qualified third-parties do not pose any significant associated business risks such as responsible security practices and impacts of operations on the local community's well-being. It also includes compliance risk, which includes human rights-related risks such as modern slavery, forced labour, bonded labour, child labour and human trafficking, that could jeopardise the reputation of MISC. All third-parties must comply with the Human Rights Commitment and Modern Slavery Policy under Part IV: Human Rights and Modern Slavery

- As part of MISC's Sustainability Strategy, under the Governance Pillar through the Responsible Supply Chain Management, an ESG assurance programme is to be implemented where self-assessment covering human rights for critical third-parties will be conducted
- In accordance with MISC's zero-tolerance approach to slavery, forced labour and human trafficking, MISC seeks to ensure that our agreements, which are used for the purchase and supply of goods and services, will allow us to terminate and cease dealing with any third-party in the event of any violations

In 2023, we conducted preliminary risk assessments for our critical suppliers under the Responsible Supply Chain (RSC) programme. Assessments were carried out for our critical vendors which included specific questions on Human Rights covering forced labour and child labour, among others through our digital procurement system. As of December 2023, 55% of our total critical suppliers have participated in this programme which enables us to assess the risk exposure in terms of human rights requirements for our critical vendors.

From this assessment, 35% of companies assessed met MISC's human rights requirements. The remaining 37% of companies assessed required some improvement and 28% required significant improvement within their business/operations. We will continue to ensure our contractors and business partners strictly comply with these principles by including human rights clauses in our contracts while performing social assessments and providing support through awareness and training.

### HUMAN RIGHTS AWARENESS AND TRAINING

To ensure a common understanding of the modern slavery and human trafficking risks in MISC's business and supply chains, training for all employees, including comprehensive training for selected managers has been introduced. Trainings for employees have been conducted since 2019 and in 2023, we have enhanced our training platforms by implementing e-Learning modules for our employees and key stakeholders.

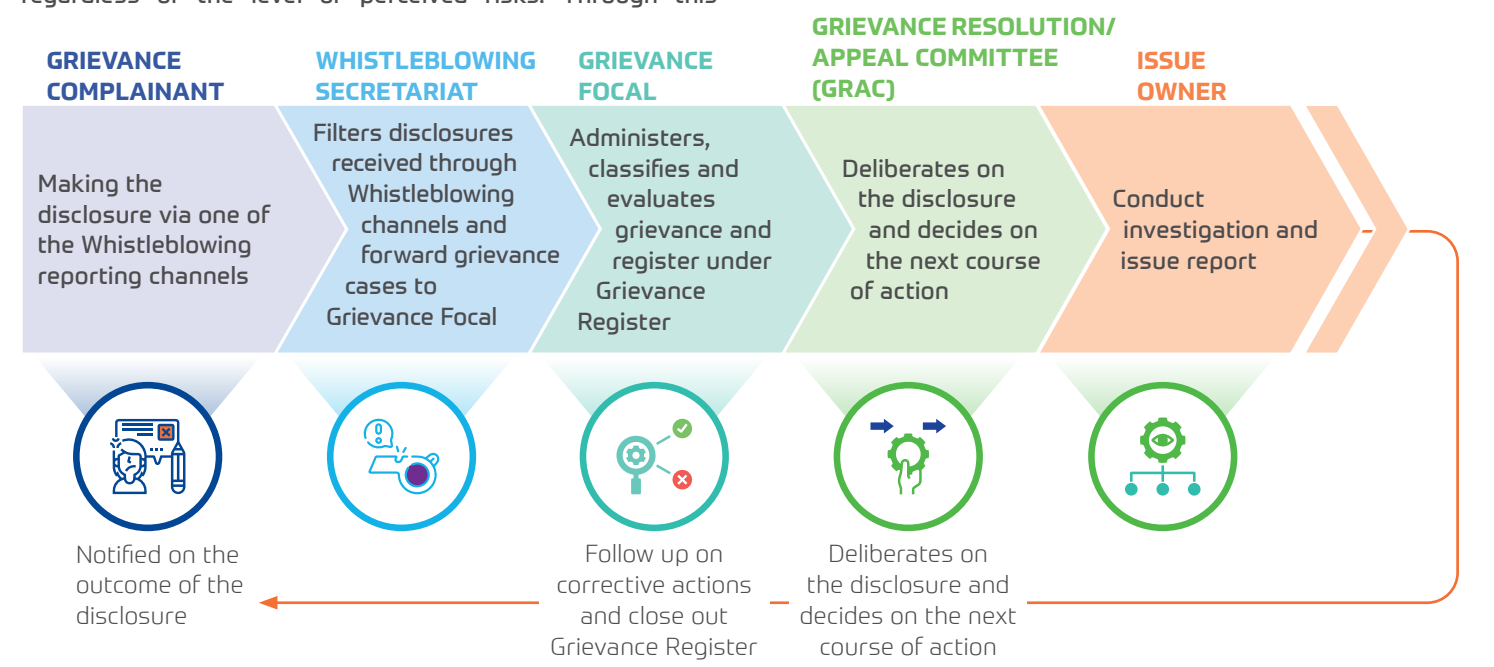
## Respecting Human Rights at Sea and Shore

### PROVIDING ACCESS TO REMEDY

At MISC, we recognise that the right to remedy is one of the basic principles in respecting human rights. In this regard, we embarked on the development of our Grievance Mechanism Procedure in 2021, which plays a critical role in guiding the Company in reporting, investigation, resolution and remedy. The Grievance Mechanism Procedure is accessible to all internal and external stakeholders, applicable throughout the lifecycle of all projects and is a requirement for all operations regardless of the level of perceived risks. Through this

procedure, we ensure confidentiality and it allows us to monitor the number and type of formal individual or collective appeals received each year. The scope of grievance accepted in these mechanisms is limited to human rights impacts related to MISC Group's operations, employees and third-parties.

The detailed responsibilities of all functions that oversee and protect human rights at MISC are presented below.



**Whistleblowing/Grievance Channels**

MISC is committed to the highest standards of integrity, openness and accountability and as such, provides an avenue for all employees of MISC and members of the public to disclose any improper conduct that happens within MISC; be it misconduct or criminal offences through MISC's established internal Whistleblowing/Grievance channels such as emailing to [whistleblow@miscbhd.com](mailto:whistleblow@miscbhd.com), filling up the Whistleblowing/Grievance e-Form as well as calling the MISC Whistleblowing Hotline at 03-2264 0807.

### Human Rights Performance

ESG Self-Assessment (including human rights risks elements) conducted for <b>55%</b> of total critical suppliers	<b>100%</b> of businesses have initiated human rights reviews or human rights impact assessments	<b>2</b> human rights training sessions conducted
<b>2</b> human rights risk assessments conducted	<b>3</b> Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening (human rights is a standard clause in all agreements)	<b>2,801</b> employees trained on human rights





# GOVERNANCE PILLAR

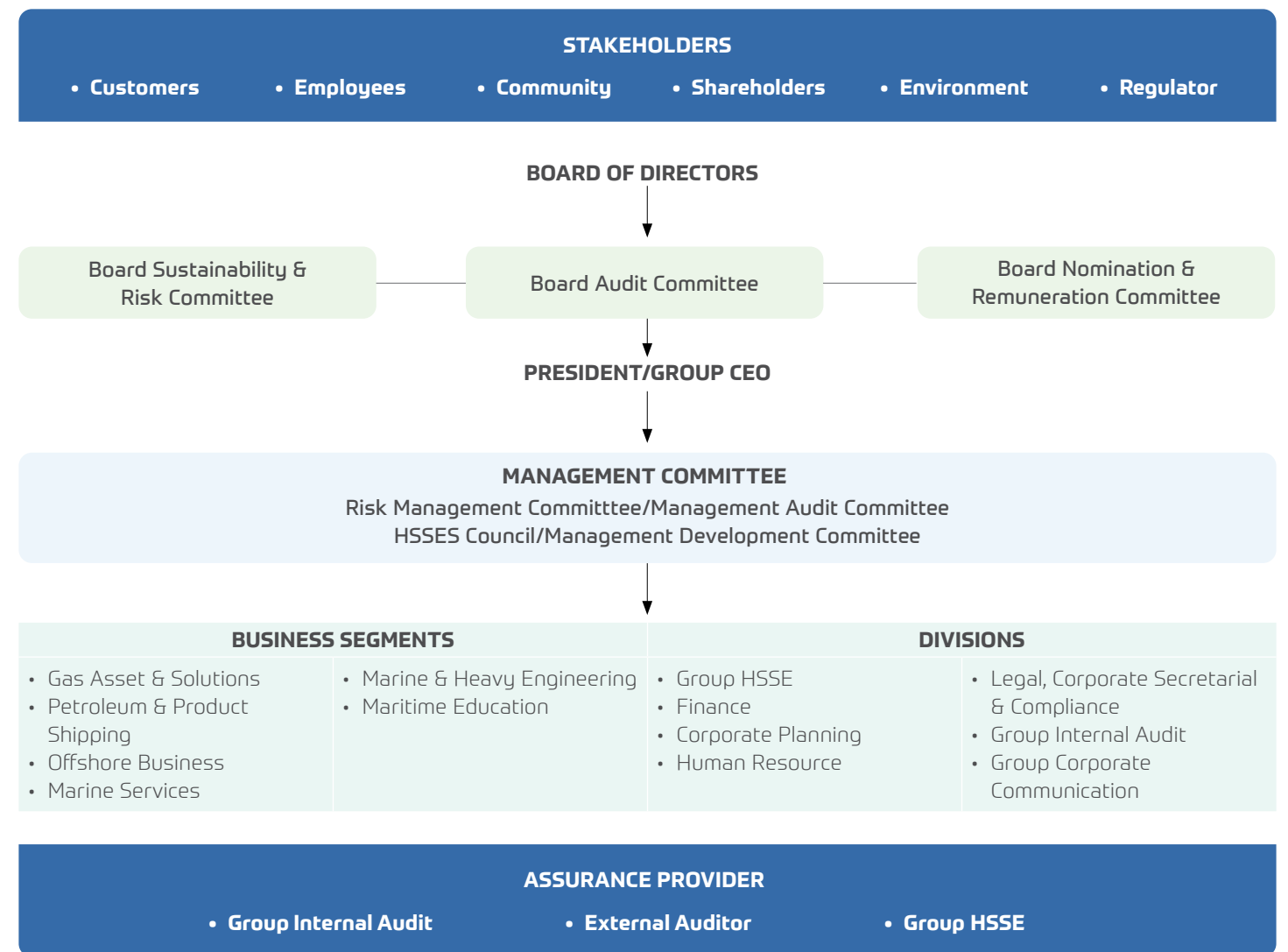
## Our Approach

Corporate governance practices underpinned by the Company's values and the industry's laws and regulations are crucial to promoting corporate accountability and business prosperity whilst considering the interests of stakeholders. Corporate governance at MISC is built on three pillars namely Ethical Behaviour, Accountability and Transparency to create long-term value for our stakeholders.

systems and processes that support the Company in achieving high standards of business ethics and conduct to safeguard stakeholders' interests and protect the Company from reputational damage. Based on this framework, the Board of Directors holds ultimate authority and is supported by the PGCEO and the Management Committees, business segments and divisions. Business strategies and decisions are deliberated at the appropriate level according to the level of significance and impact.

MISC has established strong corporate governance via a framework of control mechanisms i.e., policies, procedures,

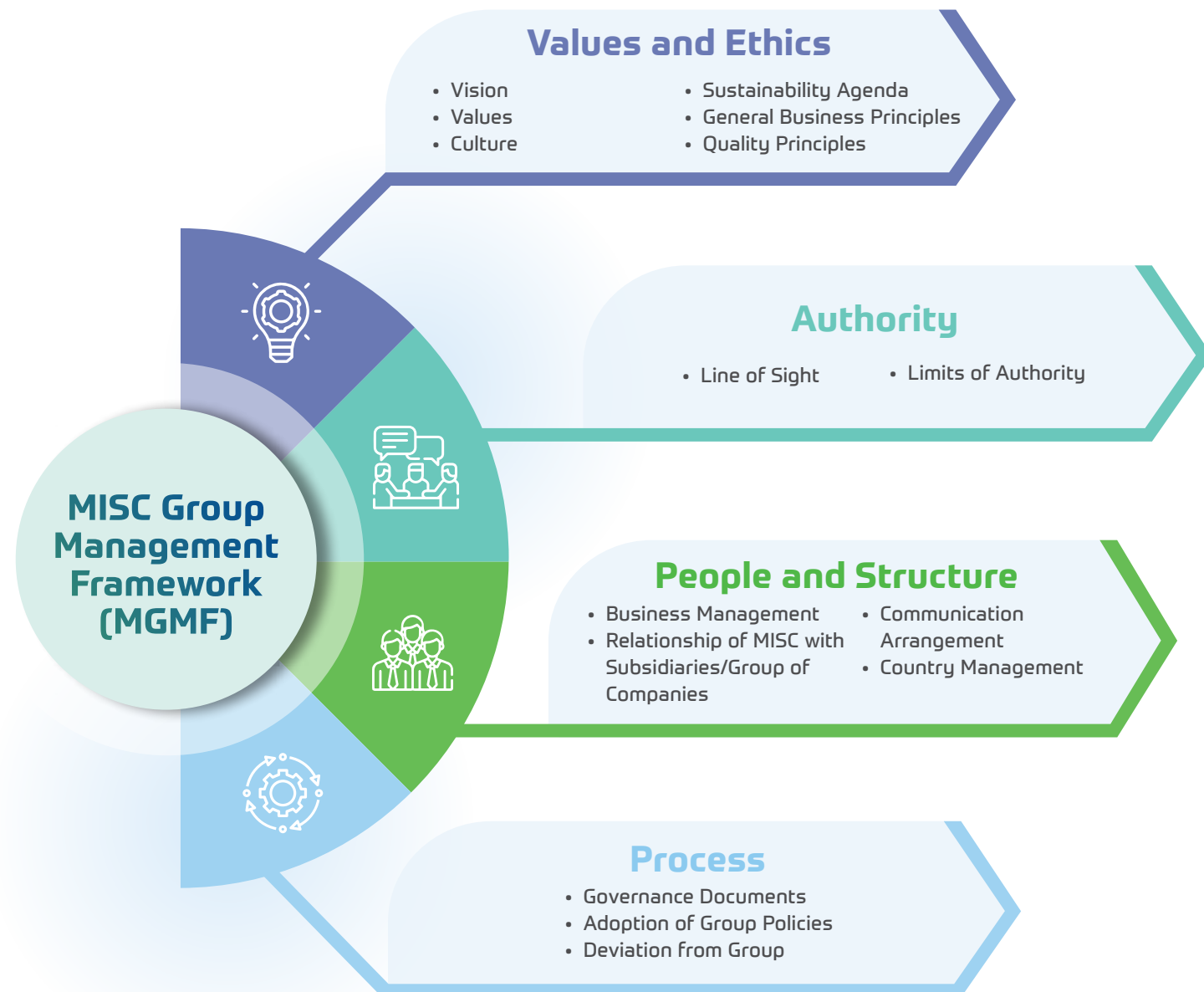
### Corporate Governance Framework of MISC



## Our Approach

MISC Group's reputation as a leading international conglomerate is further strengthened by the MISC Group Management Framework (MGMF) which gives an overview of the organisational structure, operating model and governance structure. The MGMF provides principles and guidance for line of sight, decision-making authority, adoption process for governance documents within the Group and implementation of MGMF.

### MISC Group Management Framework



## Operating Responsibly

### Our Commitment

- Continuously embed a culture of strong corporate governance and business ethics and conduct
- Enhance the cybersecurity framework and safeguard our operations

### Our Initiatives

- **Corporate Governance**
  - Include ESG risks in Enterprise Risk Management
  - Increase Board oversight on ESG risks and opportunities, including cyber risk governance
- **Compliance & Business Ethics**
  - Continue to embed compliance culture in business processes through awareness and assurance programmes
  - Continuously improve our Anti-Bribery Management System
  - Create cybersecurity capabilities and awareness among the MISC community across all levels
  - Elevate and continuously improve on cybersecurity framework

### Our Contribution to SDGs

- Promote sustainable economic growth and decent work for all by ensuring labour rights and promote safe and secure working environment for all



- Foster strong governance and business ethics culture against corruption and promote fair practices



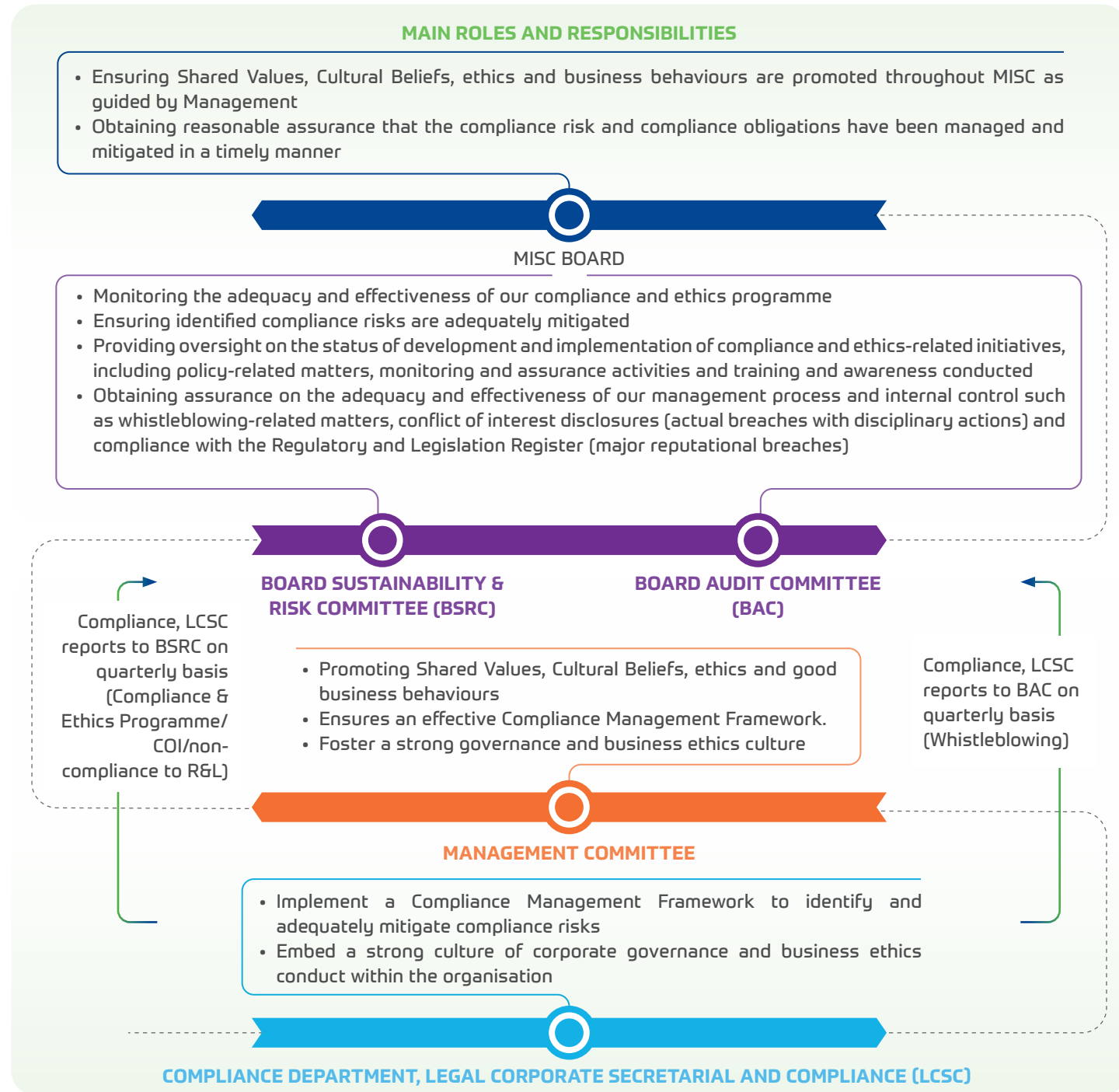
At MISC, we are committed to practising a culture of strong corporate governance, compliance and business ethics to ensure business sustainability. It is also important that we align with the interests of shareholders and other stakeholders and build trust among our customers and the public at large. We adhere to the laws and regulations relevant to our industry and within each country that we operate in by ensuring robust compliance practices and ethical business conduct.

Sound management practices have been established to strengthen compliance culture and ethical behaviours within MISC Group, manage compliance risk and obligations and guide management, business and operations in achieving zero non-compliance at all times. Our approach to ensuring fair and responsible business conduct is further elaborated in the section below.



## Compliance Governance Structure

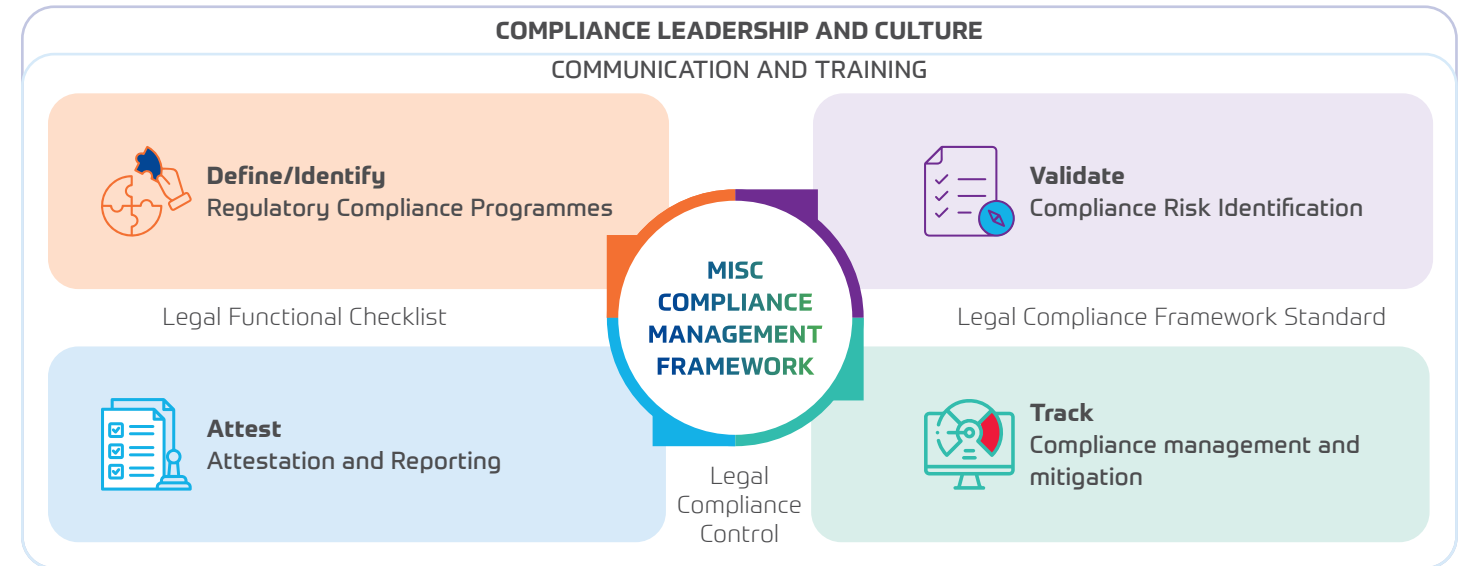
The established structure provides a mechanism to manage our operations' compliance risk and obligations proactively and effectively, with embedment of the compliance culture across all business activities and operations to ensure Group Policies and relevant laws and regulations are adhered to.



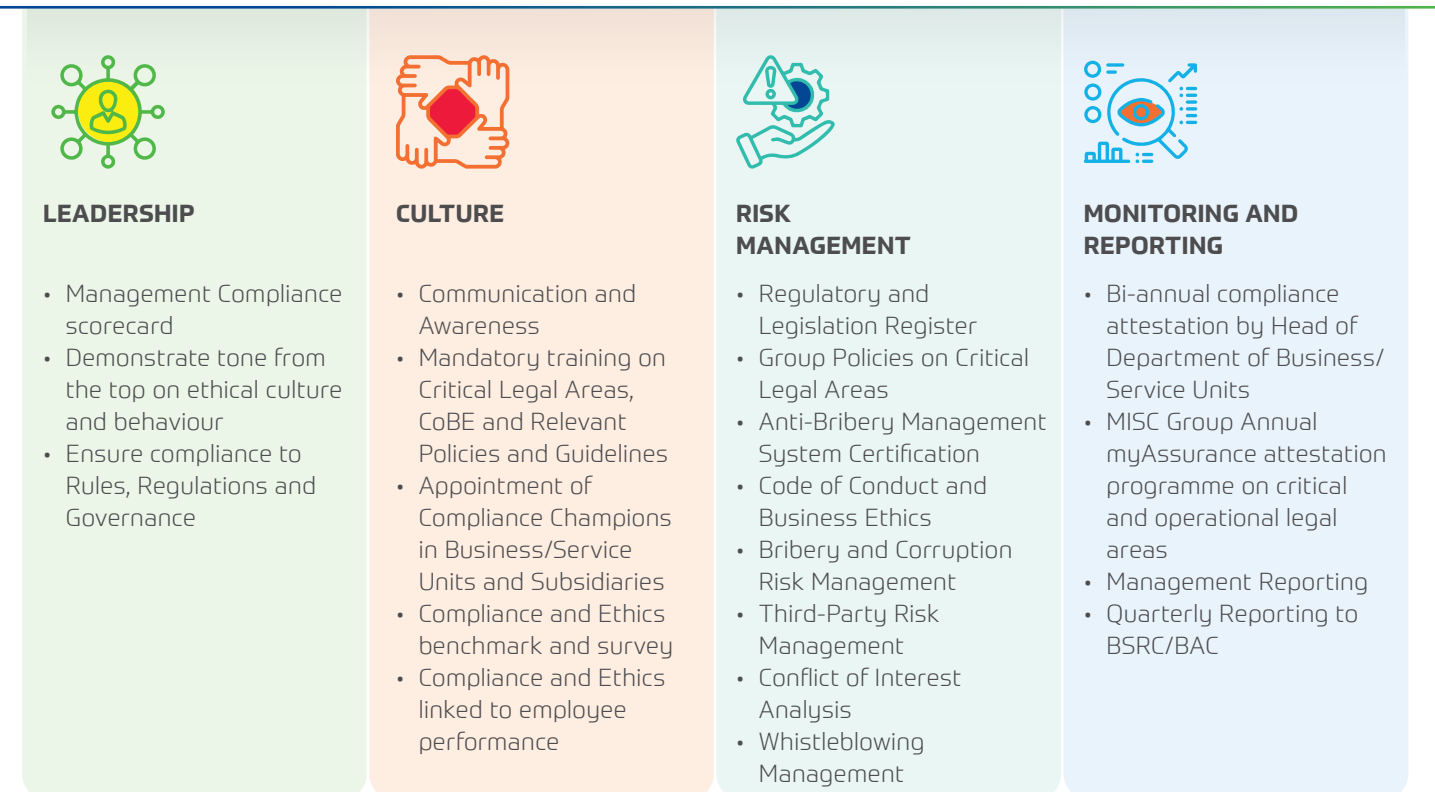
The Board and the Board Committees' designated roles and responsibilities are crucial to ensure the business is managed efficiently and resilient. The Compliance Department under LCSC assists the Board, BSRC, BAC and MC in managing compliance risk based on the Compliance Management Framework.

## Compliance Management Framework

We are guided by the MISC Compliance Management Framework, which is built on the principles of defining regulatory compliance programmes, identifying compliance risk, managing and mitigating compliance risk, attestation and reporting of compliance status while having the appropriate compliance leadership set through 'Tone from the Top' by the Board and Management. Compliance culture is promoted across MISC's business activities, where communication and training are implemented as enablers.



For each of the elements within the Compliance Management Framework, we have identified specific measures and initiatives which are vital for the Group in managing our compliance risk. These are listed as follows:



## Compliance Management Framework

### COMPLIANCE LEADERSHIP

The leadership team of MISC, which consists of the Board and the Management team has set the premise and guides the acceptable behaviours and actions expected from employees. This top-down approach signals a strong commitment to compliance, ethical culture and behaviours from our leaders. The Board and Management shall:

1. Set the appropriate ‘Tone from the Top’;
2. Provide clarity on expectations for compliance;
3. Ensure behaviours and actions are consistent with the messages delivered; and
4. Reward appropriate behaviours and penalise unacceptable practices.

#### Management Scorecard

MISC implements company-wide management compliance scorecards to measure the adherence of every business unit, service unit and subsidiary for both the Management and employees. This management compliance scorecard supports the MISC Group Balanced Scorecard on compliance with critical laws and regulations.

The Management scorecards are carried by the Heads of Divisions/Departments and are tied to each Division/Department’s compliance achievement for the reporting year. The management scorecard is principally intended to demonstrate the top-level commitment to curtail bribery, corruption and compliance risk and strategically embed compliance culture into day-to-day activities within MISC.

#### Compliance Culture

At MISC, every employee is expected to have the right attitude and behaviour towards business ethics to create a sound compliance culture. Compliance culture is built on several elements ranging from awareness and communication, leading by example, responsibility and reward and consequence management.

- i. Clear set of published values and expected compliant behaviours.
- ii. Management is seen as the role model for implementing and abiding by compliance requirements.
- iii. Employees are aware that they are accountable for their actions and equipped with the necessary skills and knowledge.
- iv. Feedback mechanisms are put in place to ensure that mechanisms and processes to achieve the desired results and drive appropriate behaviours are working.
- v. Issues raised are turned into lessons learned and appropriate actions are taken.
- vi. A consistent approach to rewards or consequence management is used to reinforce behaviours.

Furthermore, the employees’ appraisal system is supplemented with the elements of compliance and ethics where line managers are required to provide feedback during appraisals on employees’ compliance and ethical behaviours.

#### Compliance Communication and Awareness

As compliance obligations evolve to meet the changing business environment, MISC regularly carries out compliance communication and awareness programmes to ensure our employees have the latest information on laws and regulations.

We have carried out various communication and awareness programmes such as:

- i. Raising awareness of the CoBE and whistleblowing through our See.Speak.Support campaign;
- ii. Delivering comprehensive five critical laws and CoBE training and refresher sessions for employees, Directors and third-parties; and
- iii. Regular communications on various channels such as the MISC Compliance and Ethics Intranet Portal, email newsletters and workplace postings.

Our communications and awareness programmes are monitored, reviewed and assessed for their effectiveness to gauge employees’ understanding of MISC’s compliance and ethics culture through periodical surveys.

## Compliance Management Framework

### Compliance Culture

#### See.Speak.Support

We launched the See.Speak.Support Campaign in 2017 to elevate employees’ awareness of the principal elements of the CoBE. The campaign is in the form of a quarterly webinar series and aims to familiarise employees with our whistleblowing channel, five critical laws and other relevant policies and procedures. The campaign revolves around three main themes:

- i. See: If you see something or hear something that makes you feel uncomfortable, do not ignore it.
- ii. Speak: It takes courage to speak up. Talk to your supervisor, Human Resource Division or Compliance Department.
- iii. Support: Do not underestimate the power of support. It can help a colleague to stand up and act.

In 2023, the following See.Speak.Support webinar series were conducted.

#### 1. Human Rights Management: A Perspective of Community Well-being (29 March 2023)

The session was delivered by representatives from MISC Berhad’s Sustainability and PETRONAS’ Environment Social Performance and Product Stewardship teams. In this session, topics that were covered are MISC’s Human Rights Journey, Grievance Mechanism Procedures and training initiatives. Furthermore, the session also covered PETRONAS’ perspective on community well-being and its importance, lessons learnt and good practices.

#### 2. Upholding Business Integrity: A Perspective of Port Integrity from the MACN (21 June 2023)

Martin Benderson from the MACN, which MISC is a member of, was invited to share on MACN’s initiatives on corruption at ports, MACN’s Port Integrity incident statistics, case studies in West Africa and Suez Canal and best practices as well as success stories.

#### 3. Social Media Responsibilities (20 September 2023)

The session was delivered by a Partner from Lee Hishamuddin Allen & Gledhill and elaborated on employees’ social media responsibilities according to MISC’s CoBE, the Do’s and Don’ts when sharing information on social media, what constitutes social media defamation, as well as sharing of case studies.

#### 4. BRIBERY: Story Behind Bars (4 December 2023)

A guest speaker shared his story as a former magistrate in Kelantan when he found himself on the wrong side of the law when his corruption was exposed more than a decade ago. In the session, he shared his real-life experience facing the impacts of corruption which aimed to serve as a lesson learnt for MISC employees.

#### Compliance Training

19 trainings were delivered in 2023 to educate employees on ‘Five Critical Legal Areas’ namely, Ethics and Integrity (includes Human Rights and Modern Slavery), Personal Data Protection, Sanctions, Export Control and Competition. These sessions reinforced the Group’s expectations of employees’ conduct in their daily work functions. Apart from these sessions, we also shared bite-sized communications across the Group to provide simplified information on the CoBE and other related areas.

CoBE training is conducted for new employees during the HR onboarding programme which covers anti-corruption topics amongst other areas of the CoBE.

CoBE refresher training was also conducted where Directors and employees must complete with a minimum passing mark. Our CoBE training was also extended to our third-parties to ensure they are familiar with MISC CoBE and other requirements and expectations. Third-parties are required to complete a mandatory assessment post-training. In 2023, 147 third-parties attended the CoBE training session from various industries across MISC Group of which, 44 are critical suppliers.

As part of the MISC Group Compliance Learning initiative, MISC has developed seven compliance e-learning modules related to the ‘Five Critical Legal Areas’ that were rolled out in phases since June 2022 which include:

- i. Anti-bribery & Corruption Manual
- ii. Third-Party Compliance Due Diligence in MISC
- iii. Export Control
- iv. Personal Data Protection
- v. Sanctions
- vi. Competition Law
- vii. Human Rights Management

The final module was rolled out to employees in June 2023. These modules were also rolled out to the Board in stages beginning December 2022. In 2024, a CoBE e-learning module will be launched for employees and Directors once development is completed.



# Compliance Management Framework

# Compliance Management Framework

## Compliance Culture

### Malaysian Anti-Corruption Commission (MACC) Symposium with Malaysian Shipowners – Solidarity in the Maritime Industry: Fight Against Corruption

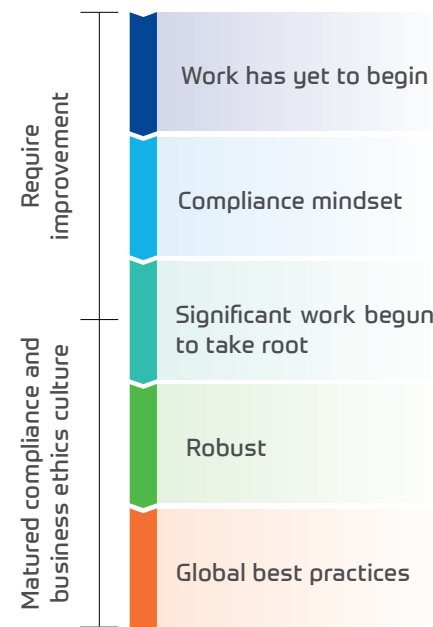
MISC collaborated with the MACC, MASA, Ministry of Transport of Malaysia (MOT) and the MACN in organising a symposium on 15 June 2023 at Wisma MISC, Cyberjaya. The objective was to raise awareness amongst the Malaysian maritime key organisations and leaders about the topic of bribery and corruption and abuse of power.

The symposium featured insightful discussions and knowledge sharing by guest speakers from MACC, MOT, Port Klang Authority, ORKIM Sdn. Bhd., BW Group Singapore and MACN. The symposium was officiated by the Deputy Chief Commissioner (Prevention) of the MACC and saw the attendance of 57 representatives from various maritime-related companies, port authorities, including MISC's PGCEO and other guests of honour from MOT, Port Klang Authority, MASA and MARDEP.



### Compliance and Ethics Survey

The Compliance and Ethics Survey is one of the tools used to gauge the compliance and ethics culture within MISC Group. It is used to measure the effectiveness of the compliance and ethics programmes as perceived by employees as well as to assess the depth of understanding and assimilation of the MISC CoBE since its adoption and rollout in August 2012.



The survey is rolled out biennially and the findings from the survey are analysed and action plans are formulated based on the findings to close gaps. The next survey will be conducted in 2024.

### Compliance and Ethics Feedback Form

A simplified compliance feedback form was rolled out to serve as a guide during employees' performance review sessions, where employees are required to illustrate their compliance and ethical behaviour when performing their day-to-day work responsibilities. This is another avenue that MISC uses to measure the effectiveness of our compliance and business ethics programmes.

## Compliance Risk Management

### Five Critical Legal Areas

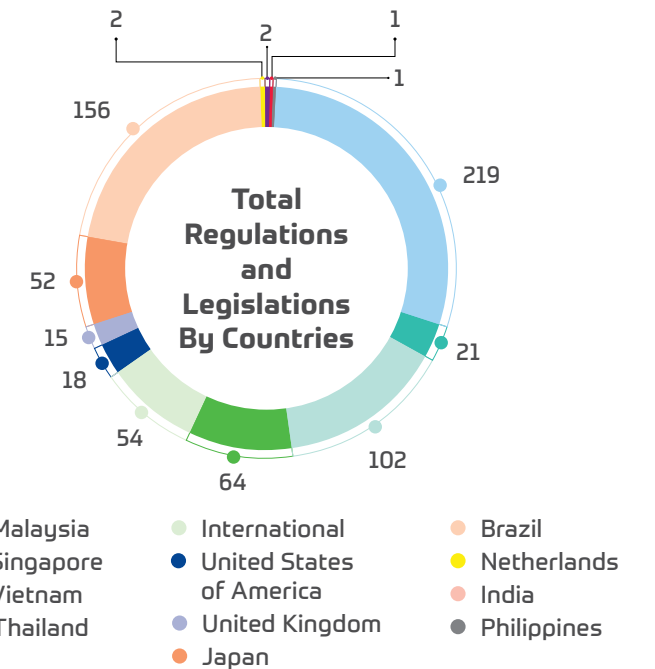
At MISC, we have identified five Critical Legal Areas (CLA) that can pose risks to MISC based on international laws with an extra-territorial effect which, if breached, could result in serious civil and criminal penalties with severe reputational damage to the Company.



### Regulatory and Legislation Register

We monitor all relevant regulations and legislations that can potentially impact the organisation through the Regulatory and Legislation Register. In 2023, 195 newly identified applicable laws and regulations were included in the Register under Malaysia, Singapore, Brazil, Japan, Norway, the United Kingdom, the United States of America and international categories. Most of the new additions are related to our latest operations in Brazil.

### TOTAL REGULATIONS AND LEGISLATIONS



The register serves as a "live" document and will be continually updated to ensure we adhere to all statutory requirements from time to time. In providing the Board and Management with assurances that MISC is complying with all applicable laws and regulations, Legal Functional Checklist (FCs) were introduced through an Integrated Assurance platform called myAssurance. For more details about FCs and myAssurance, please refer to the section on Monitoring and Reporting.

### Code of Conduct and Business Ethics (CoBE)

Our CoBE applies to all Directors, employees and third-parties performing work or services for or on our behalf. The CoBE outlines the standards of behaviour and ethical conduct expected from everyone. Directors, employees and third-parties must act in the best interests of MISC and not engage in conduct or activities which may adversely affect our best interests. The CoBE reflects our commitment to ethical business conduct throughout the Group's businesses both domestically and globally.

### The CoBE Four Key Areas:

1. Core Values and Culture
2. Duties of Good Faith, Fidelity, Diligence and Integrity
3. Workplace Culture and Environment
4. Discipline, Disciplinary Process and Sanctions

# Compliance Management Framework

# Compliance Management Framework

## Compliance Risk Management

To ensure our business practices are aligned with the recent developments in relevant legislations and regulations and internal policies and guidelines, amendments to the CoBE were made in 2023. The amendments include amongst others:

- The provision of more examples to the existing clauses, clarity of some definitions and consistency in references.
- References to major documents like the CoBE Guide, ABC Manual, Whistleblowing Policy and Whistleblowing channels which are hyperlinked to provide easy access.
- Reporting processes where reports and complaints are now to be channelled to the Head of Department (HOD) instead of Human Resource to increase accountability of HOD in managing business conducts, integrity and behaviour within their departments.

In catering to local legislations and social conventions of countries where we operate, standalone Country Supplements have been established to supplement the Group-wide CoBE. The CoBE Country Supplements adapt the CoBE requirements of the respective country's applicable laws and social mores.

Seven CoBE Country Supplements have been established and implemented as guidance to employees based in these countries where we operate: Malaysia, Singapore, Brazil, Japan, the United Kingdom, the United States of America and China.

### Anti-Bribery and Corruption (ABC) Policy and Manual

At MISC, we uphold the highest standards of ethical business practice to ensure we maintain trust among our stakeholders and avoid negative economic impacts on the business.

Our commitment is translated into the MISC's Policy on ABC where we are committed to applying the highest standards of ethical conduct, integrity and accountability in all our business activities and operations. Within this policy, we state our zero-tolerance commitment towards any form of bribery and corruption by or of our employees, or any persons or companies acting on behalf of MISC. The policy applies to all MISC business dealings and relationships.

To support the implementation of policy, we established the Anti-bribery and Corruption (ABC) Manual which incorporated the key principles set out in CoBE and guides our employees, Directors and business partners on how to

deal with improper solicitation, bribery and other corrupt activities issues that may arise in the course of business which includes but not limited to these following topics:

1. Gift, Entertainment and Corporate Hospitality;
2. Dealing with Public Officials;
3. CSR, Sponsorships and Donations;
4. Political Contributions;
5. Facilitation Payment;
6. Money Laundering;
7. Dealing with Third-parties;
8. Recruitment of Employees; and
9. MISC Whistleblowing Policy

The ABC Manual was updated in 2023, where a major revision was made concerning an outright prohibition on political contributions. Further emphasis was also included on ensuring compliance with local laws concerning lobbying where applicable, consistent with the values and principles of the CoBE.

### Anti-Bribery Management System (ABMS)

In 2023, MISC Group was fully certified with the ISO 37001:2016 ABMS with the latest addition of ALAM, being the final subsidiary in achieving the certification. This showcases our commitment to managing the bribery and corruption risks according to internationally recognised standards and to ensuring compliance with the MACC Act and foreign jurisdictions such as the US Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act.

The ABMS implementation in MISC is guided by the ABMS Manual which was established in 2018 and revised in 2023. MISC Group Internal Audit conducts annual audit reviews to evaluate the effectiveness of ABMS implementation in MISC. This is followed by an external audit by SIRIM QAS in January 2024.



## Compliance Risk Management

### Business Ethics Awareness Programme

In enhancing the anti-bribery and corruption practices within MISC, we conducted the following programmes.

#### i. Integrity Time-Out

- An Integrity Time-Out session is an avenue for the Head of Divisions/Departments to communicate and have a conversation about integrity with employees within their respective departments. The session is coordinated by the respective Compliance Champions within the Divisions/Departments.

#### ii. Compliance/Integrity Moment

- The Compliance or Integrity Moment is a brief 2 – 3 minutes sharing session by any employee to illuminate ethical situations faced in the workplace or depicted in the media which is to be held at the start of meetings, town halls or awareness sessions.

### Corruption Risk Exposure and Mitigations

The Bribery and Corruption Risk Management Framework was developed by benchmarking the following documents:

- Transparency International (TI) (UK)'s Guidance for "the Conduct of Effective Bribery Risk Assessment";
- United Nations Global Compact's "Guide for Anti-Corruption Risk Assessment";
- PETRONAS' Guide on "How to Implement an Integrity Programme – A Guide for MDs/CEOs, PETRONAS Group of Companies";
- MACC's Corporate Anti-Corruption Compliance Centre (CACCC) Risk Methodology;
- ISO 31000:2010 Risk Management; and
- ISO 37001:2016 Anti-Bribery Management System





# Compliance Management Framework

# Compliance Management Framework

## Compliance Risk Management

MISC conducts Bribery and Corruption Risk Assessments (BCRA) to identify, assess and evaluate bribery and corruption exposures within MISC.

The Bribery and Corruption Risk Register is updated and reviewed annually to ensure the bribery and corruption risks, including its ratings and mitigation measures, are adequately captured as per the requirements of ISO 37001:2016 ABMS and the Adequate Procedures Guidelines.

In 2023, we identified 229 potential bribery and corruption risks which have been clustered into 16 bribery and corruption risk categories where 76 mitigation measures have been put in place across MISC Group.

Bribery and corruption risk is linked to MISC's Risk Register under the Risk Event category; Compliance to Rules, Regulation and Governance under the Component of Compliance and Ethics.

### Key Risk Indicators for Bribery and Corruption

- Lagging indicators: Medium impact and major impact breaches on critical legal areas (CLA) and operational legal areas (OLA).
- Leading indicators: ABMS-related audits "Overall Opinion Rating".

**In 2023, no monetary losses**

as a result of legal proceedings associated with bribery or corruption

### Third-party Risk Management

Our third-party compliance due diligence process is guided by the MISC TPCDDOG. It contains basic guidelines and procedures for performing compliance due diligence on third-parties entering or having existing contractual transactions and business relationships with us. Third-party assessments ensure that business relationships do not pose any significant Associated Compliance Risks.

### Compliance Risks Covered Under TPCDDOG

- Bribery and corruption
- Money laundering
- Conflicts of Interest
- Economic sanctions
- Export control
- Competition
- Human rights and modern slavery
- Personal data protection

### Compliance Due Diligence Tools

- KYC Questionnaire
- Standard Compliance Due Diligence (Online screening via KYC platforms)
- Enhanced Compliance Due Diligence (ECDD)
- Associated Compliance Risk Assessment using the Due Diligence Risk Assessment Checklist

MISC undertakes compliance due diligence in all business dealings and relationships with new and existing third parties and business partners as part of the KYC process. KYC helps us understand and evaluate counterparties more effectively to ensure they comply with all applicable laws and the MISC CoBE requirements, policies and obligations.

Third-Party refers to contractors, sub-contractors, consultants, vendors, agents, representatives and other service providers performing/providing work, supplies or services for or on behalf of MISC Group, JV partners, clients, banking and financial institutions/lenders or otherwise.

## Compliance Risk Management

Our operations must perform due diligence on third-parties before engaging them. Due diligence comprises completing the KYC Questionnaire and/or internally screening third-parties using KYC online checks and assessing potential Associated Compliance Risk using the Due Diligence Risk Assessment Checklist. We undertake an ECDD upon identifying medium or high Associated Compliance Risk including all proposed transactions involving mergers and acquisitions and business joint ventures. We execute appropriate mitigation plans upon identifying possible red flags.

### Competition

Our Competition Law Guidelines outline the main competition laws applicable in most international jurisdictions and ensure that we strictly comply with these rules in our day-to-day business. In 2023, we have conducted a review and analysis of the Guidelines in keeping up with global business and regulatory requirements.

We have adopted two Competition Law Compliance Protocols that support the Competition Law Guidelines:

- MISC's Competition Law Compliance Protocol on Meetings and Information Sharing; and
- MISC's Competition Law Compliance Protocol on Merger and Acquisition Transactions.

**In 2023, we recorded zero non-compliances related to competition law.**

### Sanctions

We are committed to complying with relevant economic sanctions and export control regulations by identifying, mitigating and managing the related risks in the jurisdictions we operate. The Sanctions and Export Control Guidelines are our governing document for all sanctions and export control matters.

The Guidelines were recently revised in 2023 following the issuance of further guidance by relevant regulatory authorities which necessitates the need to streamline, update and provide clarity in the Guidelines to be in line with

regulators' expectations. The key changes to the Guidelines include alignment with the MISC Governance Management Framework and MISC's current processes in managing sanctions and export control matters and references to regulatory authorities' guidance and compliance elements.

As part of our third-party compliance due diligence requirement and PRA undertaken by business units, we ensure that we do not enter a business relationship with any entity or person which is the target or subject of sanctions, including those directly or indirectly owned by a sanctioned entity or person. We will also not engage in any activity that would result in MISC being in breach of any sanctions laws.

In 2023, we recorded zero non-compliances related to economic sanctions.

### Personal Data Protection

MISC is committed to complying with applicable privacy and personal data protection laws. Our Corporate Privacy Policy and its Master Guidelines apply to all operations to ensure that the collection, use, processing and storage of personal data relating to our employees, contractors, Directors and other third-parties are consistent with our policies.

Our Privacy Statement available on our corporate website, explains the processing of all personal data collected from MISC's website, social media pages and emails. Our employees, Directors and third-parties are also provided with the relevant Personal Data and Information Notice to inform them of our practices regarding the treatment of personal data.

The relevant Personal Data and Information Notice provided to our employees, Directors and third-parties upon collection of their personal data further explains their consent withdrawal rights including rights to access, rectify, modify, delete, object, restrict, receive, transfer their personal data and to make a complaint about MISC processing their personal data. Any queries, comments or complaints can be made by our employees and the public to our Compliance department at [compliance@miscbhd.com](mailto:compliance@miscbhd.com).

In 2023, we recorded zero non-compliances related to data privacy.

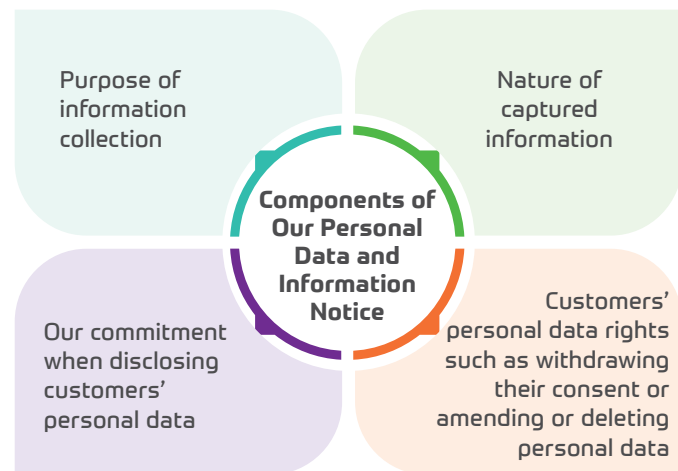
# Compliance Management Framework

# Compliance Management Framework

## Compliance Risk Management

### Customer Privacy Information

Customers are informed of our Corporate Privacy Policy through the Personal Data and Information Notice. In 2023, we recorded zero non-compliances related to customer data privacy.



### Political Involvement Policy

Employees are prohibited from using their position in MISC to influence political contributions and support politicians or their parties in any country as stated in our CoBE.

1. Political contributions are not permitted;
2. No form of financial assistance is received from the government; and
3. Facilities, resources and equipment cannot be used for political-related activities and campaigns or events.

### Lobbying Approach

Employees are required to comply with local laws concerning lobbying in any jurisdiction in which MISC engages in lobbying activity, if any. Before engaging in lobbying activities, guidance from the Head of Department is to be obtained. MISC currently does not engage in any lobbying activities.

## Conflict of Interest Annual Declaration

A conflict of interest occurs when one's personal interests, whether family, friends, financial, or social, may impair one's judgement, decisions, or actions at work. COI disclosure is part of the assurance process for Conflict-of-Interest Avoidance, in which possible or actual instances of conflict are identified and appropriately mitigated.

We must ensure that appropriate measures are being taken so that it poses no risks to our business, as well as our directors and employees. 100% of MISC Berhad's employees have completed the Annual COI Disclosure for 2023. Our directors, employees and third-parties are required to declare any conflict of interest through the following platforms:




- A dedicated email address [coideclaration@miscbhd.com](mailto:coideclaration@miscbhd.com); or
- Annual Conflict of Interest Declaration period

All declarations are properly reviewed and analysed according to the COI Analysis and Review Procedure and any necessary mitigation steps are communicated to relevant employees.

## Mechanism for Addressing Ethical Concerns

Employees and members of the public can report any suspected unethical, unlawful conduct and/or CoBE non-compliance (including Human Rights) involving MISC or our employees, using our whistleblowing platforms. Our Whistleblowing Policy applies to every employee, director and officer of MISC. Moreover, we also encourage our JV companies, in which we are not the controlling stakeholder and associate companies, to adopt this policy. This policy also applies to members of the public, where relevant.

### Whistleblowing Channel

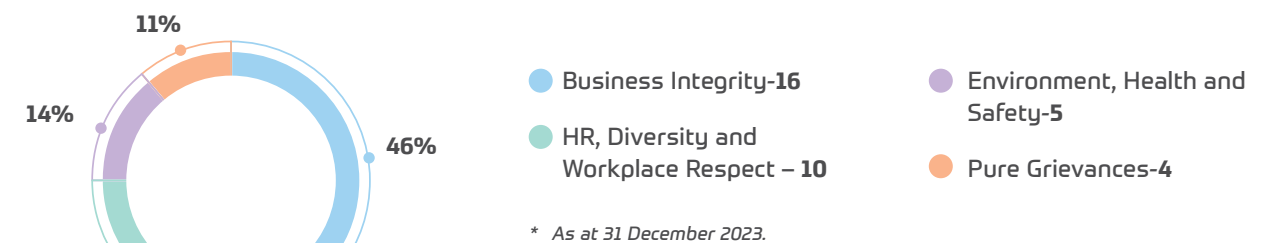
-  **Email**  
[whistleblow@miscbhd.com](mailto:whistleblow@miscbhd.com)
-  **Whistleblowing e-Form**  
(<https://whistleblow.misc.net.my/Whistleblowing/>)
-  **Hotline +603 2264 0807**  
from Monday to Friday during office hours  
(9 am-5 pm)

## Mechanism for Addressing Ethical Concerns

Any employee or members of the public may remain anonymous and are not obliged to disclose their identity as they report any misconduct or ethical issues through our whistleblowing channels. We provide secure and confidential channels in which a whistle-blower will be accorded with protection of confidentiality of identity, as well as protection against any adverse and detrimental actions, to the extent reasonably practicable, provided that the disclosure is made in good faith.

In 2023, the whistleblowing channel received and processed 35 whistleblowing complaints in comparison to 11 complaints recorded in 2022, which is a 218% increase.

### Total complaints received via Whistleblowing Channel



Based on the investigation outcomes, 14 complaints were "closed with action items" due to either allegations were substantiated, or process improvements required to minimise risks, while 10 complaints were "closed with no further action" and 11 complaints are "under investigation".

For the year under review, seven employees were under consequence management or dismissed due to non-compliance with CoBE. We have no substantiated cases under Business Integrity (Bribery and Corruption).

## Monitoring & Reporting

### Compliance Attestation

Our implementation of the HOD Compliance Attestation Programme is one means of gauging the compliance status of the applicable laws and regulations to MISC. In 2021, the HOD Compliance Attestation initiative was rolled out on a bi-annual basis to demonstrate the 'Tone from the Top' and management's commitment to inculcating a compliance culture throughout operations. This self-assessment attestation programme will boost transparency in line with the Guidelines on Adequate Procedures principles. The Compliance Attestation programme aims to:

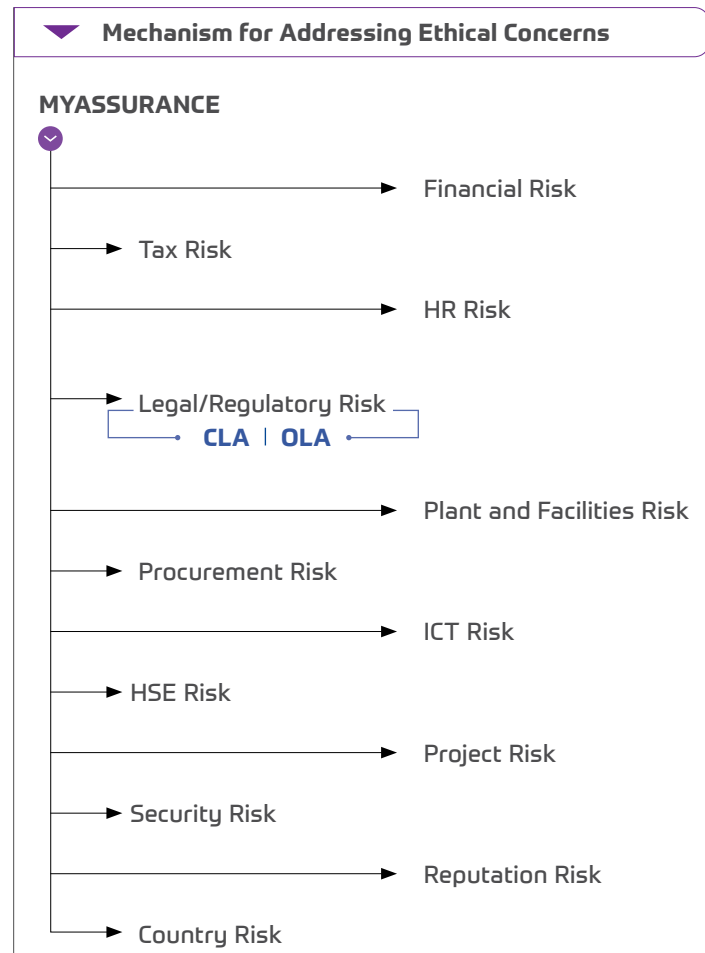
- Assure the Board and management of MISC's compliance with all applicable laws and regulations; and
- Immediately document and address any concerns that may lead to potential or actual breaches

### myAssurance

An integrated assurance platform called myAssurance has been rolled out to capture all lines of assurance throughout the business. Legal/Regulatory risk is one of the 12 Focused Risk Areas identified under the Group Risk Management where the MISC Group shall uphold and practice good corporate governance as well as comply with all laws governing the conduct of our business operations.



## Compliance Management Framework



Within the Legal/Regulatory Risk areas, there are two domains of laws identified:

1. CLA – Reputational
2. OLA – Non-reputational

### ➤ Critical Legal Areas (CLA)

The CLA FC embedded in myAssurance is a self-assessment tool to assess our operations’ legal compliance status and potential areas of weakness, non-compliance and/or unsound practices, including bribery and corruption, money laundering, conflicts of interest, sanctions, export control, competition, human rights, modern slavery and personal data protection. Corrective actions are put in place to address any identified gaps.

### ➤ Operational Legal Areas (OLA)

OLA FCs were introduced in the same platform to capture assurances to applicable laws and regulations other than CLA. The other areas covered under OLA include health, safety and environment, petroleum, energy and utilities, financial and tax, employment, land and real property, intellectual property and building and construction among others.

Three mandatory OLA FCs were identified to be completed in 2023, if applicable, as below:

- Environment Quality Act
- Occupational Safety and Health Act
- Factories and Machineries Act

The rest of the OLA FCs will be done on a risk-based basis, where the frequency is determined depending on each company’s risk assessment.

### CONTINUOUS IMPROVEMENT

Continuous improvement is necessary to prevent and mitigate potential non-compliance. We constantly improve the suitability, adequacy and effectiveness of our compliance and ethics programmes through reviews by the internal audit including the annual ISO ABMS internal and external audits. We monitor and report all compliance and ethics-related matters regularly.



## Strengthening Cybersecurity

In an era marked by technological advancement, IR4.0 and digital transformation, many businesses heavily rely on information technology and interconnected systems to perform daily tasks. The rapid evolution of technology and the growing sophistication of cyber threats necessitate a proactive and adaptable approach to cybersecurity. Cybersecurity management not only addresses current risks but also anticipates future challenges, ensuring the long-term viability and continuity of MISC Group in the face of evolving cyber threats. Continuous risk assessments, threat modelling and adaptation to changing circumstances are crucial elements in establishing a resilient environment for the Group to operate.

At MISC, cybersecurity management is guided by several standards and frameworks, namely, MISC Cybersecurity Control Standards, MISC Secure System Development Framework (SSDF), Cybersecurity Incident Response Plan and Cybersecurity Incident Playbook. These documents are aligned with industry best practices and applied according to MISC’s practices and conduct.

MISC Cybersecurity Control Standards define the minimum mandatory and specific cybersecurity controls that must be applied to a system operated and utilised within the MISC Group including JV companies where MISC have operational control.

These standards are developed based on leading standards on cybersecurity, such as the National Institute of Standards and Technology (NIST) Cybersecurity Framework, ISO/IEC 27001:2022 Information Security, Cybersecurity and Privacy Protection, ISF Information Risk Assessment Methodology, International Safety Management Code and to comply with regulations such as IMO 2021, Personal Data Protection Act and General Data Protection Regulation.

MISC SSDF is a document that establishes a framework in guiding MISC Group to build security into MISC’s System Development Lifecycle (SDLC) models. SDLC is a methodology with clearly defined processes for creating high-quality, fit-for-use software and computer systems and solutions.

MISC Cybersecurity Incident Response Plan provides details on how to respond to cybersecurity threats appropriately. A clear escalation process has been established to respond to suspicious or actual cybersecurity incidents. The IT Helpdesk is our employees’ first point of contact and the team will investigate and escalate the matter according to the Cybersecurity Incident Response Workflow.

An incident response capability is crucial as cybersecurity-related attacks may cause major damage and disruption to our operation; therefore, the response plan helps detect incidents, minimise losses and destruction, mitigate weaknesses that were exploited and restore IT services. The implementation of incident response capability provides protection and significantly reduces the potential impact of an incident on MISC Group’s IT and OT assets as well as employees.

Apart from the annual MISC audits performed by external auditors that include an audit of cybersecurity processes and practices, MISC also conducts vulnerability assessment and penetration testing to ensure the robustness of MISC’s IT infrastructure and management system, with the last assessment held in 2022. The next cycle of testing, which is a red teaming exercise and a cybersecurity assessment of MISC’s offshore asset, is expected to be completed in Q1 2024.

### CYBERSECURITY RISK MANAGEMENT AND CYBERSECURITY BUSINESS IMPACT ASSESSMENT

Integrating MISC Group’s cybersecurity risk management into our MISC Cybersecurity Strategic Plan is imperative to amplify the Group’s capacity to address evolving threats, protect our stakeholders’ interests, maintain compliance and uphold ethical standards. We have established the Cybersecurity Risk Management Guideline to manage and reduce cybersecurity risks and develop MISC Group’s capabilities around five functional areas as set by the NIST Cybersecurity Framework namely Identify, Protect, Detect, Respond and Recover.

With the establishment of the Risk Management Guidelines, MISC Group also conducted a business impact assessment to identify the “crown jewels” of MISC Group’s assets. The assessment helps us to make informed decisions when prioritising our resources and efforts towards the protection of the “crown jewels”. By ensuring mitigating risks against cyber threats, we can enhance our ability to not only withstand disruptions but also build a resilient, sustainable and successful business in the face of adversity.

### PROTECTING OUR VESSELS

Traditionally, the operating technology (OT), consisting of control, communication and navigation systems onboard, operates in a standalone environment. With the advancement of technology and the rapid increase in digital transformation projects, the interconnectivity and convergence of OT and IT will rapidly increase, leading to ever-higher risks. A cybersecurity incident or successful cyberattack on MISC Group vessels and floating platforms could have massive consequences both regionally and globally as they may impact but not limited to health and safety, environment, supply chain, reputation and brand, financial losses and legal or regulatory fines.

To prevent the potential impacts of a cyber incident and minimise MISC Group’s risk, we have established cybersecurity guidelines concerning our operational technology, conducted risk assessments, implemented security controls and worked with the industry to not only protect our IT and OT systems but also to ensure the continued and safe and efficient operation of our maritime activities.

## Strengthening Cybersecurity

### PREVENTIVE, DETECTIVE AND REACTIVE MEASURES

To ensure the security and resilience of MISC Group networks, systems, applications, data and people, we have engaged and implemented a managed security support service, to support our Cybersecurity Strategy Plan implementation, which is a crucial element for an effective security management. The managed security support service brings to MISC Group critical capabilities, including but not limited to around-the-clock security monitoring, threat detection and response for our IT endpoints and network security devices via our Security Operation Center (SOC), their expertise in threat prevention and hunting, vulnerability management and managed detection and response for IT endpoints.

With the increase in global cybersecurity attacks and zero-day vulnerabilities, integrating the managed security support service into MISC Group's cybersecurity strategy is a prudent step to supplement and enhance our security posture and protect MISC Group against the growing array of digital risks.

### OTHER KEY CYBERSECURITY INITIATIVES IN 2023

#### Vessel Assessment

As we see an increasing number of cyber-attacks in the maritime industry, we have conducted assessment on our vessels to identify gaps and establish the necessary controls to prevent potential cyber-attacks and minimise the cyber risks that exist onboard our vessels.

#### Cybersecurity Awareness

##### Cybersecurity e-Learning

A cybersecurity training and awareness e-learning module was developed and launched for MISC Group employees. All employees will be required to complete the training to ensure that they are updated with the potential impact and risks and impacts of cybersecurity threats that exist within MISC Group. There are also the Do's and Don'ts to keep them abreast of how they can help to secure MISC Group from ever-increasing cyber threats.

The e-learning module is reviewed annually and adjustments are made based on new requirements and emerging cyber threats.

#### Cybersecurity Awareness for New Hires

A cybersecurity awareness session is also specifically conducted for new hires as part of the new hires orientation programme, which covers various topics such as types of cybersecurity threats, password security and cybersecurity best practices

#### Phishing Awareness

In 2023, a monthly phishing campaign and several awareness sessions about phishing were conducted to elevate employees' awareness of the risk of phishing attacks to achieve zero cybersecurity incidents in MISC Group. The awareness sessions were held for employees who clicked phishing links.

#### Offshore Business Take 5 Safety Moments

The monthly Take 5 Safety Moment is a pivotal event aimed at instilling awareness and spreading MISC's HSSE commitment among all Offshore Business employees. The Take 5 sessions for this year had a distinctive focus on cybersecurity issues, incorporating various topics and case studies with the objectives to:

1. Raise awareness about the significance of cybersecurity in the workplace and personal life.
2. Share relevant information and case studies to promote a deeper understanding of cybersecurity challenges.
3. Encourage employees to actively engage in protecting the organisation's digital assets.
4. Foster a culture of safety, security and vigilance in daily operations.

This programme not only enhanced awareness but also empowered employees to be more vigilant and proactive in the realm of cybersecurity. The open discussions, case studies and expert guidance provided a valuable platform for learning and knowledge sharing for our employees.

#### Key highlights

**0 major** cybersecurity incidents in 2023

**0 data** breaches in 2023

- MISC Cybersecurity Risk Management Guideline
- MISC Cybersecurity Operational Technology Guideline
- MISC Group Business Impact Assessment Report
- Cybersecurity Assessment for MISC Group vessels
- Security Operation Center operates 24/7

## Embracing a Sustainable Supply Chain

### Our Commitment

- To drive sustainable practices with our suppliers

### Our Initiatives

- Implement ESG Supply Chain assurance programme emphasising sustainable sourcing, circular economy, health and safety and business ethics compliance
- Look for collaboration/partnership opportunities on pollution prevention and decarbonisation of our operations
- Promote circular economy across the value chain

### Our Contribution to SDGs

- Promote sustainable economic growth and decent work for all by ensuring labour rights and promote safe and secure working environment for all



- Foster strong governance and business ethics culture against corruption and modern slavery and promote fair practices



We believe that partnerships with suppliers are crucial to help us achieve our sustainability goals. As we progress along our sustainability journey, our aim is to ensure that our supply chain ESG performance aligns to our ESG aspirations. We expect our Tier-1 suppliers to first comply with these standards and they in turn should require compliance from their suppliers. The aim is to create a cascade of sustainable practices which promote circular economy and low-carbon economy throughout the supply chain.

In MISC, supplier sourcing is guided by the MISC Group Procurement Guidelines (GPG) in which the Sustainable Procurement Statement is embedded into the document. The statement highlights MISC Group's commitment to conducting business in an environmentally responsible and ethical manner to ensure long-term sustainable value creation for the Group and our business partners. The statement was rolled out at the Group level where business units are in the midst of adopting or adapting the statement to suit their business needs.

Furthermore, MISC has rolled out the Responsible Supply Chain Programme progressively to drive sustainable practices among suppliers through the following step-by-step approach:



Define and classify critical suppliers



Develop ESG assurance framework and conduct self-assessment



Awareness programme on low-carbon, circular economy and ethical supply chain



Collaboration opportunities on sustainable products/services



## Embracing a Sustainable Supply Chain

### CRITICAL SUPPLIERS

MISC Group defines critical suppliers as suppliers whose goods, materials and services (including intellectual property (IP)/patents) meet any of the following criteria:

- Suppliers that can cause a significant impact on the competitive advantage, market success or survival of the company;
- Suppliers of critical components and non-substitutable suppliers; and/or
- Suppliers that perform high-risk activities

High-risk activities are activities that fulfil any of the following criteria:

- High HSSE impacts;
- Involvement of subcontractors and/or high volume of foreign/migrant workers participation; and/or
- Remoteness of services rendered

### ESG EXPECTATIONS

Supplier screening is a critical process where organisations undertake reviews and assess potential supplier’s capability, legitimacy and credibility. The goal is to ensure suppliers meet our expectations, align with the Company’s values and meet regulatory requirements. Our ESG requirements have been embedded as part of the due diligence process before the appointment of suppliers. This risk-based approach reviews their health, safety and environmental management systems and business ethics, including human rights practices.

### SUPPLIERS DUE DILIGENCE

As part of our commitment, MISC requires any parties that perform work or services for the Group, including our contractors, subcontractors, consultants, agents, representatives and others, adhere to all applicable laws, the pertinent sections of the MISC CoBE and any other applicable guidelines or manuals.

Therefore, before the appointment of suppliers, we are obligated to conduct appropriate third-party due diligence to understand the business and background of the prospective business suppliers to ensure that we are dealing with parties that subscribe to the same values and ethical standards of integrity as MISC in the conduct of their business.

During the supplier registration stage, suppliers are required to sign the Declaration and Integrity Pledge (DIP) which declares compliance with MISC’s CoBE, ABC Manual, Human Rights Commitment and Modern Slavery Policy and Procedures, standards and governance relating thereto as well as to all applicable laws, rules, orders, decrees, or regulations relating to:

- anti-bribery and corruption;
- anti-trust/competition law;
- export and import controls;
- economic sanctions;
- protection of personal privacy (including personal data);
- human rights;
- anti-money laundering; and
- occupational health, safety and environment

### ESG CONTRACTUAL TERMS

Our contracts allow MISC to evaluate suppliers’ performance guided by the principles and standards outlined in the CoBE and their policies on ethics and conduct, as well as aspect on health, safety and environment.

Our CoBE for Third-parties provides further clarity to our suppliers regarding our expectations in the following areas:

#### i. Health, Safety and Environment

In addition to conducting business with respect and care for the environment, suppliers are required to abide by all applicable environmental laws and regulations. This includes making efforts to monitor and reduce carbon emissions, utilise energy and natural resources efficiently and manage waste, emissions and discharge responsibly.

#### ii. Labour Standards and Human Rights

Our business practices align with the human rights philosophy outlined in the UN Guiding Principles on Business and Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the Universal Declaration of Human Rights. We expect contractors and suppliers acting on our behalf to adhere to these values.

## Embracing a Sustainable Supply Chain

### SUPPLIERS PERFORMANCE EVALUATION

Selected critical suppliers are exposed to an ongoing Supplier Performance Evaluation process after a contract has been awarded, wherein specific contractual obligations, including ESG matters, are tracked and reassessed regularly. We conduct additional risk assessments on our important contractors and suppliers, which might lead to on-site audits at their locations.

### SUPPLY CHAIN ESG SELF-ASSESSMENT FRAMEWORK

In 2021, we developed the ESG Self-Assessment Framework in addition to our Supplier Performance Assessment. The goal is to develop a risk profile of our supply chain by identifying, assessing and managing supply chain ESG risks. In 2022, we digitised this framework into our digital procurement system and as of December 2023, we have rolled it out to 55% of our total critical suppliers.

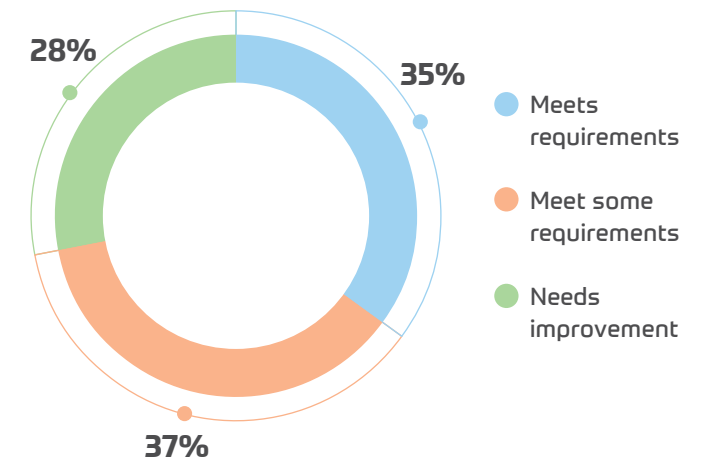
There are seven ESG topics embedded in the Self-Assessment Framework, which are:

- Sustainability Strategy and Climate Action;
- HSE & Security;
- Ethics and Integrity;
- Competition Law;
- Data Privacy and Information Security;
- Sanction/Export Control; and
- Human Rights

We classify our suppliers’ ESG profiles into the following categories:

- Needs Improvement: The organisation’s ESG practices fall below industry best practice expectations and/or legal requirements and would require attention to improve to be aligned with MISC’s sustainability expectations
- Meets Some Requirements: The organisation’s ESG practices generally meet some minimal industry best practice expectations but would require some effort to improve to be fully aligned with MISC’s sustainability expectations
- Meets Requirements: The organisation’s ESG practices meet MISC expectations and would require continual improvements to continuously be fully aligned with MISC’s sustainability expectations.

### Results of 2023 Supplier ESG Self Assessment



At MISC, supplier engagement is an ongoing process and we expect to roll out the ESG Self-Assessment framework to our remaining critical suppliers in phases and expect to complete it by 2024.

### ESG AND DIGITAL PROCUREMENT

MISC Group Procurement has introduced Category Insert comma after Management enhancing our supplier management and procurement processes. Applying category management has several advantages, such as better supplier risk management, centralised spend data, streamlined business strategy, effective resource utilisation and value add including cost-savings opportunities.

In addition, a new procurement platform was rolled out in phases since 2022, integrating requisition, sourcing, supplier onboarding, contracting, approvals and invoicing all under one platform. This provides analytics for better decision-making and audit trails for more transparency and control. It also complements the Category Management process where Supplier Performance and ESG Risk Assessment can be programmed for suppliers’ continuous improvement. Automation of these assessments and its analytics leads to a more efficient monitoring of supplier performance.



Section 5

# ADDITIONAL INFORMATION

190	Performance Data
207	Reporting Principles & Data Assumptions
212	Sustainability Reporting Standards & Disclosures
222	List of Abbreviations



## Performance Data

Financial Pillar	Unit	2023	2022	2021
<b>FINANCIAL PERFORMANCE</b>				
Revenue	RM million	14,271.7	13,867.0	10,671.7
Operating profit	RM million	2,881.4	3,102.0	1,948.3
Profit/(loss) before taxation	RM million	2,093.7	1,874.3	1,774.6
Profit/(loss) after taxation	RM million	1,958.9	1,835.0	1,733.5
Tax for the year*				
• Malaysian income tax <sup>1</sup>	RM '000	60,042	37,314	28,940
• Foreign tax <sup>2</sup>	RM '000	30,950	25,130	18,644
Under/(over) provision in prior year				
• Malaysian income tax	RM '000	368	(21,590)	(7,378)
• Foreign tax	RM '000	48,685	-	(938)
<b>CLIMATE-RELATED INDICATORS</b>				
Expenditure on climate-related initiatives	RM	15,789,782	2,105,212	14,698,849
Expenditure on environmental protection initiatives (including climate change and environmental management systems)	RM	10,817,446	55,134,046	-
<b>Transition Fuel</b> <sup>3</sup>	RM	45,920,793	14,415,212	-
Low Sulphur Marine Gas Oil	RM	10,275,703	14,415,212	-
Very Low Sulphur Fuel Oil	RM	35,645,090	-	-
<b>REVENUE</b>				
<b>Dual-Fuel Vessels</b>				
• Aframax	RM	90,320,715	149,584,640	59,294,863
• DPST	RM	396,678,943	401,975,867	184,286,393
• VLCC	RM	98,400,554	42,825,598	N/A
<b>Environmentally-friendly vessels</b>				
• VLEC	RM	376,761,667	371,687,865	293,853,386
• LNGC	RM	567,237,996	391,871,984	381,025,021
• 2 <sup>nd</sup> generation DPST	RM	846,575,255	619,837,243	316,405,235
<b>Total</b>	RM	2,375,975,130	1,977,783,198	1,234,864,898
EEDI <sup>3</sup>	Please refer to the Environment pillar data performance			
Scope 1, 2 and 3	Please refer to the Environment pillar data performance			

Note:

<sup>1</sup> Tax for the year was calculated at the statutory tax rate of 24% of the assessable profit for the financial year. The international shipping and sea-going operations of the Group is currently eligible for income tax exemption under Section 54A of the Income Tax Act, 1967. The Group has been granted with Investment Tax Allowances and Leasing incentives for its qualifying activities.

<sup>2</sup> Tax for the year was calculated at the statutory tax rate of the assessable profit for the financial year based on the respective countries' tax rate in which the Group has a taxable presence. The Group also qualifies for shipping tax exemptions in foreign jurisdictions on its international shipping and sea-going operations.

<sup>3</sup> Fuel cost purchased by MISC Group only.

\* Additional disclosure for 2021 and 2022 data on prior year under/(over) provision of taxation.

For more details on our Financial performance, please refer to MISC's Financial Report 2023.

## Performance Data

Environment Pillar	Unit	2023	2022	2021
<b>TOTAL GHG EMISSIONS</b>				
Scope 1 <sup>1</sup>	tonnes CO <sub>2</sub> e	4,146,086	4,224,813*	4,173,607*
Scope 2	tonnes CO <sub>2</sub> e	39,851	40,570*	37,946
CO <sub>2</sub> Biogenic <sup>A</sup>	tonnes CO <sub>2</sub> e	1,063	955	-
<b>TOTAL SCOPE 1</b>	tonnes CO <sub>2</sub> e	4,106,235	4,184,243*	4,135,661*
<b>Breakdown by operations</b>				
Shipping		4,074,883	4,154,733*	4,108,505*
• Gas	tonnes CO <sub>2</sub> e	2,440,885	2,554,463*	2,522,902*
• Petroleum	tonnes CO <sub>2</sub> e	1,607,509	1,554,247*	1,529,202*
• Product	tonnes CO <sub>2</sub> e	21,851	42,708*	52,054*
• Workboat	tonnes CO <sub>2</sub> e	4,638	3,315*	4,347*
• Non-Shipping	tonnes CO <sub>2</sub> e	31,353	29,511	27,156*
<b>TOTAL SCOPE 2</b>	tonnes CO <sub>2</sub> e	39,851	40,570*	37,946
Non-Shipping	tonnes CO <sub>2</sub> e	40,570*	40,570*	37,946
<b>TOTAL SCOPE 3 (Material Categories**)</b>				
<b>Breakdown by Category</b>				
Category 1 – Purchased Goods and Services from Marine and Heavy Engineering Business**	tonnes CO <sub>2</sub> e	757,671	501,712*	-
Category 3-Fuel and Energy Related Activities**	tonnes CO <sub>2</sub> e	1,132,578	1,156,385*	-
Category 6 – Business Travel	tonnes CO <sub>2</sub> e	12,280	8,554	-
Category 7 – Employee Commuting	tonnes CO <sub>2</sub> e	7,116	8,584	-
Category 8 – Upstream Leased Assets**	tonnes CO <sub>2</sub> e	40,438	74,766	101,723
Category 13 – Downstream Leased Assets**	tonnes CO <sub>2</sub> e	999,402	1,094,822	1,229,410
Category 15 – Investments**	tonnes CO <sub>2</sub> e	22,948	19,099*	13,049*
<b>AIR EMISSIONS</b>				
NO <sub>x</sub> emissions <sup>6</sup>	tonnes	43,663	43,260*	42,552*
SO <sub>x</sub> emissions <sup>7 B</sup>	tonnes	3,932	3,679*	3,213*
PM <sup>10</sup> emissions <sup>B C</sup>	tonnes	3.67	3.40	3.01
<i>(Reported data are for non-shipping only)</i>				
Ozone depleting substances (ODS)	tonnes	0.17	0.24	0.93

## Performance Data

Environment Pillar	Unit	2023	2022	2021
<b>CARBON INTENSITY AND ANNUAL EFFICIENCY RATIO</b>				
<b>ANNUAL EFFICIENCY RATIO (AER)</b>				
• MISC Shipping Fleet (GAS and Petroleum) * <sup>D</sup>	gCO <sub>2</sub> /ton-nm	5.61	6.11*	6.21*
<b>ANNUAL EFFICIENCY RATIO (AER<sup>CO2e</sup>)</b>				
• MISC Shipping Fleet (GAS and Petroleum)	gCO <sub>2</sub> e/ton-nm	5.84	6.30*	6.45*
<b>OPERATIONAL DATA</b>				
Total distance traveled by vessels (GAS and Petroleum)	nautical miles (nm)	5,485,104	5,397,536*	5,336,397*
<b>AVERAGE ENERGY EFFICIENCY DESIGN INDEX (EEDI<sup>5</sup>) FOR NEW VESSELS</b>				
LNGC	(gCO <sub>2</sub> per tonne-mile)	4.691	-	-
VLEC	(gCO <sub>2</sub> per tonne-mile)	-	-	6.080
LNG Dual-Fuel DPST	(gCO <sub>2</sub> per tonne-mile)	-	-	-
Conventional DPST	(gCO <sub>2</sub> per tonne-mile)	-	2.738	-
LNG Dual-Fuel VLCC	(gCO <sub>2</sub> per tonne-mile)	1.665	1.937	-
<b>ENERGY</b>				
<b>TOTAL GROUP ENERGY CONSUMPTION <sup>2</sup></b>	GJ	59,885,590	61,594,495*	60,632,336*
Heavy Fuel Oil <sup>3</sup>	tonnes	72,649	64,769*	69,620*
Low Sulphur Heavy Fuel Oil	tonnes	415,977	381,807*	318,274*
Ultra-Low Sulphur Heavy Fuel Oil	tonnes	3,869	6,018*	3,403*
Marine Gas Oil	tonnes	109	225*	190
Low Sulphur Marine Gas Oil	tonnes	3,885	2,167*	5,371*
Ultra-Low Sulphur Marine Gas Oil	tonnes	168,074	218,848*	227,786*
Liquefied Natural Gas	tonnes	670,977	678,624*	704,076*
Diesel	Litre	419,889	347,189	5,609,360
Biodiesel <sup>E</sup>	Litre	6,400,886	5,728,249	-
Petrol	Litre	49,189	39,274	24,039
Compressed natural gas	m <sup>3</sup>	405,000	419,712	298,920
Liquefied petroleum gas	tonnes	6	8	4
Electricity	kWh	59,847,669	60,874,967*	55,453,724
Ethane	tonnes	1,221	19,902*	15,678*
Renewable energy <sup>4F</sup>	MWh	8,827	8,957	6,075

## Performance Data

Environment Pillar	Unit	2023	2022	2021
<b>ENERGY INTENSITY RATIO</b>				
<b>Breakdown by Subsidiaries</b>				
Shipping operations-GAS and Petroleum fleet	(GJ per million transport work)	85	92*	94*
Heavy & Marine Engineering	(GJ per million revenue in RM)	87	158	144
Maritime Education & Training	(GJ per million sales in RM)	158	164	167
Port Management & Maritime Services	(GJ per hour)	4	4	4
<b>WASTE</b>				
<b>NON-SHIPING OPERATIONS</b>				
<b>Total Generation General Waste/ Non-Hazardous</b>	tonnes	5,221	5,319*	4,559*
Total recycled/reuse/recovered	tonnes	152	138*	155*
Total final disposal	tonnes	5,069	5,180*	4,404*
<b>NON-SHIPING OPERATIONS</b>				
<b>Total Generation Hazardous Waste</b>	tonnes	19,094	16,449	15,805
Total waste recycled/reuse/recovered	tonnes	19,087	20,942	11,715
Total waste sent for disposal (incineration/landfill)	tonnes	17	182	7
<b>SHIPPING OPERATIONS</b>				
Ship oil sludge	m <sup>3</sup>	6,537	6,186	4,903
Ship operational effluent discharge-comprises bilge water and cargo residues	m <sup>3</sup>	63,761	47,791	45,415
Operational effluent discharge per vessel per month-bilge water	m <sup>3</sup>	30.41	28.82	26.51
Ship garbage	m <sup>3</sup>	6,974	6,689	6,492
Ship garbage disposed to reception facility	m <sup>3</sup>	5,995	5,683	5,514
Ship garbage discharged to sea -Category B	m <sup>3</sup>	470	484	450
Ship garbage incinerated onboard	m <sup>3</sup>	509	522	528
<b>WATER</b>				
<b>TOTAL FRESHWATER WITHDRAWAL</b>	m <sup>3</sup>	883,033	799,532	658,153
Total freshwater withdrawal from surface water	m <sup>3</sup>	0	0	0
Total freshwater purchased from third-party	m <sup>3</sup>	883,033	799,532	658,153
<b>WATER CONSUMPTION</b>		308,930	313,388	315,154
Water consumption (from vessels' freshwater generator)	m <sup>3</sup>	308,930	313,388	315,154



## Performance Data

Environment Pillar	Unit	2023	2022	2021
<b>BALLAST WATER</b>				
Percentage of fleet implementing ballast water exchange and treatment				
- exchange <sup>12</sup>	%	1	6	24
- treatment <sup>13</sup>	%	99	94	76
<b>SPILLS</b>				
Total spills <sup>9</sup>	Number	2	4	3
Average volume of spills and releases to the environment <sup>10</sup>	Litre	11	18,177 – 18,187	140
<b>FINES/PENALTIES AND AUDITS</b>				
Fines/penalties on environmental related non-compliance	Number	0	2	1
Audits conducted on environmental # related matters	Number	153	122	21
<b>ISO CERTIFICATION</b>				
<b>ISO 50001 ENERGY MANAGEMENT SYSTEM</b>	%	32	14	-
<b>Breakdown by Business Unit</b>				
Gas Assets & Solutions		No	No	-
Petroleum & Product Shipping		No	No	-
Offshore Business		No	No	-
Marine & Heavy Engineering		No	No	-
Marine Services (Integrated Marine Services)		No	No	-
Marine Services (Port Management & Maritime Services)		Yes	Yes	-
Maritime Education & Training		No	No	-
<b>ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM</b>	%	86	43	-
<b>Breakdown by Business Unit</b>				
Gas Assets & Solutions		No	No	-
Petroleum & Product Shipping		No	No	-
Offshore Business		Yes	Yes	-
Marine & Heavy Engineering		Yes	Yes	-
Marine Services (Integrated Marine Services)		Yes	Yes	-
Marine Services (Port Management & Maritime Services)		No	No	-
Maritime Education & Training		No	No	-

## Performance Data

## TRAINING AND AWARENESS CONDUCTED IN 2023

No	Total Number of Programmes	Total Number of Participants
1 Environment	19	1,280

## SCOPE OF ISO CERTIFICATION

Certification	Entity	Scope
ISO50001:2018 Energy Management System	Eaglestar Shipmanagement (L) Pte Ltd	Provision of Fleet Management Services
ISO50001:2011 Energy Management System	Eaglestar Shipmanagement (S) Pte Ltd	Shore Management of tanker operations
ISO 14001:2015 Environmental Management System	Eaglestar Shipmanagement (L) Pte Ltd	Provision of Fleet Management Services
	Eaglestar Shipmanagement (S) Pte Ltd	Shore Management of tanker operations
	MISC Berhad (Offshore Business)	Provision of Engineering, Procurement and Construction Management of Subcontractors, Installation, Commissioning, Operation & Maintenance and Decommissioning of Offshore Floating/Mobile Facilities.
	Malaysia Marine and Heavy Engineering Sdn. Bhd.	<ul style="list-style-type: none"> <li>Repair, Construction, Refurbishment and Conversion of Ships &amp; Marine Vessels.</li> <li>Engineering, Procurement, Construction, Hook Up, Testing &amp; Commissioning and Maintenance of Production System and Its Facilities.</li> <li>Fabrication, Testing, Commissioning and Maintenance of Onshore Production Systems and Its Facilities.</li> <li>Project Management for Transportation and Installation of Offshore Production System and Its Facilities.</li> </ul>

Note:

<sup>1-13</sup> referring to SASB indicator.\* Restated the numbers based on (1) post-IMO Data Collection System (DCS) verification on fuel related data and distance, (2) standardized the Global Warming Potential (GWP) used for CO<sub>2</sub> equivalent following the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and (3) updates in performance data as part of our ongoing improvement in environmental data inventory and reporting.<sup>#</sup> Environmental audits including compliance audit that covers the following aspect; management system, waste, pollution, water, energy use and biodiversity.<sup>A</sup> Data for biodiesel combustion from MISC's non shipping Malaysia operations only.<sup>B</sup> Data excludes six vessels fitted with scrubbers as the system configuration for quantifying SOx emissions from scrubber is ongoing.<sup>C</sup> Data for non-shipping only.<sup>D</sup> AER data calculated for total CO<sub>2</sub> emissions without any corrections or adjustment applied.<sup>E</sup> Data for MISC's non shipping Malaysia operations only.<sup>F</sup> Renewable energy from renewable energy certificate bought.

## IUCN RED LIST OF THREATENED SPECIES AT ALAM'S MANGROVE AREA

Species	Iucn Status
1 Cave Nectar Bat (Lesser Dawn Bat)- <i>Eonycteris spelaea</i>	Least Concern
2 Dusky Leaf Monkey (Dusky Langur)- <i>Trachypithecus obscurus</i>	Endangered
3 Long-Tailed Macaque- <i>Macaca fascicularis</i>	Endangered
4 Plantain Squirrel- <i>Callosciurus notatus</i>	Least Concern
5 Civet Species- <i>Paradoxurus sp.</i>	Least Concern
6 Wild Cat Species- <i>Prionailurus sp.</i>	Least Concern
7 Wild Boar- <i>Sus scrofa</i>	Least Concern

## Performance Data

Social Pillar – Health and Safety	Unit	2023	2022	2021
<b>HEALTH, SAFETY AND SECURITY</b>				
<b>WORKING HOURS</b>	Hours	65,460,000	65,293,000	48,224,000
<b>FATALITIES</b>	Number	3	0	0
Employees	Number	1	0	0
Contractor	Number	2	0	0
<b>NUMBER OF LOST TIME INJURY (LTI) <sup>1</sup></b>	Number	6	5	7
Employees	Number	2	3	5
Contractor	Number	4	2	2
<b>LOST TIME INJURY FREQUENCY (LTIF)</b>	Per 1 million man-hours	0.09	0.08	0.15
Employees	Per 1 million man-hours	0.05	0.09	0.16
Contractor	Per 1 million man-hours	0.15	0.07	0.12
<b>TOTAL RECORDABLE CASE (TRC)</b>	Number	20	9	19
Employees	Number	8	3	13
Contractor	Number	12	6	6
<b>TOTAL RECORDABLE CASE FREQUENCY (TRCF)</b>	Per 1 million man-hours	0.31	0.14	0.39
Employees	Per 1 million man-hours	0.20	0.09	0.41
Contractor	Per 1 million man-hours	0.46	0.17	0.36
<b>RATE OF OCCUPATIONAL DISEASE</b>		0.00	0.00	0.00
<b>FINES/PENALTIES/AUDITS</b>				
Incidents of non-compliance (fines and penalties) concerning the health and safety impacts of products and services	Number	0	2	2
Health and Safety Audits (as part of HSEMS assurance)	Number	25	14	21
<b>ISO CERTIFICATION</b>				
<b>ISO 45001 Occupational Health and Safety Management System/ ISO 18001 Occupational Health and Safety Management System</b>	%	86	43	-
<b>Breakdown by Business Unit</b>				
Gas Assets & Solutions		No	No	-
Petroleum & Product Shipping		No	No	-
Offshore Business		Yes	Yes	-
Marine & Heavy Engineering		Yes	Yes	-
Marine Services (Integrated Marine Services)		Yes	Yes	-
Marine Services (Port Management & Maritime Services)		No	No	-
Maritime Education & Training		No	No	-
<b>ISO 9001 Quality Management System</b>	%	98	86	-
<b>Breakdown by Business Unit</b>				
Gas Assets & Solutions		No	No	-
Petroleum & Product Shipping		Yes	Yes	-
Offshore Business		Yes	Yes	-
Marine & Heavy Engineering		Yes	Yes	-
Marine Services (Integrated Marine Services)		Yes	Yes	-
Marine Services (Port Management & Maritime Services)		Yes	Yes	-
Maritime Education & Training		Yes	Yes	-

## Performance Data

## TRAINING AND AWARENESS CONDUCTED IN 2023

No		Total Number of Programmes	Total Number of Participants
1	Safety	10	1,851
2	Health	3	1,984
3	HSSE Policy	17	2,291
4	HSSE Assurance	10	235
5	Security	5	865

## SCOPE OF ISO CERTIFICATION

Certification	Entity	Scope
ISO 45001:2018 Occupational Health and Safety Management System	MISC Berhad (Offshore business)	Provision of Engineering, Procurement and Construction Management of Subcontractors, Installation, Commissioning, Operation & Maintenance and Decommissioning of Offshore Floating/Mobile Facilities
	Eaglestar Shipmanagement (L) Pte Ltd	Provision of Fleet Management Services (Shipboard Operations)
	Eaglestar Shipmanagement (S) Pte Ltd	Management of tanker operations
ISO 9001:2015 Quality Management System	MISC Berhad (Offshore business)	Provision of Engineering, Procurement and Construction Management of Subcontractors, Installation, Commissioning, Operation & Maintenance and Decommissioning of Offshore Floating/Mobile Facilities
	AET Tankers Pte Ltd	Asset Acquisition, Commercial Management and Management of Operations of owned and in chartered vessels, commercial activity of lightering and associated support services
	Eaglestar Shipmanagement (L) Pte Ltd	Provision of Fleet Management Services
	Eaglestar Shipmanagement (S) Pte Ltd	Management of tanker operations
	Malaysia Maritime Services Sdn. Bhd.	<ul style="list-style-type: none"> <li>Provision of Maritime Services</li> <li>Provision of Corporate Support Services</li> <li>Provision of Port &amp; Terminal Management Services</li> </ul>

Note:

<sup>1</sup> Referring to SASB indicator.



## Performance Data

Social Pillar – Talent Excellence	Unit	2023	2022	2021		
<b>EMPLOYEES</b>						
<b>TOTAL EMPLOYEES</b>	Number	10,435	9,355	8,851		
<b>Employees By Location And Gender</b>						
• Sea	Number (%)	3,982 38.16%	4,270 45.60%	4,516 51.00%		
• Shore	Number (%)	6,453 61.84%	5,085 54.40%	4,335 49.00%		
<b>Female employees</b>	Number (%)	1,588 15.22%	1,308 14.00%	1,178 13.30%		
• Sea	Number (%)	72 4.53%	62 4.70%	59 5.00%		
• Shore	Number (%)	1,516 95.47%	1,246 95.30%	1,119 95.00%		
<b>Male employees</b>	Number (%)	8,847 84.78%	8,047 86.00%	7,673 86.70%		
• Sea	Number (%)	3,910 44.20%	4,208 52.30%	4,457 58.10%		
• Shore	Number (%)	4,937 55.80%	3,839 47.70%	3,216 41.90%		
<b>EMPLOYEE AGE GROUP</b>						
30 and below	Number (%)	3,016 28.90%	2,470 26.40%	2,069 23.40%		
31-50 years old	Number (%)	6,252 59.91%	5,811 62.10%	5,731 64.70%		
Over 50 years old	Number (%)	1,167 11.18%	1,074 11.50%	1,051 11.90%		
<b>EMPLOYMENT POSITION</b>						
<b>Senior Leadership</b>	Number (%)	121 1.16%	123 1.31%	108 1.22%*		
• Female	Number (%)	22 18.18%	21 17.10%	18 16.70%		
• Male	Number (%)	99 81.82%	102 82.90%	90 83.30%		
<b>Middle Management</b>	Number (%)	210 2.01%	217 2.32%	202 2.28%		
• Female	Number (%)	58 27.62%	52 23.96%	47 23.27%		
• Male	Number (%)	152 72.38%	165 76.04%	155 76.73%		
<b>Junior Management</b>	Number (%)	749 7.18%	689 7.37%	659 7.45%		
• Female	Number (%)	187 24.97%	174 25.25%	161 24.43%		
• Male	Number (%)	562 75.03%	515 74.75%	498 75.57%		
<b>Executives/Officers</b>	Number (%)	4,480 42.93%	4,244 45.37%	4,188 47.32%*		
• Female	Number (%)	798 17.81%	659 15.50%	637 15.20%		
• Male	Number (%)	3,682 82.19%	3,585 84.50%	3,551 84.80%		
<b>Non-Executives/Ratings</b>	Number (%)	4,875 46.72%	4,082 43.63%	3,694 41.74%		
• Female	Number (%)	523 10.73%	402 9.80%	320 8.70%		
• Male	Number (%)	4,352 89.27%	3,680 90.20%	3,374 91.30%		
<b>Management Position In Revenue Generating Function</b>	Number	630	476	-	-	
• Female	Number (%)	100 15.87%	101 21.20%	-	-	
• Male	Number (%)	530 84.13%	375 78.80%	-	-	

\* Restatement of data due to methodology update and data accuracy.

## Performance Data

Social Pillar – Talent Excellence	Unit	2023	2022	2021		
<b>STEM Related Function</b>	Number	5,197	3,245	-	-	-
• Female	Number (%)	881 16.95%	590 18.20%	-	-	-
• Male	Number (%)	4,316 83.05%	2,655 81.80%	-	-	-
<b>Employee basic salary by gender (Male:Female)</b>	Ratio	1.1:1	1.4:1		1.3 :1	-
<b>Employee with disability</b>	Number	5	2		3	-
Female	Number (%)	1 0.01%	1 0.01%		-	-
Male	Number (%)	4 0.04%	1 0.01%		3 0.03%	
<b>EMPLOYEE BY COUNTRIES OF OPERATIONS (SHORE EMPLOYEES ONLY)</b>						
Malaysia	Number (%)	6,108 94.65%	4,742 93.30%	3,998 92.20%		
Asia	Number (%)	224 3.47%	222 4.40%	217 5.00%		
Europe	Number (%)	26 0.40%	27 0.50%	29 0.70%		
Middle East	Number (%)	1 0.02%	1 0.00%	1 0.00%		
North and South America	Number (%)	94 1.46%	93 1.80%	90 2.10%		
<b>NATIONALITY</b>						
Malaysian	Number (%)	7,192 68.92%	6,476 69.20%	5,894 66.60%		
Non-Malaysian	Number (%)	3,243 31.08%	2,879 30.80%	2,957 33.40%		
<b>EMPLOYMENT TYPE</b>						
Permanent	Number (%)	2,756 26.41%	2,720 29.10%	2,634 29.80%		
Contract and third-party	Number (%)	7,679 73.59%	6,635 70.90%	6,217 70.20%		
<b>NEW HIRES</b>						
<b>Total shore new hires</b>	Number	2,235	1,504	-	1,189	-
<b>By age group</b>						
30 and below	Number (%)	1,257 56.24%	830 55.19%*	294 24.70%		
31-50 years old	Number (%)	912 40.81%	615 40.89%*	776 65.30%		
Over 50 years old	Number (%)	66 2.95%	59 3.92%*	119 10.00%		
<b>By gender</b>						
Female	Number (%)	470 21.03%	1,208 80.32%*	371 31.20%		
Male	Number (%)	1,765 78.97%	296 19.68%*	818 68.80%		
<b>By Management Level</b>						
Junior Management	Number (%)	97 4.34%	-	-	-	-
Middle Management	Number (%)	17 0.76%	-	-	-	-
Senior/Top Management	Number (%)	16 0.72%	-	-	-	-
<b>By countries of operations</b>						
Malaysia	Number (%)	2,179 97.49%	1,447 96.21%*	1,096 92.18%*		
Asia	Number (%)	29 1.30%	33 2.19%*	54 4.54%*		
Europe	Number (%)	4 0.18%	5 0.33%*	11 0.93%*		
North and South America	Number (%)	23 1.03%	19 1.26%*	28 2.35%*		

\* Restatement of data due to methodology update and data accuracy.

## Performance Data

Social Pillar – Talent Excellence	Unit	2023		2022		2021	
<b>AVERAGE HIRING COST</b>	USD	885		1,606		-	-
<b>Internal mobility</b>	Number	832		1,148		-	-
Female	Number (%)	233	28.00%	259	22.60%	-	-
Male	Number (%)	599	72.00%	889	77.40%	-	-
<b>Total seafarers' new hires</b>	Number	165		303		403	-
<b>TURNOVER</b>							
<b>Total shore turnover</b>	Number	898		795		598	
<b>By age group</b>							
30 and below	Number (%)	357	39.76%	268	33.71%*	222	37.12%*
31-50 years old	Number (%)	456	50.78%	423	53.21%*	276	46.16%*
Over 50 years old	Number (%)	85	9.47%	104	13.08%*	100	16.72%*
<b>By gender</b>							
Female	Number (%)	202	22.49%	196	24.65%*	127	21.24%*
Male	Number (%)	696	77.51%	599	75.35%*	471	78.76%*
<b>By countries of operations</b>							
Malaysia	Number (%)	858	95.55%	719	90.44%*	539	90.14%*
Africa	Number (%)	-	-	-	-	-	-
Asia	Number (%)	22	2.45%	45	5.66%*	28	4.68%*
Europe	Number (%)	3	0.33%	7	0.88%*	14	2.34%*
North and South America	Number (%)	15	1.67%	24	3.02%*	17	2.84%*
<b>By Employee Category</b>							
Junior Management	Number (%)	97	10.80%	-	-	-	-
Middle Management	Number (%)	33	3.67%	-	-	-	-
Senior/Top Management	Number (%)	23	2.56%	-	-	-	-
<b>Total seafarers' turnover</b>	Number	584		566		392	
<b>Total voluntary turnover</b>	Number	916		319		311	
<b>RATE OF ABSENTEEISM</b>							
<b>By age group</b>							
30 and below	Number (%)	95	84.08%	141	46.08%*	-	-
31-50 years old	Number (%)	17	15.04%	137	44.77%*	-	-
Over 50 years old	Number (%)	1	0.88%	28	9.15%*	-	-
<b>By gender</b>							
Female	Number (%)	-	-	2	0.70%	-	-
Male	Number (%)	113	100%	304	99.30%	-	-

\* Restatement of data due to methodology update and data accuracy.

## Performance Data

Social Pillar – Talent Excellence	Unit	2023		2022		2021	
<b>SEAFARERS' THAT JOINED CORPORATE POSITION</b>	Number	8		2		7	
Female	Number	0		2		1	
Male	Number	8		-		6	
<b>KEY TALENT DEVELOPMENT</b>							
Average training hours-by employee category and gender	Hours	30		24		-	
<b>Executive/Officers</b>	Hours	43		28		26	
Female	Hours	34		35		-	
Male	Hours	20		26		-	
<b>Non-Executive/Ratings</b>	Hours	15		19		19	
Female	Hours	21		23		-	
Male	Hours	21		19		-	
<b>Number of training days</b>	Days	35,953		31,708		-	
Female	Days	6,306		5,669		-	
Male	Days	29,646		26,039		-	
<b>Percentage of employees trained</b>	%	79		81		-	
Female	%	90		85*		-	
Male	%	78		81*		-	
<b>Total Hours of Training by Employee Category</b>							
Senior/Top Management	Hours	4,634		-		-	
Middle Management	Hours	9,058		-		-	
Junior Management	Hours	73,680		-		-	
Executives/Officers	Hours	70,919		-		-	
Non-Executives/Ratings	Hours	64,666		-		-	
<b>Total amount training invested</b>	USD (million)	11.9		17.9		14.8	
Average amount invested per employee	USD	1,143		1,919		1,673	
<b>Human Capital Return on Investment</b>	MYR	Reported in IAR – Financial Report					

\* Restatement of data due to methodology update and data accuracy.



## Performance Data

Social Pillar – Talent Excellence	Unit	2023		2022		2021	
<b>PERFORMANCE MANAGEMENT</b>							
<b>Performance appraisal</b>	%	100.00		100.00		-	
Female	%	17.23		12.90		-	
Male	%	82.77		87.10		-	
<b>PARENTAL LEAVE</b>							
<b>Employees taking Parental Leave</b>	Number	160		157	-	163	-
Female	Number (%)	67	41.88%	49	31.20%	49	30.00%
Male	Number (%)	93	58.13%	108	68.80%	114	70.00%
<b>Employees returned after Parental Leave ended</b>	Number	154		155		157	-
Female	Number (%)	61	39.61%	47	30.30%	43	27.40%
Male	Number (%)	93	60.39%	108	69.70%	114	72.60%
<b>Employees who returned after Parental Leave ended and still employed 12 months after return to work</b>	Number	151		150		155	-
Female	Number (%)	61	40.40%	44	29.30%	43	27.70%
Male	Number (%)	90	59.60%	106	70.70%	112	72.30%
<b>EMPLOYEE ENGAGEMENT</b>							
<b>Employee engaged</b>	%	95		95		-	-
<b>UNIONISED EMPLOYEES</b>	Number (%)	1,248	11.96%	1,302	13.90%	1,267	14.30%
<b>Breakdown by countries of operations</b>							
Malaysia	Number (%)	289	23.20%	364	28.00%	-	-
Singapore	Number (%)	0	0.00%	-	0.00%	-	-
United Kingdom	Number (%)	0	0.00%	-	0.00%	-	-
United States of America	Number (%)	0	0.00%	-	0.00%	-	-
Japan	Number (%)	0	0.00%	-	0.00%	-	-
Brazil	Number (%)	10	0.80%	9	0.70%	-	-
Others	Number (%)	949	76.00%	929	71.40%	-	-

## Performance Data

## TRAINING AND AWARENESS CONDUCTED IN 2023

Training Type	Programme Name	Content Description	Number of Participants
<b>Leadership Pathway– Leader+ Series</b>	<ul style="list-style-type: none"> <li>Young Leaders Programme (YLP) for Executives</li> <li>Emerging Leaders Programme (ELP) for Managers</li> <li>Strategic Leaders Programme (SLP) for Senior Managers and General Managers</li> </ul>	<ul style="list-style-type: none"> <li>Leaders+ Series is a six-month accelerated development programme to equip MISC Group's Successors and High Potentials with new skills, experience and perspective. The programme helps them be impactful at work, close their gaps and increase their readiness to assume greater roles.</li> <li>The programme is delivered through a blended approach that combines experiential and cognitive elements comprising of engaging lectures coupled with group work, exercises, case studies, simulations, role-play and action learning projects to provide a fully immersive learning experience.</li> <li>The programmes sharpen participants' skillsets and increase their ability to solve challenges and they are given access to faculty who shares thorough research and novel approaches to problem-solving.</li> <li>The skills and knowledge gained from the programme will enhance learners' leadership competencies and promote the right behaviour, which will have a lasting impact on the teams they lead, communities they serve and the entire organisation.</li> </ul>	YLP: 72 ELP: 66 SLP: 74
<b>Leadership Pathway– Signature Series</b>	<ul style="list-style-type: none"> <li>Executive Excellence Series (EES) for Non-Executives, Team Administrators and Secretaries</li> <li>Executive Development Series (EDS) for Executives</li> <li>Managers Foundation Series (MFS) for New Managers</li> <li>Managers Development Series (MDS) for Managers</li> <li>Senior Leaders Series (SLS) for Senior Managers and above</li> </ul>	<ul style="list-style-type: none"> <li>Signature series are one-to two-years programme delivered through a blended approach that combines experiential and cognitive elements comprising of engaging lectures coupled with group work, exercises, case studies, simulations, role plays and action learning projects to provide a fully immersive learning experience.</li> </ul>	EES: 44 EDS: 100 MFS: 36 MDS: 71 SLS:14
<b>Other Leadership Programmes</b>	<ul style="list-style-type: none"> <li>Online Leadership Programmes</li> <li>Self-learning and e-learning content such as Harvard ManageMentor (HMM) and Skillsoft</li> <li>Programmes such as Critical Thinking &amp; Problem Solving, Coaching, Crisis Management, Diversity, Learning Agility for the Future of Work, Becoming Agile</li> <li>Eaglestar's Leadership Programmes</li> </ul>	<ul style="list-style-type: none"> <li>Collaborated with external learning partners to convert the content of our leadership programmes into virtual platforms.</li> <li>Addressed mindset change, creative problem-solving and communication gaps.</li> <li>Developed the next generation of leaders for the organisation through a structured employee succession planning programme that supports workers by identifying gaps in their skillsets and conducting planned interventions to enhance their capabilities.</li> </ul>	28,225
<b>Functional and Technical Skills Development</b>	<ul style="list-style-type: none"> <li>Oil and Gas Safety Passport</li> <li>Professional Scrum Master</li> <li>Project Management Essentials</li> <li>Project Management Professional (PMP) Certification</li> <li>Rotating Equipment Masterclass</li> <li>First Aider training</li> </ul>	<ul style="list-style-type: none"> <li>Addressed the specific needs of groups of employees, such as training engineering employees to support the Group's business expansion into the global market.</li> </ul>	42,569

## Performance Data

Governance Pillar	Unit	2023	2022	2021
<b>Anti-Bribery and Corruption</b>				
Anti-bribery Management System (ABMS)	Number	18	22	8
Number of assurances *				
Percentage of operations assessed for corruption-related risks	%	6	-	-
Confirmed incidents of corruption and action taken	Number	0	-	-
Monetary losses as a result of legal proceedings associated with bribery or corruption	Number	0	0	0
<b>Whistleblowing</b>				
Number of cases received	Number	35	7	14
Number of cases on-going	Number	11	0	0
Number of cases investigated	Number	35	3	14
Number of cases closed	Number	24	6	14
<b>Competition Protocols and Other Critical Laws</b>				
Legal actions for anti-competitive behaviour, anti-trust, monopoly practices and other critical law	Number	0	0	0
<b>Personal Data and Information</b>				
Complaints concerning breaches of customer privacy and losses of customer data	Number	0	0	0
Substantiated complaints from regulatory	Number	0	0	0
Substantiated complaints from external	Number	0	0	0
<b>Public Policy Positions/Political Contributions</b>				
Contribution to politically-related agenda	Number	0	0	0
Expenditure on lobbying activities	Number	0	0	0
<b>Third-party Compliance Due Diligence</b>				
Compliance due diligence and risk assessment completed	Number	473	251	327
<b>Cybersecurity</b>				
Number of major cybersecurity incidents	Number	0	0	1
<b>CODE OF CONDUCT AND BUSINESS ETHICS</b>				
<b>Coverage</b>				
Employees	%	100	100	-
Contractors/suppliers/service providers	%	100	100	-
Subsidiaries	%	100	100	-
Joint Ventures (incl. stakes above 10%)	%	58	64	-
<b>Written/Digital Acknowledgement</b>				
Employees	%	100	100	-
Contractors/suppliers/service providers	%	83	56	-
Subsidiaries	%	93	99	-
Joint Ventures (incl. stakes above 10%)	%	33	15	-

\* Anti-bribery and corruption related assurances covering ISO ABMS internal and external audits and CLAs functional checklist through myAssurance.

## Performance Data

Governance Pillar	Unit	2023	2022	2021
<b>Training provided</b>				
Employees	%	100	100	-
Contractors/suppliers/service providers	%	7	8	-
Subsidiaries	%	58	96	-
Joint Ventures (incl. stakes above 10%)	%	78	24	-
<b>Audits</b>				
Audit on five critical legal areas	Number	0	6	-
<b>Human Rights</b>				
Number of training sessions conducted	Number	2	4	8
Human Rights Risk Assessment conducted	Number	2	2	2
Employees trained of human rights	Number	2,801	2,767	1,461
Number of harassment and discrimination	Number	0	0	-
<b>Supply Chain</b>				
<b>SUPPLIER SCREENING</b>				
<b>Tier 1 supplier</b>				
Total Tier-1 suppliers	Number	2,466	-	-
<b>Significant suppliers in Tier-1</b>				
Total significant suppliers in Tier-1	Number	183	-	-
Percentage of total spend on significant suppliers in Tier-1	%	28	-	-
<b>Total number of significant suppliers in non Tier-1</b>	Number	N/A	-	-
<b>Total number of significant suppliers (Tier-1 and non-tier-1)</b>	Number	2,466	-	-
<b>SUPPLIER ASSESSMENT</b>				
Total number of suppliers assessed via desk assessments/on-site assessments	Number	137	-	-
Percentage of significant suppliers assessed	%	61	-	-
Number of suppliers assessed with substantial actual/potential negative impacts	Number	6	-	-
Percentage of suppliers with substantial actual/potential negative impacts with agreed corrective action/improvement plan	%	67	-	-
Number of suppliers with substantial actual/potential negative impacts that were terminated	Number	N/A	-	-



## Performance Data

Supply Chain	Unit	2023	2022	2021
<b>SUPPLIERS WITH CORRECTIVE ACTION PLANS</b>				
Total number of suppliers supported in corrective action plan implementation	Number	4	-	-
Percentage of suppliers assessed with substantial actual/potential negative impacts supported in corrective action plan implementation	%	67	-	-
<b>Suppliers Capacity Building Programme</b>				
Total number of suppliers in capacity building programmes	Number	N/A	-	-
Percentage of significant suppliers in capacity building programmes	%	N/A	-	-
Proportion of spending on local suppliers	%	60	-	-

### TRAINING AND AWARENESS CONDUCTED IN 2023

No	Total Number of Programmes	Total Number of Participants	
1	Compliance and business ethics	19	3,711
2	Cybersecurity	3	1,984
3	Webinar on new Coupa Supplier Portal	1	145

Note:  
Compliance and business ethics related trainings and awareness sessions covering six critical legal areas i.e. Ethics and Integrity, Sanctions, Export Control, Data Privacy, Competition and Human Rights.

### SCOPE OF ISO CERTIFICATIONS

Certification	Entity	Scope
ISO 37001:2016 Anti-Bribery Management System	MISC Berhad	Anti-Bribery Management System covering integrity and compliance processes, procurement, vendor management and business development for GAS Business and Offshore Business segments.
	Malaysia Marine and Heavy Engineering Sdn. Bhd.	Anti-Bribery Management System for yard operation and its corporate services of Marine Operations and Heavy Engineering Operations.
	AET Tankers Pte. Ltd.	Asset acquisition, commercial management and management of operations of owned and in chartered vessels including provision of ship lightering and support services.
	MISC Maritime Services Sdn. Bhd.	Provision of support services, Port & Terminal Management services & Maritime services, at all regional sites where MMS operates namely in East & West Coast, Peninsular Malaysia and East Malaysia.
	Eaglestar	The application of anti-bribery management systems on processes supporting the provision of fleet management (shipboard crewing, operating, maintaining, managing fleet of vessels including but not limited to, VLECs, LBVs, LNGCs, LNG dual-fuel petroleum tankers and DPSTs, LNG FSUs and MCVs.

## Reporting Principles & Data Assumptions

### REPORTING APPROACH

The sustainability reporting principles of stakeholder inclusiveness, sustainability context, materiality and completeness have been applied when defining the content. Accuracy, balance, clarity, comparability, reliability and timeliness have also been considered.

### PRECAUTIONARY PRINCIPLES

We support a precautionary approach to social and environmental challenges. Many initiatives have been implemented to promote the development of sustainable solutions and innovations including effectively managing assets, business activities and project work. We have also collaborated with industry partners and both professional and technical organisations.

We have established a group-wide risk management system that identifies and assesses risks systematically. This system ensures that the Company's focus and stakeholders' expectations are balanced when combined with a thorough materiality assessment.

### INFORMATION ON EXCLUSIONS

Our approach to exclusions is based on our Group-wide sustainable business risk framework. Information which we are unable to verify is excluded from the report.

### SUSTAINABILITY FRAMEWORK

This Sustainability Report has been prepared in accordance with several local and international sustainability standards and frameworks indicated on page 3 of this report.

Our reporting period covers the period from 1 January to 31 December 2023, unless specified and any material events that occurred after this date up to the date of publication.

### SCOPE

Except for GHG data, all our sustainability performance data are reported based on operational control. Based on the operational control scope, data are accounted from assets or facilities where MISC or its subsidiaries have the authority to introduce and implement our operational and HSE policies. Please refer to the scope for GHG data under the Environment Pillar in this section.

### CONSOLIDATION

For operational scope, 100% of the data reported is accounted for irrespective of the percentage of ownership where MISC has operational control. Assets and operations, in which MISC does not have operational control, are excluded. Please refer to the operational scope for GHG data under the Environment Pillar in this section.

### ENVIRONMENT PILLAR



#### GHG Data

##### Scope

We adopt the GHG Protocol Corporate Standard's financial control approach for our GHG emissions (Scope 1 and 2) accounting which includes assets owned or leased that are used by MISC to gain economic benefits, with the exclusion of the following assets and operations:

- Downstream leased assets which are owned by MISC but leased out to other parties;
- Assets where MISC has minority equity ownership and no control;
- Upstream leased assets where MISC has no control; and
- Short-term leases with a lease term of 6 months or less.

The above-listed assets from our operations will be included in our Scope 3 GHG emissions (where material). The followings gases are included in our GHG accounting:

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Ethane (C<sub>2</sub>H<sub>6</sub>) – from our VLECs which uses ethane as fuel.

## Reporting Principles & Data Assumptions

## Reporting Principles & Data Assumptions

● **Consolidation**

Emissions from the assets and facilities where MISC has financial control are accounted as MISC's Scope 1 and 2 emissions in full (100% of the emissions), except for JV assets. JV assets where MISC has joint financial control over the operations are accounted as Scope 1 or 2, with emissions apportioned according to MISC's ownership share of the venture. JVs in which MISC does not have financial control, are excluded.

Scope 3 emissions included in this report are emissions assessed as material for MISC in accordance with the following Scope 3 materiality definition:

1. Scope 3 categories covering the top two-thirds of the total Group's Scope 3 emissions.
2. Operational emissions from assets not accounted as Scope 1 and 2 of which fall under the following Scope 3 categories:
  - Leased vessels where MISC has no financial control;
  - Vessels owned by MISC but leased out to other parties and MISC has no financial control; and
  - Vessels which MISC has equity ownership but not accounted in Scope 1 and 2.

Based on the definition of materiality adopted and screening of emissions on all relevant Scope 3 categories, five out of a total 15 categories were assessed to be material for MISC. These include Category 1 i.e., purchased goods and services from our Marine & Heavy Engineering segment, Category 3 i.e., fuel and energy related activities, Category 8 i.e., in-chartered vessels where MISC is the commercial operator only (neither the vessel owner nor have technical control), Category 13 i.e., our offshore assets which are leased out to customers for offshore oil and gas extraction and Category 15 i.e., vessels which are jointly owned by MISC and other parties, where we have equity ownership but do not have control.

Scope 3 categories 2, 4, 5, 6 and 7 are relevant but does not meet the materiality threshold and definition adopted by MISC. Though not material, Category 6 (Business related travels) and Category 7 (employee commuting) are monitored and reported separately. Please refer to the Performance Data Metrics section (Environment Pillar) for more details. Categories related to product and franchise (Category 9-12 and Category 14) are assessed as not relevant for our business. A similar consolidation approach for our Scope 1 and 2 emissions, according to the financial consolidation methodology, is adopted for our Scope 3 emissions.

● **Third-Party Assurance**

Each of our vessel's fuel consumption and relevant activity data used for our emission accounting have been verified by a third-party i.e., ABS confirming the data were collected and reported in accordance with the methodology and processes set out in the ship's SEEMP as required by Regulation 22A of Annex VI of MARPOL Convention.

Vessel's fuel consumption and relevant activity data are reported and consolidated through an online reporting tool, with ship specific plausibility checks that provides data validation, alert generation and thus improving data quality.

Our internal team has been constantly monitoring the reporting processes and any changes or updates required are made promptly to maintain continuous veracity.

● **GHG Emissions Calculations**

The methodology MISC has adopted for the quantification of GHG emissions is through the application of documented emission factors. GHG emissions from our marine combustion sources are calculated in accordance with the IMO guidelines and uses emission factors as published by IMO. Two primary references are used namely the Fourth IMO GHG Study 2020 and the Guidelines for Voluntary Use of the Ship Energy Efficiency Operational Indicator (EEOI). Methane/ethane emissions from our LNG dual-fuel engines are calculated using engine specific methane/ethane slip levels.

Methane emissions from all other vessels (non dual-fuel engine) and nitrous oxide emissions are calculated using emission factors published in the Fourth IMO GHG Study 2020. For non-marine sources, our primary scheme used is the 2006 IPCC Guidelines for National GHG Inventories (IPCC). Specific elements not available in the IPCC and US EPA emission factors are used. We measure our vessel's carbon intensity performance using two metrics as follows:

● **Annual Efficiency Ratio (AER)**

- AER measures a vessel's total CO<sub>2</sub> per transport work (unit is gCO<sub>2</sub>/t-nm)
- Transport work is calculated by multiplying the vessel's deadweight with the distance travelled
- AER is chosen to align with the metric adopted by IMO for ships CII scheme applicable for tankers and LNGCs which effects in 2023.

At the MEPC 78 meeting, IMO approved correction factors applicable on some of MISC's ship types. These correction factors allow for adjustments on the attained AER equation and excludes some portion of emissions from the calculation. The AER reported in the Performance Data Metrics however are calculated for total emissions of MISC's vessels without any corrections or adjustments applied.

● **GHG Intensity (AERCO<sub>2e</sub>)**

- Measures a vessel's total emissions of carbon, methane and nitrous oxide using a common unit termed as carbon dioxide equivalent per transport work (gCO<sub>2e</sub>/t-nm).
- Transport work is calculated by multiplying the vessel's deadweight with the distance travelled.

Indicator	Assumptions
Vessel garbage	Sum of all garbage categories in volumetric unit (m <sup>3</sup> ) disposed to reception facilities, discharged to sea and incinerated, as recorded in the vessel's Garbage Record Book.
Operational effluent discharge	Sum of the volumes of bilge water and cargo residues discharged to sea and at shore reception facility, as recorded in the vessel's Oil Record Book.
Hazardous waste	Sum of all hazardous waste types generated from MISC's shore operations.  Hazardous wastes managed through reuse, recovery and recycle (3R) is the sum of all hazardous waste types generated which are sent to 3R facilities and excludes the quantity of hazardous wastes sent to final disposal sites i.e. landfill or incineration sites.
Non-hazardous waste	Sum of all non-hazardous waste types generated from MISC's shore operations.  For ALAM and Wisma MISC, assumptions are used to estimate the non-hazardous waste generation, when actual data is not available.
Freshwater withdrawal	Actual volume of freshwater drawn into MISC facilities from municipal supply, as recorded in water bills.
Spill	Unplanned or uncontrolled releases of liquid or solid associated with current operations from primary or secondary containment, into the environment. (i.e., soil and surface water)
Average EEDI for new vessels	Total EEDI for new vessels divided by total number of new vessels.
Fines/penalties	A sum of money required to be paid to the regulatory agency/local authority as a penalty for an offence such as non-compliance with rules and regulations.



## Reporting Principles & Data Assumptions

### SOCIAL PILLAR



#### Health and Safety

Data regarding working hours, fatalities, injuries and recordable cases under the health and safety are reported through our consolidated reporting tool based on submitted data from all reporting entities within the Group.

Indicator	Assumptions
LTI	The Sum of Fatalities, Permanent Total Disabilities (PTD), Permanent Partial Disabilities (PPD) and Lost Workday Cases (LWC) but excluding Restricted Work Cases (RWC) and Medical Treatment Cases (MTC).
LTIF	The number of Lost Time Injuries per million hours worked.
TRC	The sum of Fatalities, Permanent Total Disabilities (PTD), Permanent Partial Disabilities (PPD), Lost Workday Cases (LWC), Restricted Workday Cases (RWC) and Medical Treatment Cases (MTC).
TRCF	The number of Total Recordable Cases per million hours worked.
Working Hours	Actual "hours worked" including overtime and training but excluding off-duty hours (although the time is spent at the worksite or premise), leave, sickness and other absences.  For shipping operations (Eaglestar), man-hours accumulation starts when the employee signs on and ends when the employees sign off from the vessel.
Work-related	Work-related is described as those activities for which management controls are, or should have been, in place. Incidents occurring during such activities are reportable and will be included in the statistics.
Fines/penalties	A sum of money required to be paid to the regulatory agency/local authority as a penalty for an offence such as non-compliance with rules and regulations. This shall include traffic summons and fines by municipal bodies issued to company-owned vehicles.
Significant Investment Agreement and Contracts	Human rights clauses are already included as part of requirements in significant investments agreements and contracts that require approval at higher level i.e. PGCEO and Board. (MISC Berhad only).

## Reporting Principles & Data Assumptions

### Talent Excellence

Data regarding number of employees and seafarers, gender, employment position, age group, nationality, new hires, turnover, training hours, parental leaves and collective bargaining are generated through SAP System (HR System).

Indicator	Assumptions
Average Hiring Cost	The average hiring cost includes internal and external recruiting cost e.g. recruiter salaries, interviews, agency fees, advertising, job fairs, travel and relocation costs.
Average Training Hours	Total training hours divided by the total number of employees.
Employee Engaged	Engaged employee is based on active employees participating in the company's scaled employee engagement surveys-POCS.
Headcounts	Regular employees excluding those on unpaid leave as of 31 <sup>st</sup> December. Permanent and contract employees, third-party, JVs and project are included in the scope.
Junior Management	Represent Manager unless if specifically stated otherwise.
Management position in Revenue Generating Functions	Refers to management roles in departments such as sales, or that contribute directly to the output of products or services. It excludes support functions such as HR, IT, Legal. May also be referred to as roles that have P&L responsibility.
Middle Management	Represent Manager and Senior Manager unless if specifically stated otherwise.
Performance Appraisal	All eligible employees will undergo formal performance evaluation during year-end review and will be given performance rating based on the performance rating scale.
Rate of absenteeism	Absenteeism is non attendance at work when attendance was scheduled or expected i.e. AWOL/MIA.
Senior Leadership	Represent General Manager and above unless if specifically stated otherwise.
Unionised Employees	Employee who is eligible and opted to join a union that is recognised by the company.
Management Position in Revenue Generating Functions	Refers to management roles in departments such as sales, or that contribute directly to the output of products or services. It excludes support functions such as HR, IT, Legal. May also be referred to as roles that have P&L responsibility.
STEM Related Function	Refers to roles that use their knowledge of Science, Technology, Engineering and Mathematics (STEM) in their daily responsibilities.
Talent Retention	Cover only high-performing employees.

### GOVERNANCE PILLAR



Data regarding number of anti-bribery and corruption, whistleblowing, competition protocol and other critical laws, personal data and information, political contribution, third-party due diligence, human rights and cybersecurity are generated through internal data consolidation system.

Indicator	Assumptions
Major Cybersecurity Breach	A cybersecurity breach that has major adverse impact on any of our asset, data, environmental, functional, people or reputation per MISC Cybersecurity Incident Response Plan definitions.

## Sustainability Reporting Standards & Disclosures

### Bursa Malaysia Common Sustainability Matters and Indicators

Indicator	Measurement Unit	2021	2022	2023
<b>Bursa (Anti-corruption)</b>				
Bursa C1(a) Percentage of employees who have received training on anti-corruption by employee category				
Management	Percentage	-	100.00	100.00
Executive	Percentage	-	100.00	100.00
Non-executive	Percentage	-	100.00	100.00
Bursa C1(b) Percentage of operations assessed for corruption-related risks	Percentage	-	-	6.00
Bursa C1(c) Confirmed incidents of corruption and action taken	Number	-	-	0
<b>Bursa (Community/Society)</b>				
Bursa C2(a) Total amount invested in the community where the target beneficiaries are external to the listed issuer	MYR	-	-	29,600,000.00
Bursa C2(b) Total number of beneficiaries of the investment in communities	Number	-	-	829
<b>Bursa (Diversity)</b>				
Bursa C3(a) Percentage of employees by gender and age group, for each employee category				
Age Group by Employee Category				
Management 30 and below	Percentage	No Data Provided	No Data Provided	0.28
Management Between 31-50	Percentage	No Data Provided	No Data Provided	74.26
Management Above 50	Percentage	No Data Provided	No Data Provided	25.46
Executive 30 and below	Percentage	No Data Provided	No Data Provided	25.71
Executive Between 31-50	Percentage	No Data Provided	No Data Provided	66.70
Executive Above 50	Percentage	No Data Provided	No Data Provided	7.59
Non-executive 30 and below	Percentage	No Data Provided	No Data Provided	38.19
Non-executive Between 31-50	Percentage	No Data Provided	No Data Provided	50.48
Non-executive Above 50	Percentage	No Data Provided	No Data Provided	11.32
Gender Group by Employee Category				
Management Male	Percentage	77.10	76.00	75.28
Management Female	Percentage	22.90	24.00	24.72
Executive Male	Percentage	84.80	84.50	82.19
Executive Female	Percentage	15.20	15.50	17.81
Non-executive Male	Percentage	91.30	90.20	89.27
Non-executive Female	Percentage	8.70	9.80	10.73
Bursa C3(b) Percentage of directors by gender and age group				
Male	Percentage	-	-	60.00
Female	Percentage	-	-	40.00
30 and below	Percentage	-	-	0.00
Between 31-50	Percentage	-	-	0.00
Above 50	Percentage	-	-	100.00

Internal assurance External assurance No assurance

(\*)Restated

## Sustainability Reporting Standards & Disclosures

### Bursa Malaysia Common Sustainability Matters and Indicators

Indicator	Measurement Unit	2021	2022	2023
<b>Bursa (Energy management)</b>				
Bursa C4(a) Total energy consumption	Megawatt	16,842,316.90	17,109,583.31	16,634,887.44
<b>Bursa (Health and safety)</b>				
Bursa C5(a) Number of work-related fatalities	Number	0	0	3
Bursa C5(b) Lost time incident rate ("LTIR")	Rate	0.15	0.08	0.09
Bursa C5(c) Number of employees trained on health and safety standards	Number	-	-	6,361
<b>Bursa (Labour practices and standards)</b>				
Bursa C6(a) Total hours of training by employee category				
Management	Hours	-	-	87,372
Executive	Hours	-	-	70,919
Non-executive	Hours	-	-	64,666
Bursa C6(b) Percentage of employees that are contractors or temporary staff	Percentage	70.20	70.90	73.59
Bursa C6(c) Total number of employee turnover by employee category				
Management	Number	-	-	153
Executive	Number	-	-	284
Non-executive	Number	-	-	461
Bursa C6(d) Number of substantiated complaints concerning human rights violations	Number	-	0	0
<b>Bursa (Supply chain management)</b>				
Bursa C7(a) Proportion of spending on local suppliers	Percentage	-	-	60.00
<b>Bursa (Data privacy and security)</b>				
Bursa C8(a) Number of substantiated complaints concerning breaches of customer privacy and losses of customer data	Number	0	0	0
<b>Bursa (Water)</b>				
Bursa C9(a) Total volume of water used	Megalitres	315.150000	313.390000	308.930000

Note:

- <sup>1</sup> This performance table is generated from the Bursa ESG reporting platform and has not been edited in any way.  
<sup>2</sup> Hyphens and "No Data Provided" refer to data previously undisclosed which MISC started tracking in 2023.

Internal assurance External assurance No assurance

(\*)Restated



## Sustainability Reporting Standards & Disclosures

### GRI Content Index

MISC has reported the information cited in this GRI content index for the period between 1 January 2023 to 31 December 2023 with reference to the GRI Standards.

GRI Content Index	Location of the disclosures	Page No.
<b>GRI 1: Foundation 2021</b>		
<b>GRI 2: General Disclosures 2021</b>		
GRI 2-1: Organisational details	About This Report	2, 7
GRI 2-2: Entities included in the organisation's sustainability reporting		
GRI 2-3: Reporting period, frequency and contact point	About this Report	2, 6 - 13
GRI 2-4: Restatement of information		
GRI 2-5: External assurance		
GRI 2-6: Activities, value chain and other business relationships	Who We Are What We Do How We Move Energy	6 - 13
GRI 2-7: Employees	Performance Data-Social Pillar-Talent Excellence	198 - 199
GRI 2-8: Workers who are not employees		
GRI 2-9: Governance structure and composition		
GRI 2-11: Chair of the highest governance body		
GRI 2-12: Role of the highest governance body in overseeing management of impacts	Sustainability Governance	30 - 32
GRI 2-13: Delegation of responsibility for managing impact		
GRI 2-14: Role of the highest governance body in sustainability reporting		
GRI 2-15: Conflicts of interest		
GRI 2-16: Communication of critical concerns	• Integrated Annual Report 2023 – Corporate Governance Overview Statement	180 -181
GRI 2-17: Collective knowledge of the highest governance body	• Operating Responsibly	
GRI 2-18: Evaluation of the performance of the highest governance body		
GRI 2-19: Remuneration policies	Integrated Annual Report 2023 – Nomination & Remuneration Committee Report	
GRI 2-20: Process to determine remuneration		
GRI 2-21: Annual total compensation ratio		
GRI 2-22: Statement on sustainable development strategy	Chairman's Message	14 - 15
GRI 2-23: Policy commitments	• About this Report • Operating Responsibly • Respecting Human Rights at Sea and Shore	2 - 3, 159 - 160 171
GRI 2-24: Embedding policy commitments	• Operating Responsibly • Respecting Human Rights at Sea and Shore	159 - 160, 171
GRI 2-25: Process to remediate negative impacts	Respecting Human Rights at Sea & Shore	165
GRI 2-26: Mechanism for seeking advice and raising concerns		165, 175,
GRI 2-27: Compliance with laws and regulations	Operating Responsibly	180 - 181
GRI 2-28: Membership associations		
GRI 2-29: Approach to stakeholder engagement	• Our Stakeholders' Universe	38 - 58
GRI 2-30: Collective bargaining agreements	• Our People, Our Strength • Performance Data	155, 206
<b>GRI 3: Material Topics 2021</b>		
GRI 3-1: Process to determine material topics	• Prioritising What Matters Most	
GRI 3-2: List of material topics	• Throughout the report	33 - 37
GRI 3-3: Management of material topics		

## Sustainability Reporting Standards & Disclosures

### GRI Content Index

GRI Content Index	Location of the disclosures	Page No.
<b>GRI 201: Economic Performance 2016</b>		
Disclosure 201-1: Direct economic value generated and distributed	• Economic Value Creation • Integrated Annual Report 2023-Financial Review	64, 73 - 81
Disclosure 201-2: Financial implications and other risks and opportunities due to climate change	• Climate-related Financial Disclosures Report 2023	
Disclosure 201-3: Defined benefit plan obligations and other retirement plans	Our People, Our Strength	148
<b>GRI 203: Indirect Economic Impacts 2016</b>		
Disclosure 203-1: Infrastructure investments and services supported	Economic Value Creation	67 - 72
Disclosure 203-2: Significant indirect economic impacts		
<b>GRI 204: Procurement Practices 2016</b>		
Disclosure 204-1: Proportion of spending on local suppliers	Performance Data-Governance Pillar	206
<b>GRI 205: Anti-corruption 2016</b>		
Disclosure 205-1: Operations assessed for risks related to corruption		
Disclosure 205-2: Communication and training about anti-corruption policies and procedures	• Operating Responsibly • Performance Data-Governance Pillar	172 - 173, 177, 204
Disclosure 205-3: Confirmed incidents of corruption and action taken		
<b>GRI 206: Anti-competitive Behaviour 2016</b>		
Disclosure 206-1: Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	Operating Responsibly	179, 204
<b>GRI 207: Tax 2019</b>		
Disclosure 207-1: Approach to tax		
Disclosure 207-2: Tax governance, control and risk management	Economic Value Creation	65 - 66
Disclosure 207-3: Stakeholder engagement and management of concerns related to tax		
Disclosure 207-4: Country-by-country reporting	Performance Data – Financial Pillar	65 - 66, 190
<b>GRI 302: Energy 2016</b>		
Disclosure 302-1: Energy consumption within the organisation		
Disclosure 302-2: Energy consumption outside of the organisation		
Disclosure 302-3: Energy intensity	• Our Decarbonisation Pathway • Performance	100, 192 - 193
Disclosure 302-4: Reduction of energy consumption	Data-Environmental Pillar	
Disclosure 302-5: Reduction in energy requirements of products and services		

## Sustainability Reporting Standards & Disclosures GRI Content Index

GRI Content Index	Location of the disclosures	Page No.
<b>GRI 303: Water and Effluents 2018</b>		
Disclosure 303-1: Interactions with water as a shared resource		
Disclosure 303-2: Management of water discharge-related impacts	<ul style="list-style-type: none"> <li>Other Environmental Matters</li> <li>Performance</li> </ul> Data-Environmental Pillar	116 - 117, 193 - 194
Disclosure 303-3: Water withdrawal		
Disclosure 303-4: Water discharge		
Disclosure 303-5: Water consumption		
<b>GRI 304: Biodiversity 2016</b>		
Disclosure 304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		
Disclosure 304-2: Significant impacts of activities, products and services on biodiversity	<ul style="list-style-type: none"> <li>Conserving Marine Biodiversity</li> <li>Performance</li> </ul> Data-Environmental Pillar	109 - 115, 195
Disclosure 304-3: Habitats protected or restored		
Disclosure 304-4: IUCN Red List species and national conservation list species with habitats in areas affected by operations		
<b>GRI 305: Emissions 2016</b>		
Disclosure 305-1: Direct (Scope 1) GHG emissions		
Disclosure 305-2: Energy indirect (Scope 2) GHG emission		
Disclosure 305-3: Other indirect (Scope 3) GHG emissions		
Disclosure 305-4: GHG emissions intensity	<ul style="list-style-type: none"> <li>Our Decarbonisation Pathway</li> <li>Performance</li> </ul> Data-Environmental Pillar	98 - 99, 191
Disclosure 305-5: Reduction of GHG emissions		
Disclosure 305-6: Emission of ozone – depleting substances (ODS)		
Disclosure 305-7: Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions		
<b>GRI 306: Waste 2020</b>		
Disclosure 306-1: Waste generation and significant waste-related impacts		
Disclosure 306-2: Management of significant waste-related impacts	<ul style="list-style-type: none"> <li>Promoting Circular Economy</li> <li>Performance Data-Environmental Data</li> </ul>	102 - 108, 193
Disclosure 306-3: Waste generated		
Disclosure 306-4: Waste diverted from disposal		
Disclosure 306-5: Waste directed to disposal		
<b>GRI 308: Supplier Environmental Assessment 2016</b>		
Disclosure 308-1: New suppliers that were screened using environmental criteria	<ul style="list-style-type: none"> <li>Embracing a Sustainable Supply Chain</li> <li>Performance Data-Governance Pillar</li> </ul>	185 - 187, 206
Disclosure 308-2: Negative environmental impacts in the supply chain and actions taken		

## Sustainability Reporting Standards & Disclosures GRI Content Index

GRI Content Index	Location of the disclosures	Page No.
<b>GRI 401: Employment 2016</b>		
Disclosure 401-1: New employee hires and employee turnover		
Disclosure 401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul style="list-style-type: none"> <li>Our People, Our Strength</li> <li>Performance Data-Social Pillar-Talent Excellence</li> </ul>	148, 199, 200, 202, 206
Disclosure 401-3: Parental leave		
<b>GRI 403: Occupational Health and Safety 2018</b>		
Disclosure 403-1 Occupational health and safety management system		
Disclosure 403-2 Hazard identification, risk assessment and incident investigation		
Disclosure 403-3: Occupational health services		
Disclosure 403-4: Worker participation, consultation and communication on occupational health and safety		
Disclosure 403-5: Worker training on occupational health and safety	<ul style="list-style-type: none"> <li>Operating Safely</li> <li>Performance Data-Social Pillar-Health and Safety</li> </ul>	121 - 134, 137 - 138, 196 - 197
Disclosure 403-6: Promotion of worker health		
Disclosure 403-7: Prevention and mitigation of occupational health and safety impact directly linked by business relationships		
Disclosure 403-8: Workers covered by an occupational health and safety management system		
Disclosure 403-9: Work-related injuries		
Disclosure 403-10: Work-related ill health		
<b>GRI 404: Training and Education 2016</b>		
Disclosure 404-1: Average hours of training per year per employee		
Disclosure 404-2: Programmes for upgrading employee skills and transition assistance programmes	<ul style="list-style-type: none"> <li>Our People, Our Strength</li> <li>Performance Data-Social Pillar-Talent Excellence</li> </ul>	146 - 148, 201 - 202
Disclosure 404-3: Percentage of employees receiving regular performance and career development reviews		
<b>GRI 405: Diversity and Equal Opportunity 2016</b>		
Disclosure 405-1: Diversity of governance bodies and employees	Performance Data-Social Pillar-Talent Excellence	198 - 200
Disclosure 405-2: Ratio of basic salary and remuneration of women to men		
<b>GRI 406: Non-discrimination 2016</b>		
Disclosure 406-1: Incidents of discrimination and corrective actions taken	<ul style="list-style-type: none"> <li>Respecting Human Rights at Sea &amp; Shore</li> <li>Performance Data-Governance Pillar</li> </ul>	205



## Sustainability Reporting Standards & Disclosures

### GRI Content Index

GRI Content Index	Location of the disclosures	Page No.
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>		
Disclosure 407-1: Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	<ul style="list-style-type: none"> <li>Our People, Our Strength</li> <li>Performance Data-Social Pillar-Talent Excellence</li> </ul>	152, 202
<b>GRI 408: Child Labour 2016</b>		
Disclosure 408-1: Operations and suppliers at significant risk for incidents of child labour	Respecting Human Rights at Sea & Shore	161 - 163
<b>GRI 409: Forced or Compulsory Labour 2016</b>		
Disclosure 409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labour	Respecting Human Rights at Sea & Shore	161 - 163
<b>GRI 410: Security Practices 2016</b>		
Disclosure 410-1: Security personnel trained in human rights policies or procedures	<ul style="list-style-type: none"> <li>Respecting Human Rights at Sea &amp; Shore</li> <li>Operating Safely</li> </ul>	135
<b>GRI 413: Local Communities 2016</b>		
Disclosure 413-1: Operations with local community engagement, impact assessments and development programmes	<ul style="list-style-type: none"> <li>Partnering With The Community</li> <li>Respecting Human Rights at Sea &amp; Shore</li> </ul>	110 - 113, 153 - 158
Disclosure 413-2: Operations with significant actual and potential negative impacts on local communities		
<b>GRI 414: Supplier Social Assessment 2016</b>		
Disclosure 414-1: New suppliers that were screened using social criteria	Embracing a Sustainable Supply Chain	185 - 187, 205 - 206
Disclosure 414-2: Negative social impacts in the supply chain and actions taken		
<b>GRI 415: Public Policy 2016</b>		
Disclosure 415-1: Political contributions	<ul style="list-style-type: none"> <li>Operating Responsibly</li> <li>Performance Data-Governance Pillar</li> </ul>	204
<b>GRI 418: Customer Privacy 2016</b>		
Disclosure 418-1: Substantiated complaints concerning breaches of customer privacy and losses of customer data	<ul style="list-style-type: none"> <li>Operating Responsibly</li> <li>Performance Data-Governance Pillar</li> </ul>	204

## Sustainability Reporting Standards & Disclosures

### Sustainability Accounting Standards Board (SASB) Index

MISC recognises the value of SASB's approach to create disclosures expectations based on the material issues for each sector. SASB Standards identify the subset of environmental, social and governance issues most relevant to financial performance.

Topic	Accounting Metric	Unit	Data/Location of Disclosures
Greenhouse Gas Emissions	Gross global Scope 1 emissions <sup>1</sup>	Metric tonnes (t) CO <sub>2</sub> e	Performance data – Environment pillar
	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	n/a	Our Decarbonisation Pathway
	(1) Total energy consumed <sup>2</sup> , (2) percentage heavy fuel oil <sup>3</sup> and (3) percentage renewable <sup>4</sup>	Gigajoules (GJ), Percentage (%)	Performance data – Environment pillar
	Average Energy Efficiency Design Index (EEDI) for new ships <sup>5</sup>	Grammes of CO <sub>2</sub> per ton-nautical mile	Performance data – Environment pillar
Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N <sub>2</sub> O) <sup>6</sup> , (2) SOx <sup>7</sup> and (3) particulate matter (PM <sup>10</sup> ) <sup>8</sup>	Metric tonnes (t)	Performance data – Environment pillar
Ecological Impacts	Shipping duration in marine protected areas or areas of protected conservation status	Number of travel days	0
	Percentage of fleet implementing ballast water (1) exchange <sup>11</sup> and (2) treatment <sup>12</sup>	Percentage (%)	Performance data – Environment pillar
	(1) Number <sup>9</sup> and (2) aggregate volume of spills and releases to the environment <sup>10</sup>	Number, Cubic meters (m <sup>3</sup> )	Performance data – Environment pillar
Employee Health and Safety	Lost time incident rate	Rate	Performance data – Social pillar (Operating Safely)
Business Ethics	Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Number	0
	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Reporting currency	0
Accident and Safety Management	Number of marine casualties, percentage classified as very serious	Number, Percentage (%)	1, 0%
	Number of (1) Conditions of Class or (2) Recommendations	Number	5 70
	Number of port state control (1) deficiencies and (2) detentions	Number	50 0

## Sustainability Reporting Standards & Disclosures

### Sustainability Accounting Standards Board (SASB) Index

Activity Metric	Unit	Value
Number of shipboard employees	Number	3,982
Total distance travelled by vessels	Nautical miles (nm)	5,141,321
Operating days	Days	30,545
Deadweight tonnage	Thousand deadweight tons	11,187,618
Number of vessels in total shipping fleet	Number	92 (excluding workboats)
Number of vessel port calls	Number	3,625

<sup>1</sup> Direct GHG emissions from sources that are owned or controlled by the company.

<sup>2</sup> Energy consumption includes from fuel (including biofuels) and gas usage, as well as purchased electricity.

<sup>3</sup> The percentage of energy consumed supplied from heavy fuel oil.

<sup>4</sup> Renewable energy from renewable energy certificate bought.

<sup>5</sup> Energy Efficiency Design Index (EEDI) for new ships in grammes of carbon dioxide per ton-nautical mile.

<sup>6</sup> The scope of NO<sub>x</sub> includes NO and NO<sub>2</sub> but excludes N<sub>2</sub>O.

<sup>7</sup> The scope of SO<sub>x</sub> includes SO<sub>2</sub> and SO<sub>3</sub>.

<sup>8</sup> Particulate matter 10 micrometres or less in diameter.

<sup>9</sup> The total number of spills and releases to the environment.

<sup>10</sup> The total estimated amount spilled that reached the environment in cubic metres.

<sup>11</sup> Percentage of fleets that has implemented ballast water exchange.

<sup>12</sup> Percentage of fleets that has implemented ballast water treatment.

## Sustainability Reporting Standards & Disclosures

### Task Force on Climate-related Financial Disclosures

Recommended Disclosures	Location of Disclosures
<b>Governance</b>	
a. Board's oversight of climate-related risks and opportunities	Board Oversight
b. Management's role in assessing and managing climate-related risks and opportunities	Management Oversight
<b>Strategy</b>	
a. Risks and opportunities identified in the short, medium and long-term	Short, Medium and Long-term Time Horizon
b. Actual and potential impacts on the business, strategy and financial planning	Overview of MISC Group Climate-related Risks and Opportunities and Climate Strategy
c. Scenario analysis of impacts including a 2°C scenario	Scenario Analysis
<b>Risk Management</b>	
a. Processes for identifying and assessing climate-related risks	Identification of Climate-related Risks and Opportunities
b. Process for managing climate-related risks	Climate Strategy
c. Integration of climate-related risk into overall risk management	Risk, Strategic Risk and Enterprise Risk Management
<b>Metrics &amp; Targets</b>	
a. Metrics used to assess climate-related risks and opportunities	Metrics and Targets
b. All GHG emissions (Scopes 1,2 and 3) and related risks	Refer to Sustainability Report-Data Performance section
c. Targets used to manage climate-related risks and opportunities and performance against targets	GHG Target and Commitment



## List of Abbreviations

<b>3R</b>	Recycle, Reduce and Reuse
<b>4R</b>	Refuse, Reduce, Reuse and Recycle/ Recover
<b>ABC</b>	Anti-Bribery and Corruption
<b>ABMS</b>	Anti-Bribery Management System
<b>ABS</b>	American Bureau of Shipping
<b>AER</b>	Annual Efficiency Ratio
<b>AERCO<sub>2e</sub></b>	Annual Efficiency Ratio Carbon Dioxide Equivalent
<b>AET</b>	American Eagle Tankers Private Limited
<b>AiP</b>	Approval in Principle
<b>ALAM</b>	Malaysian Maritime Academy Sdn Bhd
<b>ALARP</b>	As Low As Reasonably Practicable
<b>API</b>	American Petroleum Institute
<b>ASB</b>	Asia School of Business
<b>BAC</b>	Board Audit Committee
<b>BAU</b>	Business As Usual
<b>BCM</b>	Business Continuity Management
<b>BCP</b>	Business Continuity Planning
<b>BCRA</b>	Bribery and Corruption Risk Assessment
<b>BhS</b>	Behavioral HSSE
<b>BoG</b>	Boil off gas
<b>BPA</b>	Bintulu Port Authority
<b>BSRC</b>	Board Sustainability & Risk Committee
<b>BWTS</b>	Ballast Water Treatment System
<b>CA</b>	Collaboration Agreement
<b>CACCC</b>	Corporate Anti-Corruption Compliance Center
<b>CAPEX</b>	Capital Expenditure
<b>CCS</b>	Carbon Capture and Storage
<b>CCUS</b>	Carbon Capture, Utilisation & Storage
<b>CDP</b>	Carbon Disclosure Project
<b>CEO</b>	Chief Executive Officer
<b>CFD</b>	Computational Fluid Dynamics
<b>CGM</b>	Climate Governance Malaysia
<b>C<sub>2</sub>H<sub>6</sub></b>	Ethane
<b>CH<sub>4</sub></b>	Methane
<b>CII</b>	Carbon Intensity Indicator
<b>CLA</b>	Critical Legal Areas
<b>CMS</b>	Cultural Maturity Survey
<b>CMT</b>	Crisis Management Team
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>CO<sub>2e</sub></b>	Carbon Dioxide Equivalent
<b>CoBE</b>	Code of Conduct and Business Ethics
<b>CoBE Third-party</b>	Code of Conduct and Business Ethics for Third-parties
<b>COE</b>	Centre of Excellence

<b>COI</b>	Conflict of Interest
<b>COP28</b>	28 <sup>th</sup> Conference of Parties
<b>CSR</b>	Corporate Social Responsibilities
<b>CWW</b>	Compressed Work Week
<b>D&amp;I</b>	Diversity and Inclusion
<b>DIP</b>	Declaration and Integrity Pledge
<b>DJSI</b>	Dow Jones Sustainability Indices
<b>DOE</b>	Department of Environment
<b>DOSH</b>	Department of Occupational Safety and Health
<b>DNV GL</b>	Det Norske Veritas and Germanischer Lloyd
<b>DP</b>	Dynamic Positioning
<b>DPST</b>	Dynamic Positioning Shuttle Tanker
<b>DWT</b>	Deadweight Tonne
<b>EAP</b>	Employee Assistance Programme
<b>ECA</b>	Emissions Control Area
<b>ECDD</b>	Enhanced Compliance Due Diligence
<b>EDS</b>	Executive Development Series
<b>EEDI</b>	Energy Efficiency Design Index
<b>EEOI</b>	Energy Efficiency Operational Indicator
<b>EEXI</b>	Energy Efficiency Existing Ship Index
<b>EES</b>	Executive Excellence Series
<b>EMT</b>	Environmental Mainstreaming Tools
<b>EMPC</b>	Eaglestar Marine (Philippines) Corporation
<b>EPCIC</b>	Engineering, Procurement, Construction, Installation and Commissioning
<b>EPF</b>	Employee Provident Fund
<b>EPP</b>	Employee Participation Programme
<b>EQ</b>	Emotional Intelligence
<b>ERM</b>	Enterprise Risk Management
<b>ESG</b>	Environment, Social and Governance
<b>EU ETS</b>	European Union Emission Trading Scheme
<b>EU SRR</b>	European Union Ship Recycling Requirement
<b>FC</b>	Functional Checklist
<b>FCPA</b>	Foreign Corrupt Practices Act
<b>FCSU</b>	Floating CO <sub>2</sub> Storage Unit
<b>FCSU-I</b>	Floating CO <sub>2</sub> Storage Unit with Injection capability
<b>FCSU-L</b>	Floating CO <sub>2</sub> Storage Unit with Liquefaction
<b>FPSO</b>	Floating Production, Storage and Offloading
<b>FSC®</b>	Forest Stewardship Council
<b>FSO</b>	Floating Storage and Offloading

<b>FSU</b>	Floating Storage Unit
<b>FTSE4GOOD</b>	Financial Times Stock Exchange for Good
<b>GAS</b>	Gas Assets and Solution
<b>gCO<sub>2</sub></b>	Gramme CO <sub>2</sub>
<b>gCO<sub>2</sub>/ton-nm</b>	Gramme CO <sub>2</sub> per tonnage nautical miles
<b>GCB</b>	Generative HSSE Culture Behaviours
<b>GCFL</b>	Generative Culture for Frontliners
<b>GCMD</b>	Global Centre for Maritime Decarbonisation
<b>GCMM</b>	Generative Culture for Middle Managers
<b>GCTL</b>	Generative Culture for Top Leaders
<b>GHG</b>	Greenhouse Gas
<b>GHSSE</b>	Group Health, Safety, Security and Environment
<b>GIA</b>	Group Internal Audit
<b>GlobalMET</b>	Maritime Seafarer Training & Education Association
<b>GMF</b>	Global Maritime Forum
<b>GPG</b>	Group Procurement Guidelines
<b>GRAC</b>	Grievance Resolution/Appeal Committee
<b>GRI</b>	Global Reporting Initiative
<b>GSP</b>	Green Ship Programme
<b>GTC</b>	Gas Tanker Committee
<b>GWP</b>	Global Warming Potential
<b>HAZID</b>	Hazard Identification
<b>HFC</b>	Hydrofluorocarbon
<b>HKC</b>	Hong Kong Convention
<b>HMM</b>	Harvard Manage Mentor
<b>HOTO</b>	Heart of The Ocean
<b>HRA</b>	Health Risk Assessment
<b>HRRA</b>	Human Rights Risk Assessment
<b>HSE</b>	Health, Safety and Environment
<b>HSEMS</b>	HSE Management System
<b>HSSE</b>	Health, Safety, Security and Environment
<b>HVDC</b>	High voltage direct current
<b>IAR</b>	Integrated Annual Report
<b>iCER</b>	Intelligent Control by Exhaust Recycling
<b>ICP</b>	Internal Carbon Price
<b>IEA</b>	International Energy Agency
<b>IFC</b>	Information Fusion Centre of the Republic of Singapore's Navy
<b>IGU</b>	International Gas Union
<b>IH</b>	Industrial Hygiene

<b>IHM</b>	Inventory of Hazardous Materials
<b>ILO</b>	International Labour Organisation
<b>IMarEST</b>	Institute of Marine Engineering, Science and Technology's
<b>IMD</b>	International Men's Day
<b>IMO</b>	International Maritime Organisation
<b>IMO CII</b>	International Maritime Organisation Carbon Intensity Indicator
<b>INTERTANKO</b>	International Association of Independent Tanker Owners
<b>IOGP</b>	International Association of Oil & Gas Producers
<b>IP</b>	Intellectual Property
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IRENA</b>	The International Renewable Energy Agency
<b>IRSO</b>	Integrated Regional Satellite Office
<b>ISPS</b>	International Ship and Port Facility Security
<b>IWD</b>	International Women's Day
<b>JDP</b>	Joint Development Project
<b>KPI</b>	Key Performance Indicators
<b>KRI</b>	Key Risk Indicator
<b>KWAP</b>	Kumpulan Wang Persaraan
<b>KYC</b>	Know Your Counterparty
<b>LBV</b>	LNG Bunkering Vessel
<b>LCSC</b>	Legal, Corporate Secretarial and Compliance
<b>LCO<sub>2</sub></b>	Liquid Carbon Dioxide
<b>LNG</b>	Liquefied Natural Gas
<b>LNGC</b>	Liquefied Natural Gas Carrier
<b>LOPC</b>	Loss of Primary Containment
<b>LPG</b>	Liquefied Petroleum Gas
<b>LR</b>	Lloyd's Register
<b>LSR</b>	Life-Saving Rules
<b>LSV</b>	Lightering Support Vessels
<b>LTI</b>	Lost Time Incidences
<b>LTIF</b>	Lost Time Injury Frequency
<b>LWC</b>	Lost Workday Cases
<b>MACC</b>	Malaysian Anti-Corruption Commission
<b>MACN</b>	Maritime Anti-Corruption Network
<b>MARISX</b>	8th Maritime Information Sharing Exercise
<b>MARPOL</b>	International Convention for the Prevention of Pollution from Ships
<b>MARSEC</b>	Maritime Security
<b>MARDEP</b>	Marine Department Malaysia
<b>MASA</b>	Malaysia Shipowners' Association

## List of Abbreviations

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<b>MBOT</b>	Malaysia Board of Technologists
<b>MBPG</b>	Majlis Bandaraya Pasir Gudang
<b>MC</b>	Management Committee
<b>MCCG</b>	Malaysian Code of Corporate Governance
<b>MCF</b>	Mandatory Control Framework
<b>MCV</b>	Modular Capture Vessel
<b>MDC</b>	Management Development Committee
<b>MDM</b>	Mobile Device Management
<b>MDS</b>	Managers Development Series
<b>MEAT</b>	Management Effectiveness Assessment Tool
<b>MEGI</b>	M-Type Electronically Controlled Gas Injection
<b>MEPC</b>	Marine Environment Protection Committee
<b>MFS</b>	Managers Foundation Series
<b>MGA</b>	Malaysian Gas Association
<b>MGMF</b>	MISC Group Management Framework
<b>MHB</b>	Malaysia Marine & Heavy Engineering Holdings Berhad
<b>MIA</b>	Malaysian Institute of Accountants
<b>MLC</b>	Maritime Labour Convention
<b>MMEGA</b>	Mega-Module Engineering and Green Architecture
<b>MMHE</b>	Malaysia Marine and Heavy Engineering Sdn. Bhd.
<b>MMS</b>	Port Management and Maritime Services
<b>MOF</b>	Ministry of Finance
<b>MOHE</b>	Ministry of Higher Education
<b>MOL</b>	Mitsui O.S.K Lines, Ltd.
<b>MOT</b>	Ministry of Transport
<b>MoU</b>	Memorandum of Understanding
<b>MPA</b>	Maritime and Port Authority of Singapore
<b>MRCBSB</b>	Malaysia Refining Company Sdn Bhd
<b>MSOSH</b>	Malaysian Society for Occupational Safety and Health
<b>MSS</b>	Medical Standards for Seafarers
<b>MT</b>	Metric Tonnes
<b>MTC</b>	Medical Treatment Cases
<b>MTCO<sub>2e</sub></b>	Metric Tonnes of Carbon Dioxide Equivalent
<b>MTPA</b>	Metric tons per annum
<b>MVOT</b>	Malaysia Vietnam Offshore Terminal Limited
<b>MyWiE</b>	Malaysia Women in Energy
<b>NBFP50</b>	New Build Floating Production Storage and Offloading

<b>NGO</b>	Non-Governmental Organisation
<b>NIST</b>	National Institute of Standards & Technology
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NOx</b>	Nitrogen Oxide
<b>N<sub>2</sub>O</b>	Nitrous Oxide
<b>NRC</b>	Nomination and Remuneration Committee
<b>OCIMF</b>	Oil Companies International Marine Forum
<b>ODS</b>	Ozone Depleting Substances
<b>OLA</b>	Operational Legal Areas
<b>OPEX</b>	Operating Expense
<b>OSH</b>	Occupational Safety and Health
<b>OSS</b>	Offshore Substation
<b>OT</b>	Operating Technology
<b>OVID</b>	Offshore Vessel Inspection Database
<b>OVMSA</b>	Offshore Vessels Management and Self-Assessment
<b>PBCF</b>	Propeller Boss Cap Fin
<b>PCASP</b>	Privately Contracted Armed Security Personnel
<b>PDPA</b>	Personal Data Protection Act
<b>PGB</b>	PETRONAS Gas Berhad
<b>PGCEO</b>	President and Group Chief Executive Officer
<b>PLNG2SB</b>	Pengerang LNG (Two) Sdn. Bhd.
<b>PMP</b>	Project Management Professional
<b>PM10</b>	Particulate Matter ≤10 Microns
<b>PMS</b>	Planned Maintenance System
<b>PNB</b>	Permodalan Nasional Berhad
<b>POCS</b>	PETRONAS Organisational Cultural Survey
<b>POMEX23</b>	Port and Maritime Exchange 2023
<b>PPD</b>	Permanent Partial Disabilities
<b>PPE</b>	Personal Protective Equipment
<b>PRA</b>	Project Risk Assessment
<b>PRASC</b>	Project Risk Assessment Committee
<b>Pre-FEED</b>	Preliminary Front-end Engineering Design
<b>PRM</b>	PETRONAS Resiliency Model
<b>PSM</b>	Process Safety Management
<b>PSPI</b>	Process Safety Performance Indicators
<b>PTD</b>	Permanent Total Disabilities
<b>PTG 19.90.05</b>	PETRONAS Technical Guideline on Social Risk Assessment
<b>PTLCL</b>	PETCO Trading Labuan Company Ltd.
<b>PTT</b>	Petroleum Authority of Thailand

<b>PTW</b>	Permit-to-Work
<b>P&amp;I</b>	Protection and Indemnity
<b>PV</b>	Solar Photovoltaic
<b>RACI</b>	Responsible, Accountable, Consulted, Informed
<b>RCM</b>	Reef Check Malaysia
<b>RCP</b>	Representative Concentration Pathways
<b>RGTP</b>	PETRONAS LNG Regasification Terminal Pengerang
<b>RGTSU</b>	PETRONAS LNG Regasification Terminal Sungai Udang
<b>RMC</b>	Risk Management Committee
<b>RMN</b>	Royal Malaysian Navy
<b>RMN-NID</b>	Naval Intelligence Department of Royal Malaysia Navy
<b>R&amp;L</b>	Regulatory and Law
<b>RSC</b>	Responsible Supply Chain
<b>RWC</b>	Restricted Workday Cases
<b>SASB</b>	Sustainability Accounting Standards Board
<b>SBTi</b>	Science Based Target Initiative
<b>SCMG</b>	Strategic Crisis Management Guidelines
<b>SCR</b>	Selective Catalytic Reduction
<b>SDG</b>	Sustainable Development Goals
<b>SDLC</b>	MISC's System Development Lifecycle
<b>SEATRU</b>	Sea Turtle Research Unit
<b>SEATEC</b>	South-East Asian Technical Committee
<b>SEEMP</b>	Ship Energy Efficiency Management Plan
<b>SeMS</b>	Security Management System
<b>Semi-FPS</b>	Semi-submersible Floating Production System
<b>SGMF</b>	The Society of Gas as a Marine Fuel
<b>ShaPoLi</b>	Shaft power limitation
<b>SHI</b>	Samsung Heavy Industries Co Ltd
<b>SIGTTO</b>	Society of International Gas Tanker and Terminal Operators
<b>SIRE</b>	Ship Inspection Report Programme
<b>SKM</b>	Malaysian Skills Certificate
<b>SLL</b>	Sustainability-linked Loan
<b>SLP</b>	Strategic Leaders Programme
<b>SLS</b>	Senior Leaders Series
<b>SOC</b>	Security Operation Center
<b>SOx</b>	Sulphur Oxide
<b>SOLAS</b>	Safety of Life at Sea
<b>SOP</b>	Standard Operating Procedures
<b>SRA</b>	Social Risk Assessment

<b>SRM</b>	SeaRiver Maritime
<b>SSDF</b>	MISC Secure System Development Framework
<b>SSP</b>	Shared Socioeconomic Pathways
<b>STCW</b>	Standards of Training, Certification and Watchkeeping for Seafarers
<b>STS</b>	Ship-to-Ship
<b>SUPSB</b>	Sungai Udang Port Sdn Bhd
<b>TCFD</b>	Task Force on Climate-related Financial Disclosures
<b>TI</b>	Transparency International
<b>TMDC</b>	Technical Management Development Committee
<b>TMS</b>	Talent Management System
<b>TMSA</b>	Tanker Management and Self-Assessment
<b>TPCDDOG</b>	Third-party Compliance Due Diligence Operational Guidelines
<b>TRCF</b>	Total Recordable Case Frequency
<b>UCUA</b>	Unsafe Condition and Unsafe Act
<b>ULEV</b>	Ultra-Low Emission Vessels
<b>UMT-MMS</b>	University Malaysia Terengganu-Port Management and Maritime Services
<b>UMT-SEATRU</b>	University Malaysia Terengganu – Sea Turtle Research Unit
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UTM</b>	Universiti Teknologi Malaysia
<b>VLCC</b>	Very Large Crude Carrier
<b>VLEC</b>	Very Large Ethane Carrier
<b>VOC</b>	Volatile Organic Compound
<b>VP</b>	Vice President
<b>WinGD</b>	Winterthur Gas & Diesel
<b>WtV</b>	Waste-To-Value
<b>YARA</b>	Yara International ASA
<b>YLP</b>	Young Leaders Programme
<b>ZEV</b>	Zero Emissions Vessel

## List of Abbreviations



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