

SUSTAINABILITY REPORT 2025

A Green Maritime Future



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Photo credit: PSA Singapore

About MPA

Established in 1996, MPA serves as Singapore's maritime and port regulator and planner, industry champion, and national maritime representative. We work with industry partners, the research community and other government agencies to strengthen Singapore's position as a global hub port and international maritime centre. This is achieved by expanding multi-domain capabilities to elevate maritime and port operations and services; enhancing safety, security and environmental protection; developing manpower; and promoting maritime digitalisation and decarbonisation.

Our Vision

A leading maritime agency driving Singapore's global maritime aspirations.

Our Mission

To develop and promote Singapore as a premier global hub port and an international maritime centre, and to advance and safeguard Singapore's strategic maritime interests.

About This Report

This report highlights our commitment to environmental sustainability and how we address key sustainability issues in fulfilling our mission. It outlines MPA's policies and practices for managing the risks and opportunities associated with material topics significant for us and our stakeholders, and showcases MPA's efforts to:

1. enhance environmental sustainability in the maritime industry by forging consensus and collaboration, and setting standards at the international level;
2. drive transformation through maritime innovation and digitalisation to reduce emissions domestically; and
3. enable positive change and manage resources effectively as a public sector organisation.

These efforts align with the United Nations Framework Convention on Climate Change (UNFCCC), the 2023 International Maritime Organization (IMO) Strategy on Reduction of Greenhouse Gas (GHG) Emissions from Ships, and Singapore's Nationally Determined Contribution (NDC). The report also includes disclosures such as environmental targets and measurements.

Reporting Standards

This report is guided by the GreenGov.SG requirements and prepared with reference to the GRI standards. It incorporates relevant disclosures aligned to key global standards and frameworks, and guiding principles from the IMO aligned with the United Nations Sustainable Development Goals (UN SDGs). The report also considers metrics and issues relevant to the maritime industry as outlined in the World Port Sustainability Programme (WPSP).

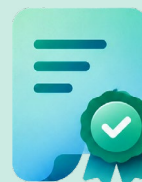


GreenGov.SG

This is a sustainability movement in the public sector that supports Singapore's national sustainability agenda as set out in the Singapore Green Plan 2030.

GRI Standards

This is an independent international organisation that helps entities understand and report on their impact on the economy, environment and people. The GRI Standards are the world's most widely used standards for sustainability reporting.



IMO and UN SDGs

IMO is the UN agency responsible for regulating international shipping, including on issues of safety and security, and for preventing sea and atmospheric pollution by ships. The IMO's work supports the UN SDGs. Singapore is one of the 176 member states of the IMO.

World Ports Sustainability Program (WPSP)

The WPSP is managed by the International Association of Ports and Harbors (IAPH). It promotes best practices in ports worldwide, applying the 17 UN SDGs and integrating them into organisational practices across six areas: Digitalisation; Infrastructure; Health, Safety and Security; Environmental Care; Community Building; and Climate and Energy.



Reporting Scope and Period

This report covers MPA's sustainability approach, organisational activities, performance and achievements in key environmental, social and governance topics in FY2025 (1 January 2025 to 31 December 2025) across MPA's key properties and assets. For MPA's organisational performance, we recommend that this report be read together with [MPA's Annual Report 2025](#). MPA calculates and scopes its emissions in accordance with the Operational Control approach defined in the GHG Protocol Corporate Accounting and Reporting Standard, which is a widely used GHG accounting standard.

Restatement of Information

We have included restatements of information in this report as data collection and calculation methodologies have improved, and data collection parameters have been refined. Details of restatements can be found in the relevant sections of the report.¹

Assurance

External assurance has not been sought for this report. However, we have conducted an internal review focused on relevance and reliability of the information.

Questions or feedback on the report can be emailed to Sustainability@mpa.gov.sg.

¹ Restatement of information fulfils GRI standards and GreenGov.SG requirements.

Chief Executive's Message

Driving Decarbonisation of Singapore's Maritime Sector at Scale

There is broad agreement on the need to reduce emissions, and the pace and pathways for decarbonisation continue to evolve along with wider shifts in the global operating environment. This underscores the importance for Singapore to remain a trusted, reliable and forward-looking maritime hub — one that supports global trade flows while working towards a lower-carbon future.

Singapore is taking a multi-fuel approach to maritime decarbonisation. We focus on developing the capabilities, infrastructure and partnerships needed to support the sector's green transition, while ensuring that operations remain safe, efficient and resilient. We enable industry to move from trials to deployment at scale.

As Singapore is a global bunkering hub, the Maritime and Port Authority of Singapore (MPA) is strengthening our readiness to support a range of alternative fuels. Sales of alternative fuels increased to 1.95 million tonnes in 2025 from 1.35 million tonnes the year before.

MPA has translated early trials into clear operational standards for methanol bunkering and awarded three methanol bunkering licences which came into effect in January 2026. MPA is also taking steps to prepare for the

use of ammonia as a next-generation fuel. Together with the Energy Market Authority of Singapore (EMA), we appointed a consortium led by Keppel Ltd and its partner Sumitomo Corporation in 2025. The consortium will undertake front-end engineering design studies for ammonia power generation and bunkering, alongside the development of technical standards and frameworks to conduct trials to guide the industry towards safer implementation.

For LNG, we continue to build on existing capabilities, including enhancing supply chain resilience and diversification. As part of our broader transition pathway and to support growing demand as well as strengthen Singapore's ability to supply synthetic variants and bio-variants of LNG, we have issued eight new licences to supply LNG as a marine fuel from September 2026.

For domestic harbour craft, we are working closely with industry to support fleet renewal and the adoption of electric and other low-carbon solutions. We saw the launch of the first fully electric supply boat and cargo vessel in 2025 and first fully electric tug in 2026, building on a growing fleet of electric passenger harbour craft already in operation. These deployments demonstrate that electrification is viable even for more demanding harbour craft operations. MPA set up a taskforce with the Singapore Shipping Association to develop a roadmap for port decarbonisation, and its recommendations were presented during Singapore Maritime Week 2026.

“ Our focus will be on translating ambition into practical outcomes. ”

Mr Ang Wee Keong



Enabling the Transition: Talent and Digitalisation

The transition to new alternative fuels has to be supported by a skilled workforce. This shift introduces new operational and safety requirements, which demand specialised skills and training. The Maritime Energy Training Facility seeks to support maritime professionals and seafarers in developing the necessary capabilities to handle these fuels safely and confidently. As of June 2026, more than 2,400 personnel have been trained, and we will continue to build a pipeline of skilled manpower in the coming years.

At the same time, stronger operational capabilities are needed to manage more complex port activities. The Maritime Digital Twin, launched in 2025, brings together data across the port into a shared, real-time operational view. This improves coordination among stakeholders and contributes to more efficient operations and lower fuel consumption by optimising vessel schedules and reducing waiting time in port.

Advancing International Collaboration

Maritime decarbonisation is a global challenge that requires coordinated action. Working with like-minded countries, Singapore continues to contribute actively to efforts led by the International Maritime Organization to decarbonise international shipping. Our network of Green and Digital Shipping Corridors expanded to nine in 2025, supporting pilot projects in fuel adoption, digital exchange, and emissions reporting.

Making Our Operations More Sustainable

Within MPA, we are reducing our environmental footprint in line with national sustainability targets. We are improving energy efficiency across our operations, including the progressive migration of IT workloads to more energy-efficient cloud infrastructure.

We are also expanding the use of renewable energy at our facilities, including optimising solar generation at Marina South Pier (MSP) and Pulau Satumu. We have completed the installation of a solar energy generation system at MSP and are on track to complete Pulau Satumu before the end of 2027. Our new buildings, which will be ready in 2027/2028, will incorporate energy-efficient and water-efficient features to support longer-term sustainability outcomes.

Looking Ahead

Our focus will be on translating ambition into practical outcomes. MPA will continue to work with our partners to strengthen readiness for a greener future, while ensuring that Singapore remains a reliable and competitive hub for seaborne trade.



Members of The Authority

(as at 31 December 2025)

1) Mr Loh Khum Yean

Chairman
Maritime and Port Authority
of Singapore

2) Mr Ang Wee Keong

Chief Executive
Maritime and Port Authority
of Singapore

3) Mr Abu Bakar Bin Mohd Nor

Chairman and Director
M Kapital Holdings Pte Ltd

4) Mr Allen Lew

Chairman
Certis Group

5) Ms Mary Liew

General Secretary
Singapore Maritime Officers' Union

6) Mr Jermaine Loy

Managing Director
Economic Development Board

7) Mr Jeremy Nixon

Chief Executive
Ocean Network Express Co. Ltd

8) Mr Chris Ong Leng Yeow

Chief Executive Officer
Seatrium Ltd

9) Mr Sng Seow Wah

Director
Financial Industry Disputes
Resolution Centre Ltd (FIDRec)

10) A/Prof Simon Tay

Associate Professor
Faculty of Law, National University
of Singapore
Chairman
Singapore Institute of
International Affairs

11) Mr Teo Teng Seng

Advisor
Pacific International Lines

12) RADM Sean Wat

Chief of Navy
Republic of Singapore Navy

13) Ms Yeo Siew Eng

Director
Keppel DC REIT Management Pte Ltd

14) Ms Patricia Yim

Member
Maritime and Port Authority
of Singapore

15) Mr Chua Kwan Ping

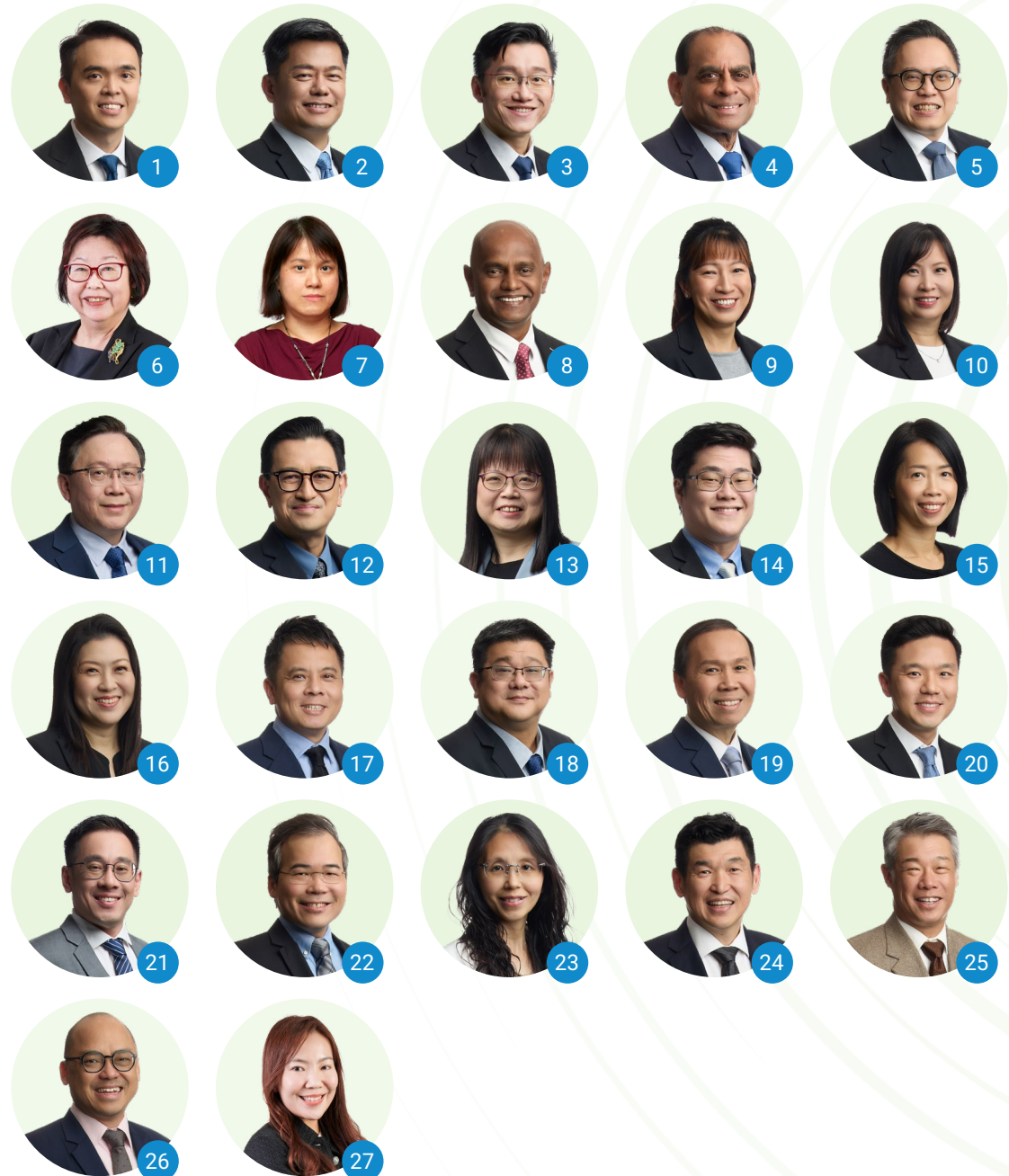
Senior Director
Ministry of Transport



Senior Management

(as at 31 December 2025)

- 1) **Mr Ang Wee Keong**
Chief Executive
- 2) **Mr David Foo**
Deputy Chief Executive (Operations & Technology) / Chief Data Officer
- 3) **Mr Chin Yi Zhuan**
Deputy Chief Executive (Industry & Corporate)
- 4) **Capt M Segar**
Chief Marine Officer / Senior Advisor
- 5) **Mr Tan Hoe Soon**
Assistant Chief Executive (Corporate & Strategy), Chief Risk Officer
- 6) **Ms Tan Beng Tee**
Senior Advisor
- 7) **Ms Angela Png**
Senior Legal Advisor & Corporate Secretary
- 8) **Capt Daknashamoorthy Ganasen**
Senior Director, Marine Safety & Port Operations
- 9) **Ms Cindy Sim**
Senior Director, Finance, Procurement & Admin
- 10) **Ms Tan Woei Tyng**
Senior Director, International
- 11) **Er Tham Wai Wah**
Senior Director, Engineering & Project Management / Chief Engineer
- 12) **Mr Cheah Aun Aun**
Director, Shipping / Director, Marine
- 13) **Ms Chua Chen Yun**
Director, Internal Audit
- 14) **Mr Chua Yeng Hian**
Director, Marine Services
- 15) **Ms Ding Lee Yong**
Dean, MPA Academy / Director, Maritime Network & Partnerships Office
- 16) **Ms Caroline Goh**
Director, Business Capability Development
- 17) **Mr George Goh**
Director, Communications & Community
- 18) **Mr Dennis Khoo**
Director, Maritime Systems & Technology / Chief Technology Officer
- 19) **Mr Koh Chin Yong**
Director, Digital & Data Science / Chief Information Officer
- 20) **Mr Jason Leong**
General Counsel
- 21) **Mr Ng Yi Han**
Director, Innovation, Technology & Talent Development / Chief Transformation Officer
- 22) **Mr Ong Chin Beng**
Director, Cybersecurity & Data Governance
- 23) **Ms Jasmin Tan**
Director, International Maritime Centre
- 24) **Mr Vince Tan**
Director, Operations Transformation & Planning
- 25) **Mr Thai Low Ying-Huang**
Chief Hydrographer
- 26) **Mr Benjamin Wong**
Director, Strategy & Policy
- 27) **Ms Yeo Suat Lay**
Director, Human Resource

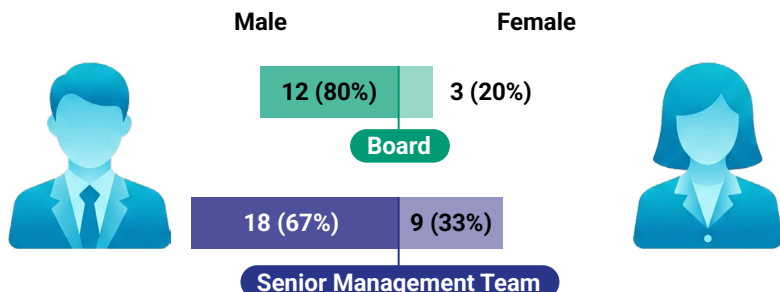


Sustainability Governance

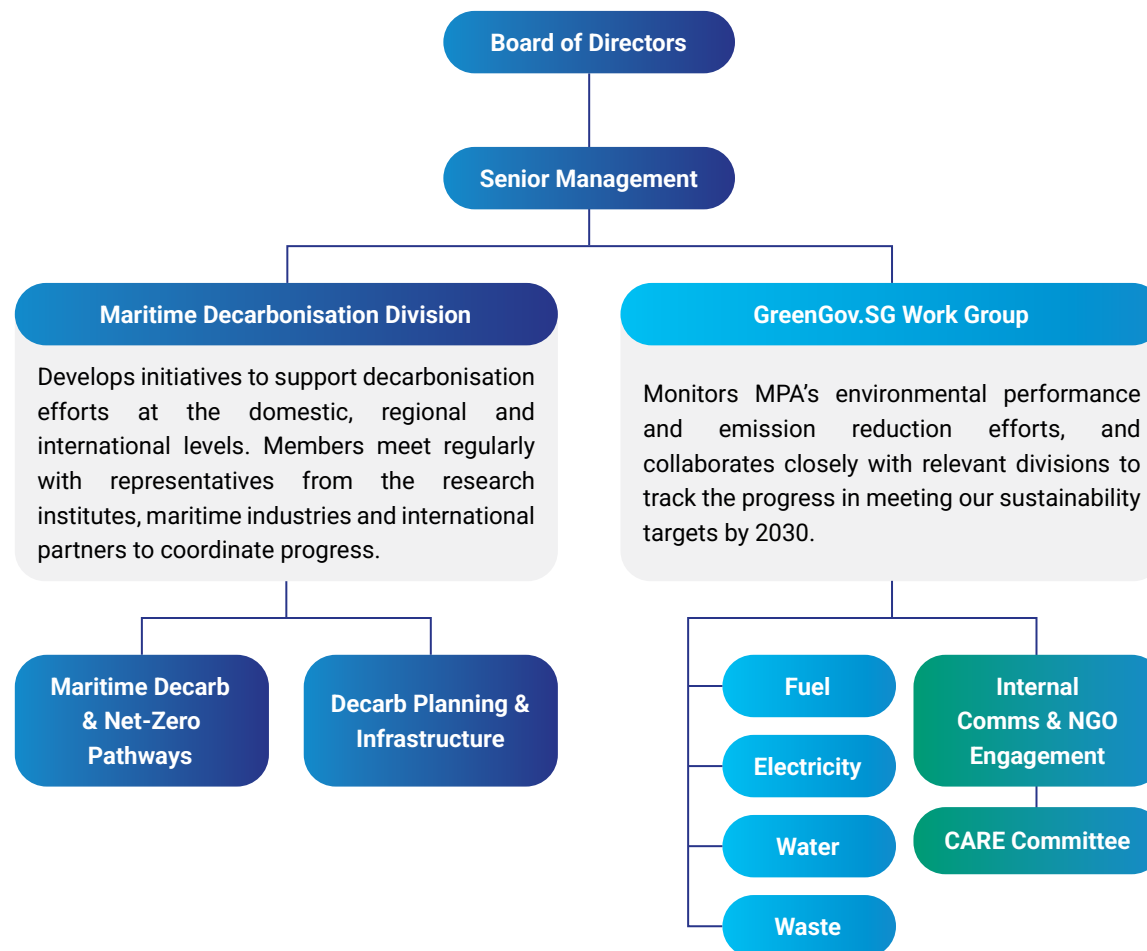
The MPA Board is appointed by the Minister for Transport. Led by Chairman Mr. Loh Khum Yean, the Board oversees and shapes the organisation's sustainability efforts. It ensures that sustainability is integrated into MPA's strategic vision and operations, and guides policies that promote environmental responsibility, economic viability, and social equity. By actively engaging stakeholders and upholding good governance and accountability, the Board helps MPA meet regulatory requirements and build long-term value and trust. (Learn more about the [Members of the Authority](#))

The senior management team, led by the Chief Executive, translates the Board's strategic directions and goals into action plans. The senior management team is responsible for meeting the environmental targets set under GreenGov.SG, and the Environment, Social and Governance (ESG) metrics under GRI. It drives the digitalisation, decarbonisation and manpower development efforts of Maritime Singapore. It also leads in fostering consensus, collaboration and partnerships at the international level, such as the IMO, the International Organization for Marine Aids to Navigation, and the International Hydrographic Organization.

Gender Representation in Board and Senior Management Team



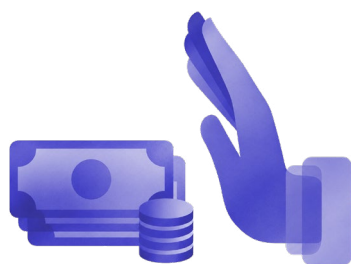
MPA's Sustainability Governance Structure



Organisational Ethics and Standards

Organisational ethics and standards uphold MPA's integrity and credibility, and ensure that we keep public trust. Our Internal Audit Division (IAD) provides independent assurance that MPA's governance, risk management and internal control processes adhere to established policies and procedures, and operate effectively. IAD manages a dedicated whistleblowing channel where staff and the public can report suspected fraudulent activities, improper conduct or wrongful acts in MPA or involving MPA's appointed vendors, regulated entities and business partners. Reports may be made without fear of retaliation or discrimination, provided they are submitted in good faith and based on legitimate concerns.

The IAD produces Risk Digest, an internal publication that raises staff awareness and supports our risk culture as part of MPA's Enterprise Risk Management (ERM) framework. IAD regularly briefs the staff on the development and reinforcement of controls across operational, financial, administrative and corporate processes; media coverage of fraud and corruption cases; and insights from the Auditor-General's Office Report on significant audit findings on public agencies.



There were
0 confirmed
incidents of fraud,
including corruption, in 2025.

Risks and Opportunities

MPA applies our ERM framework to identify, assess and monitor risks that may affect our mission. The framework establishes measures to mitigate the likelihood and impact of these risks. For climate-related risks, MPA has identified mitigation measures, including working towards national and IMO decarbonisation targets and ensuring sufficient supply of new fuels to support the maritime industry.

The MPA Board provides oversight of MPA's risk management. The ERM Steering Committee, chaired by the Chief Executive, reviews risk assessments and monitors the implementation of mitigation measures. A member of the senior management team serves as the Chief Risk Officer to drive and coordinate efforts to identify key risks and develop mitigation measures.

Material Topics

MPA engaged an external consultant to conduct a materiality assessment of the ESG material topics in 2023. The exercise involved more than 70 stakeholders from various sectors. This ensured that MPA's sustainability strategy remains aligned with the priorities of internal and external stakeholders and our sustainability efforts remain relevant.

The materiality assessment was conducted in four steps: (1) Identify, (2) Rate, (3) Prioritise, and (4) Validate. A final list of 15 material topics was approved by the Board.



1

Identify

A preliminary list of potential ESG issues was identified from desktop research on topics relevant to the maritime industry.

2

Rate

Through surveys and one-on-one interviews, key external stakeholders were invited to rank the identified ESG topics according to their importance to MPA and the maritime industry.

3

Prioritise

The ESG topics were prioritised by MPA's internal stakeholders, accounting for financial and impact materiality.

4

Validate

The prioritised list was validated through peer benchmarking involving port authorities, port operators, shipping companies, statutory bodies and companies with sustainability reporting best practices.

Environment

Material topic	Why topic is material	Aligning to UN SDGs
Energy management and climate mitigation	With the public sector leading the national effort to achieve Singapore's net-zero emissions goal by 2045, MPA has a vital role to play. This includes demonstrating our commitment to responsible energy management, energy efficiency, the use of renewable energy sources, and net-zero emissions.	
Climate resilience and adaptation	Climate change poses significant risks to Singapore as we are a coastal state. MPA works closely with the Public Utilities Board (PUB), which is the national coastal protection agency, to protect Singapore's coastlines and make our ports resilient.	 
Water and effluent management	Singapore is a water-stressed nation as well as an island. MPA has a role to play in ensuring proper water management, such as by regulating the discharge of effluents from vessels. Singapore is also a signatory of the International Convention for the Prevention of Pollution from Ships (MARPOL) set by the IMO.	 
Biodiversity	MPA's ports and activities are located near natural habitats. We have a responsibility to protect biodiversity.	 
Waste	We promote a circular economy within MPA's facilities as well as Singapore's port waters, where resources are used efficiently and waste is minimised. It is particularly important to meet our national zero-waste goals given Singapore's limited land.	
Supplier environmental assessment	MPA incorporates supplier environmental assessments aligned with the GreenGov.SG initiative.	

Social

Material topic	Why topic is material	Aligning to UN SDGs
Public policy	As the port authority and regulator, MPA monitors and influences public policy to foster growth in the maritime domain and safeguard Singapore's maritime interests. This includes providing marine and coastal geospatial data so that the Government can analyse rising sea levels and ensure that measures to protect the coast are adequate.	 
Port safety and security	A core function of MPA, as the port operator and regulator, is to ensure safety and security in Singapore's port waters.	
Employment practices	Fair employment practices are essential to safeguard employees' interests and motivate them, as well as to attract maritime talents.	
Occupational health and safety	MPA gives top priority to the safety and physical and mental well-being of our employees and the workers of our contractors. It is important that all of them can perform their duties safely.	
Training and education	MPA will equip our employees and stakeholders with the necessary knowledge and skills to meet the challenges of a rapidly evolving maritime industry driven by digitalisation and decarbonisation.	  

Governance

Material topic	Why topic is material	Aligning to UN SDGs
Indirect economic impacts	MPA's sustainability efforts and contributions to the Singapore economy are portrayed more comprehensively as we include indirect impacts in our reporting.	
Anti-corruption	It is paramount that MPA, a public agency, upholds a culture of integrity and non-corruption.	
Economic performance	MPA must make financially responsible decisions to ensure that we have sufficient funds for our operations and development.	
Secure and reliable information technology infrastructure	Digitalisation is crucial for the development of the maritime industry. While promoting digitalisation, it is important to address data security vulnerabilities and manage big data and algorithms responsibly. As the sector lead in the world's busiest transshipment hub, MPA monitors data on activities across maritime and port critical information infrastructure (CII), and takes early action to prevent major disruptions to port operations and delivery of services.	

Stakeholder Engagement

To achieve shared sustainability goals, MPA engages a wide range of stakeholders to forge effective partnerships and deliver innovative solutions for the maritime industry.

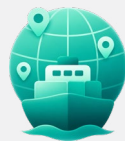
Key Stakeholder Groups	Key Engagement Methods	Key Interest Areas & Material Topics
Board Members	Board meetings	- Public sector targets - Economic growth
Employees	- Townhall meetings - Staff intranet - Electronic Direct Mails (EDMs) - Engagement and employee wellness activities	- Corporate direction and growth plans - Remuneration and benefits - Talent attraction and capacity-building - Occupational safety, health and well-being - Labour and human rights - Diversity, equity and inclusion - Work-life balance
Maritime Ecosystem and Value Chain (Port terminal operators, ship owners and management companies, ship and harbour craft operators, maritime law and arbitration, ship finance)	- Media releases - Circulars and notices - Annual reports and sustainability reports - Conferences and exhibitions - Meetings	- Environmental sustainability - Climate risks - Maritime safety for future fuels adoption - Economic impacts - Supply chain - Maritime competitiveness and transition - Talent attraction and capacity building - Governance and oversight - Human rights
Non-profit/supporting organisations (MaritimeSG Youth Ambassadors and environmental groups)	- Media releases - Annual reports and sustainability reports - Dialogue sessions - Events - Instant messaging	- Inter-agency collaboration for tackling biodiversity and sustainability issues - Safety at sea for all users, including dealing with marine pollution - Sustainable supply chain
Public sector agencies and ministries	Inter-agency and workgroup meetings	- Environmental sustainability - Public policy - Climate change mitigation - Leadership diversity - Anti-corruption - Local hiring

ESG Highlights

Green and Digital Initiatives



Launched
Maritime
Digital Twin



Expanded to
9
Green and Digital
Shipping Corridors



Published
standards for electric craft
(TR 136) and methanol
bunkering (TR 129)

GreenGov.SG



11,119
tonnes CO₂ equivalent of
gross emissions emitted



Energy Utilisation Index
(EUI) =
117
kWh/m²



Water Efficiency Index
(WEI) =
100.5
litres/person/day



Waste Disposal Index
(WDI) =
0.611
kg/person/day

Social



90
average training
hours per employee



46
officers progressively
trained as mentors

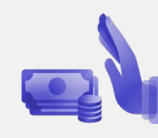


4383
hours of safety training
completed by MPA officers

Governance



Women in leadership:
29%
female
representation in
board and senior
management team



0
confirmed
incidents of fraud
or corruption

Prologue

Singapore's Commitment to Sustainability and Climate Change

Why Climate Change Matters to Singapore

As a small low-lying island nation exposed to rising sea levels, warmer oceans and increasing extreme weather events, Singapore is vulnerable to the impacts of climate change. We are also a global maritime hub with a highly open economy, dependent on resilient supply chains.

Singapore's Role in Global Climate Efforts

The United Nations Climate Change Conference (COP 30/ CMP 20/CMA 7) laid the groundwork to mobilise at least US\$1.3 trillion annually by 2035 to finance actions to deal with the climate crisis, focusing on developing countries. At COP 29, Singapore had pledged up to US\$500 million to

support green projects in Asia through the Financing Asia's Transition Partnership (FAST-P).

We are also doing our part to support the development of high-integrity carbon markets, rolling out novel types of carbon credits such as energy transition credits to support the early phase-out of coal in the region. These efforts reduce regional climate risks, strengthen economic resilience, and reinforce Singapore's role as a trusted and credible partner.

In February 2025, Singapore submitted to the UNFCCC our 2035 Nationally Determined Contribution (NDC). Our target is to reduce our emissions to between 45 million and 50 million tonnes of carbon dioxide equivalent by 2035, on a trajectory to net zero in 2050.

Reducing Emissions in Global Shipping

International shipping moves over 80 per cent of global trade and accounts for nearly three per cent of global GHG emissions. Singapore remains committed to being a responsible member of the global maritime community, and participates actively in forums such as the IMO, where we were re-elected to the Council for the 17th consecutive term. Singapore is focused on building technical and operational readiness to meet the 2023 IMO Strategy on Reduction of GHG Emissions from Ships, which aims to achieve net-zero emissions for international shipping by or around 2050. We are also working with like-minded countries and industry stakeholders to develop Green and Digital Shipping Corridors (GDSCs). These will enhance the resilience, efficiency and sustainability of global supply chains, and complement and reinforce the work of global bodies such as the IMO.



Sustainable Global Hub Port and International Maritime Centre

Our Global Hub Port

The performance of the Port of Singapore hit new highs in 2025, supported by resilient global trade and fuel offtake. We achieved a record of 3.22 billion gross tonnage (GT) of vessel arrivals and 44.66 million Twenty-Foot Equivalent Units (TEUs) of container throughput. Marine fuel sales reached a new peak at 56.77 million tonnes. The use of alternative marine fuels continued to grow, with sales increasing to 1.95 million tonnes.

The port plays an important role in Singapore's national climate strategy. MPA has set the target for the harbour craft sectors to achieve net-zero emissions by 2050 in line with Singapore's national target. Our new Tuas Port is being constructed with sustainability as a priority and the capability to adapt to rising sea levels.

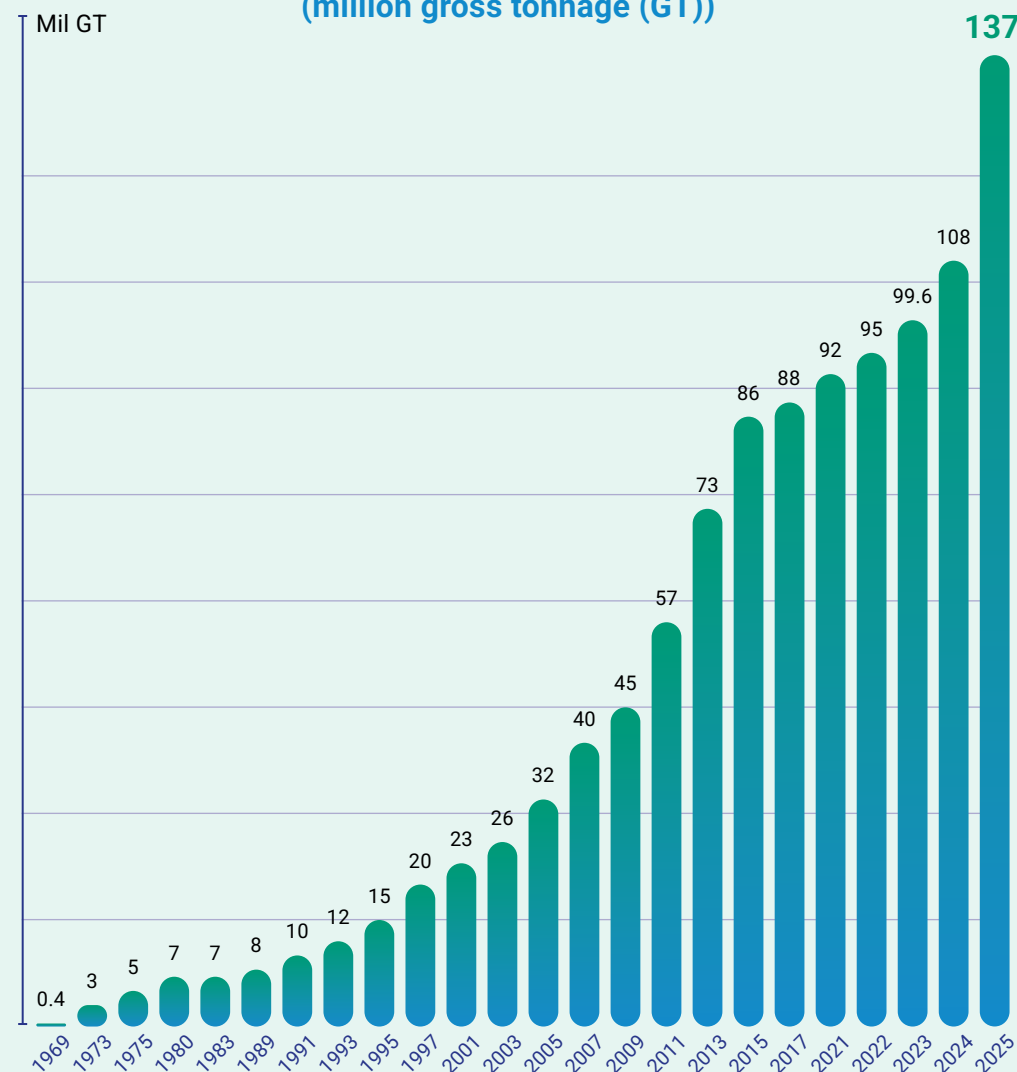
Our International Maritime Centre

Singapore remains a choice destination for maritime business. There are over 200 international shipping groups in Singapore, with 35 maritime companies that opened or expanded operations in 2025. Collectively, the significant maritime companies contributed an annual total business spending of around S\$5 billion to our economy.

MPA has set aside S\$15 million through 2030 under the Maritime Cluster Fund–Sustainability to encourage the early adoption of sustainable technologies. We refreshed the Maritime Singapore Green Initiative in 2024, with an additional S\$50 million committed to five programmes targeted at reducing the environmental impact of shipping.

We continue to promote sustainability in the Singapore Registry of Ships (SRS), which has one of the youngest quality fleets. The SRS became the world's fourth largest ship registry in 2025, with more than 4,400 ships and a record 137.46 million GT. In 2025, the SRS awarded 34 Green Ship Certificates under the Green Ship Programme. It has also flagged five methanol-fuelled vessels since 2020 and is expected to flag its first ammonia dual-fuelled vessel within the next two years.

Total tonnage of ships under the Singapore Registry of Ships (million gross tonnage (GT))



Chapter 1

Maritime Singapore Playing a Leading Role in Decarbonisation

As a global hub port and international maritime centre, Singapore is committed to driving decarbonisation on both the domestic and international fronts.



Domestic Initiatives

MPA is facilitating the adoption of net-zero harbour craft and digital solutions across the domestic maritime sector, to meet Singapore's national target of net-zero emissions by 2050.

Building a Sustainable Harbour Craft Ecosystem

To support the transition to electric harbour craft (e-HC), MPA is developing e-HC charging infrastructure and engaging the industry on harbour craft decarbonisation.

e-HC Design

Singapore made steady progress in the development of electric vessels in 2025.

- **Electric supply boat, *Voltai*:** The Coastal Sustainability Alliance (CSA) launched its first fully electric supply boat with support from MPA, institutes of higher learning and research institutions. It can achieve up to 60 per cent energy savings with zero direct emissions.
- **Electric tug, *EON*:** The CSA also launched Singapore's first fully electric tug (e-tug), with support from MPA. It has started operations in the first quarter of 2026.
- **Electric cargo vessel, *Hydromover 2.0*:** Launched in October 2025 by Yinson GreenTech, this vessel has longer range, faster charging time, higher payload capacity, better energy efficiency, and advanced digital capabilities for smarter operations.



CSA Electric Supply Boat, *Voltai* (photo credit: Kuok Maritime Group)



CSA Electric e-tug, *EON* (photo credit: Kuok Maritime Group)



Electric cargo vessel, *Hydromover 2.0*

e-HC Charging Infrastructure

MPA worked with Enterprise Singapore (EnterpriseSG) and the Singapore Standards Council to publish the first edition of Technical Reference (TR) 136 on 25 March 2025. This is Singapore's national standard for e-HC charging infrastructure, and its aim is to ensure the safe operation, efficient use, and interoperability of e-HC charging systems.



Launch of TR 136 by Standards Development Organisation @ NTU (NTU-SDO), MPA and EnterpriseSG

Industry Engagement on Harbour Craft Decarbonisation

MPA and the Singapore Shipping Association (SSA) held a seminar on harbour craft decarbonisation, attended by 77 representatives from 47 companies and three industry associations. We updated the participants on the potential decarbonisation pathways for Singapore's harbour craft and sought the industry's inputs. MPA will continue to work closely with the industry to ensure a smooth and safe transition to a net-zero harbour craft sector. MPA set up a decarbonisation taskforce with SSA to develop a roadmap and recommend measures to support decarbonisation. The taskforce presented its recommendations during Singapore Maritime Week (SMW) 2026.



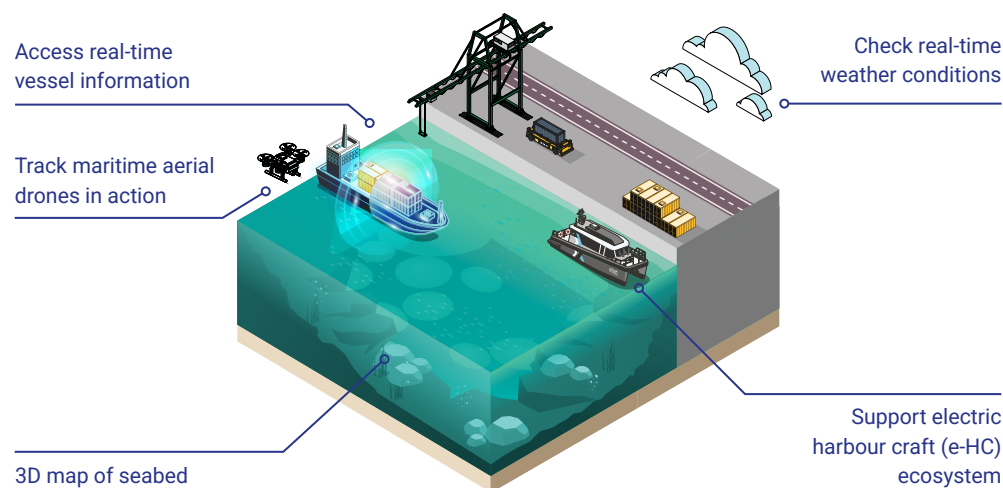
Seminar jointly organised by MPA and Singapore Shipping Association, 1 September 2025

Digital Transformation for Sustainability

Singapore is leveraging digital solutions to lower emissions, optimise operations and build a more sustainable, resilient port.

Digital Twin

The Maritime Digital Twin (MDT), launched at SMW 2025, is a dynamic virtual model of the Port of Singapore that integrates real-time data from vessels, port operations, and environmental sensors into a 3D visualisation and simulation environment. The MDT applies artificial intelligence and predictive analytics to optimise operations and reduce emissions in port activities.



In 2026, MPA will pilot industry use cases on the MDT. The first pilot aims to reduce idle time for vessels calling at Singapore by optimising fleet utilisation, job planning, and ship supply services. The second pilot will enhance situational awareness, multi-agency operational planning and decision-making for incident response, by integrating vessel traffic data, weather information, drone feeds, and oil and chemical plume models.

MPA signed an MoU with Yinson GreenTech to exchange operational data and insights from their e-HC fleet. This will advance the capabilities of the MDT as it enables more precise modelling and scenario testing to optimise fleet deployment and port operations. MPA will also work with Yinson GreenTech to co-develop digital tools to scale up e-HC operations.

Digital Port

Since its launch in 2024, the Just-In-Time (JIT) Planning and Coordination Platform has onboarded over 150 port users and service providers across the container, general cargo and bulk sectors. The JIT platform improves vessel turnaround time in our port.

Digital Bunkering

Digital bunkering was implemented by all bunker suppliers in Singapore in August 2025. This system streamlines documentation processes and transactions as electronic bunker delivery notes (e-BDNs) which can now be checked against records transmitted to MPA through our enquiry facility. The initiative eliminates paper-based processes and improves productivity, saving the industry about 40,000 man-days a year.

MPA and Firmus Technologies to Study Seawater Cooling for Sustainable AI Infrastructure

MPA and Firmus Technologies signed an MoU in June 2025 to study seawater-based cooling systems for sustainable AI infrastructure. The study aims to improve the efficiency of seawater cooling and examine the viability of deploying such systems around Singapore's waterfront areas to support growing demand for computing infrastructure. MPA will provide technical guidance to ensure the study complies with pollution control regulations and does not affect navigational safety. MPA and Firmus Technologies will also engage local research institutions and industry stakeholders to take part in the study.

PIER71™ Smart Port Challenge (SPC) 2025

The SPC 2025 attracted a record number of 288 proposals from 35 countries. The proposals covered four areas: Maritime Green Technologies, Smart Shipping, Next-Generation Ports, and Digitalisation. Shortlisted startups participated in a 10-week acceleration programme and received targeted mentorship from our maritime partners.

Since 2018, PIER71™ has supported over 170 startups that have collectively raised more than S\$130 million in venture capital and deployed over 30 innovative solutions in the maritime industry.



Winners of SPC 2025

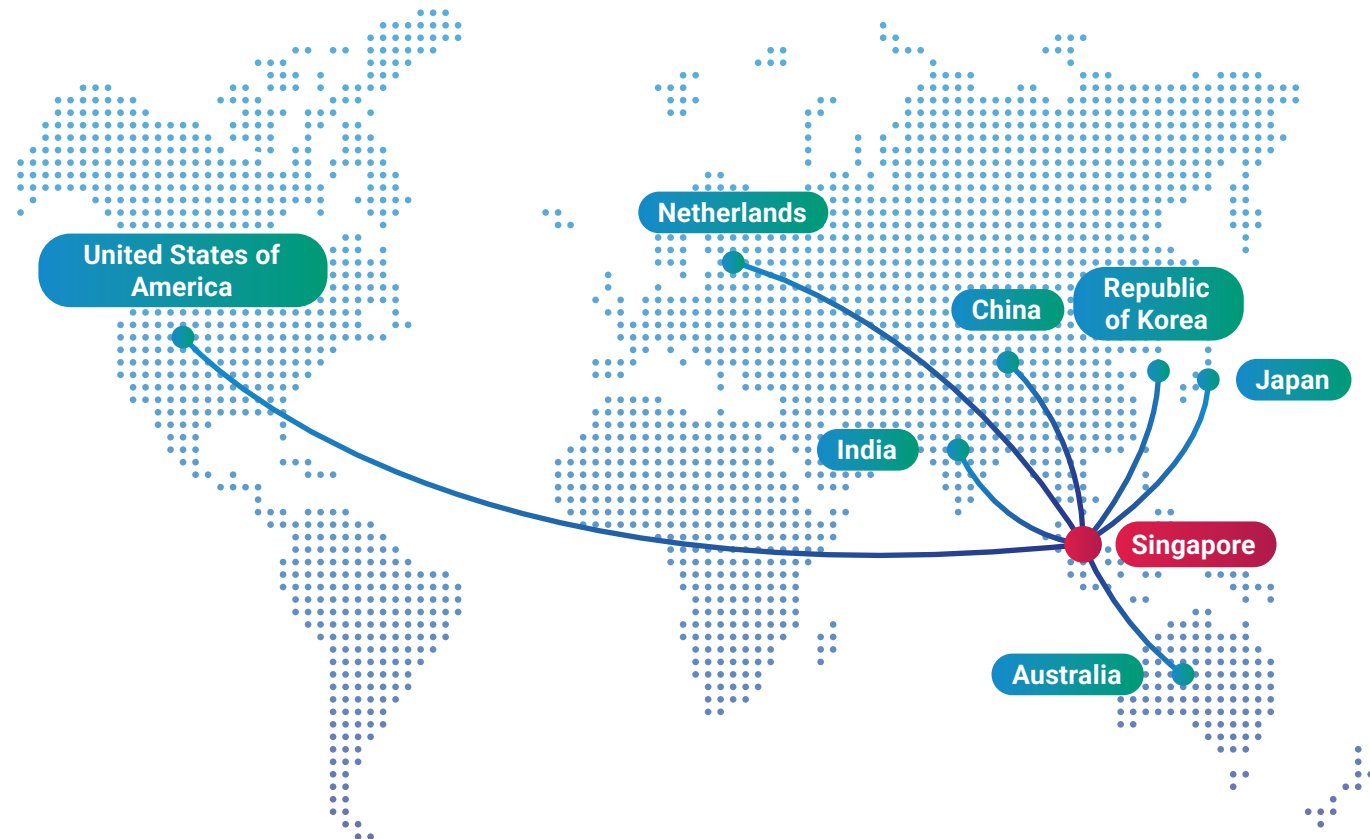
International Collaborations

Singapore is strengthening our international partnerships to exchange expertise and co-develop solutions to support global maritime decarbonisation efforts.

Global Partnership for Green and Digital Shipping Corridors (GDSC)

Key partners:

- Port of Rotterdam Authority.
- Port of Los Angeles and Port of Long Beach.
- Japan's Ministry of Land, Infrastructure, Transport and Tourism, and eight Japanese port partners – Port of Tokyo, Port of Yokohama, Port of Kawasaki, Yokohama Kawasaki International Port Corporation supporting the Kanto Region, Port of Osaka, Port of Kobe, Kobe-Osaka International Port Corporation supporting the Kansai Region, and Port of Nagoya supporting the Chubu Region.
- Australia's Department of Infrastructure, Transport, Regional Development, Communications, Sports, and the Arts, Commonwealth Scientific and Industrial Research Organisation, Pilbara Ports Authority, Fremantle Ports Authority, Ports Victoria, and Gladstone Ports Corporation.
- China's Ministry of Transport, Tianjin Municipal Transportation Commission, and Shandong Provincial Transport Department.
- India's Ministry of Ports, Shipping and Waterways.
- Republic of Korea's Ministry of Oceans and Fisheries.



Singapore-Rotterdam GDSC

The Singapore-Rotterdam GDSC now comprises 29 global partners across the value chain. They include shipping lines, fuel suppliers, port authorities and operators, industry coalitions, banks, and leading institutes of higher learning and knowledge partners. The GDSC aims to reduce emissions of large container vessels by 20 to 30 per cent by 2030, while accelerating the adoption of global standards and solutions to facilitate efficient port calls and flow of goods, and enable paperless handling.

MPA and the Port of Rotterdam strengthened the partnership with the signing of a Cooperation Agreement in March, during SMW 2025.

In September, the corridor published an Ammonia white paper and life cycle assessment study. This provided consolidated safety initiatives to support the safe adoption of ammonia as a marine fuel. The corridor also set up a Financial Experts Working Group to explore and testbed potential solutions to reduce the cost gap for alternative fuels.

The partnership is also trialling ship-to-shore and port-to-port data exchanges to promote efficient port clearance processes based on international standards, as well as berth planning and allocation. The first phase commenced in March to trial the use of global standards and digital solutions. An enhanced solution is scheduled for testing in the second half of 2026 or early 2027.



Delegates at Port of Rotterdam on 24 September 2025

Singapore-Port of Los Angeles (POLA)-Port of Long Beach (POLB) GDSC

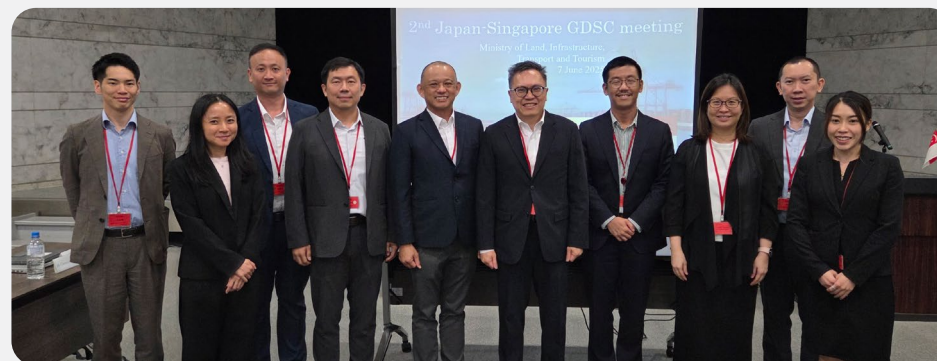
The Singapore-POLA-POLB GDSC has developed a new governance structure focusing on digital data exchange, energy efficiency technology demonstrations, and net-zero and near net-zero fuels transition.

Following the development of technical sandboxes based on international data standards to facilitate seamless data exchange between the participating ports, MPA, POLA, and POLB conducted initial tests. More trials are planned for 2026.

The corridor is working with companies to explore projects on energy efficient solutions, such as wind propulsion along the trade route and bunkering of low-emission and zero-emission fuels. A Clean Marine Fuels Feasibility Assessment was also launched to explore bunkering alternative fuels at POLA and POLB. The corridor will then collaborate with the industry and start alternative fuel trials along the route.

Singapore-Japan GDSC

Ten port partners from Singapore and Japan met in July, at the 2nd Annual Singapore-Japan GDSC meeting. They reviewed the corridor's progress and reaffirmed their commitment to continue exchanging knowledge and exploring projects on port decarbonisation, ammonia as marine fuel, and autonomous shipping.



2nd Singapore-Japan Annual GDSC Meeting, Tokyo, July 2025

Singapore-Australia GDSC

MPA and Australia's Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts (DITRDCA) have onboarded four Australian state agencies and port authorities as GDSC partners since the MoU was signed in March 2024.

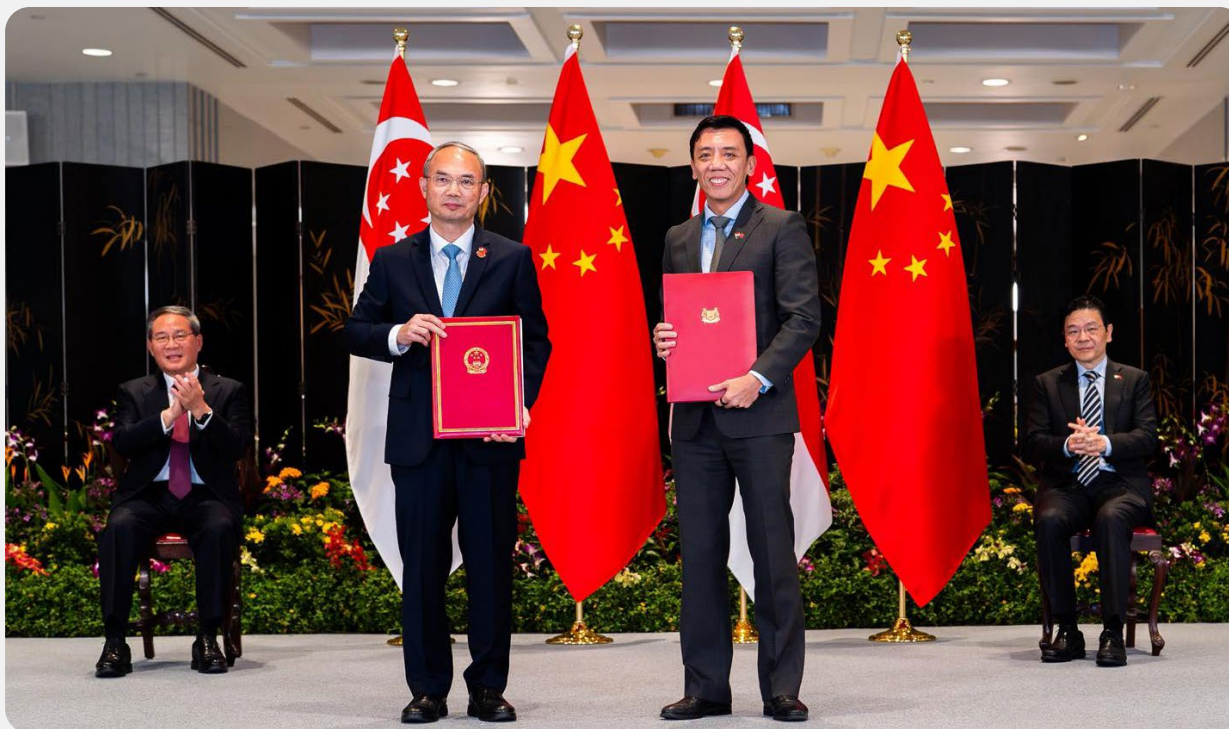
MPA and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) launched the Australia-Singapore Initiative on Low Emissions Technologies (ASLET) Grant Call for maritime and port operations. This aligns with and supports the GDSC. Under the ASLET initiative, both Singapore and Australia will commit up to \$10 million each.

Eight projects were announced at SMW 2025 and these aim to advance innovations in the supply, transport, storage and use of alternative fuels, as well as safety and environmental monitoring and electrification. The awarded projects have attracted co-contributions from industry partners and are expected to be completed within the next two years.

Singapore-China GDSC

Established in October 2025, the Singapore-China GDSC will work with industry stakeholders to advance maritime decarbonisation, enhance port and supply-chain efficiency, and develop supporting technologies, infrastructure and standards to promote a more sustainable and connected maritime ecosystem. It also seeks to strengthen digitalisation in maritime transport operations by promoting the use of data-driven systems to enhance efficiency, resilience and transparency across the maritime value chain.

The MoU elevates Singapore and China's GDSC cooperation to the national level. It builds on the municipality-level and provincial-level GDSCs with Tianjin and Shandong, established in 2023 and 2024 respectively.



Singapore's Minister for Transport Jeffrey Siow and China's Minister of Transport Liu Wei at the Singapore-China GDSC MoU signing ceremony, Singapore, 19 October 2025

Other International Partnerships

In May 2025, Singapore and France signed the Enhanced Maritime Partnership Agreement to strengthen collaboration in maritime decarbonisation, digitalisation, cybersecurity, innovation and training. Under the agreement, the parties will work with industry partners to conduct pilot projects, such as the development of a bio-methane supply chain and certification framework that aligns with international sustainability standards and accounting guidelines. This collaboration reflects the shared commitment of the two countries, as important maritime nations, to advance sustainable, innovative and secure maritime solutions.

MPA also signed MoUs and LOIs with:

- Port of Antwerp-Bruges to collaborate on maritime decarbonisation and digitalisation.
- CMA CGM to increase the number of vessels under the Singapore flag that run on alternative fuels.
- Wärtsilä to train maritime professionals to operate methanol-powered vessels safely and efficiently.

On the digital and green innovation front, MPA is partnering with:

- American Bureau of Shipping (ABS) to accelerate maritime innovation and workforce excellence. ABS will set up the ABS Singapore Maritime Safety Centre, which will provide immersive training for seafarers and maritime professionals.
- DNV to drive R&D and innovation, and test-bed projects on green and digital maritime solutions.
- RINA on maritime digitalisation and decarbonisation. It includes setting up a technology demonstration centre as part of the Open Innovation Hub, to co-create and trial innovative solutions.

Advancing Global Maritime Decarbonisation Efforts

10th Port Authorities Roundtable (PAR) 9 to 11 July 2025, Osaka, Japan

The theme of the 10th edition of the PAR was “Navigating the Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) Landscape Together: Building Future-Ready Ports”. Twenty port authorities from Africa, America, Asia, Europe, the Middle East and Oceania came together to discuss how they can adapt to an increasingly volatile environment while seizing opportunities to shape a greener, smarter, and more resilient maritime future.

PAR 2025 marks a decade since MPA launched the platform in 2015 to bring together leading global port authorities to exchange best practices, discuss issues of common interest, and foster collaborations. MPA has served as the PAR Secretariat since its inception. We continue to spearhead two workstreams, one of which is the Safe Handling of Alternative Fuels to advance decarbonisation projects aligned with the network's goals.



Participants of the 10th Port Authorities Roundtable 2025

Chapter 2

Igniting Multi-Pathways for Maritime Decarbonisation

As the regulator of one of the world's busiest bunkering hubs, MPA ensures safe and responsible bunkering operations while supporting the maritime industry's transition to a multi-fuel future.



LNG bunkering vessel approaching an LNG carrier to receive LNG fuel

Bunker Sales in 2025

Bunker sales in Singapore increased 3.4 per cent to a new high of 56.77 million tonnes in 2025. Sales of alternative bunker fuels grew steadily to 1.95 million tonnes, from 1.35 million tonnes in 2024.

Bunker Sales in 2025 (in '000 tonnes)

Conventional Fuel	54,822
Bio-blended Fuel	1,379
Liquefied Natural Gas (LNG)	571
Methanol	3 ¹
Total	56,775

Biofuel

Biofuel sales surpassed 1 million tonnes for the first time, increasing to 1.38 million tonnes from 0.88 million tonnes in 2024. This included an increased supply of higher blends like B30 and B100. To support the growing adoption of biofuels, MPA raised the permissible limit for tankers to carry B30 blends from 7 March 2025 and published Technical Reference (TR) 140 in May 2025 to set the standard for the quality of biofuel delivered in Singapore.

Liquefied Natural Gas (LNG)

LNG sales grew from 0.46 million tonnes in 2024 to 0.57 million tonnes in 2025. MPA issued an EOI in December 2024 to scale up ship-to-ship reloading and supply of bio-methane and e-methane in the Port of Singapore. Fourteen proposals were submitted, eight of which offered bio-methane and e-methane solutions. MPA worked with the shortlisted companies and successfully conducted two sea-based reloading trials in September 2025.

¹ No Methanol bunker supply licence was issued in 2025. The volume here is from Methanol bunkering trials.



LNG bunkering at a passenger cruise terminal in Singapore on 24 February 2025 (photo credit: TotalEnergies)

Singapore carried out its first LNG bunkering operation for a cruise vessel at a passenger cruise terminal in February 2025. The bunkering was conducted in simultaneous operations (SIMOPS) with passenger movements, which is the preferred mode for efficiency. Advanced capabilities, such as drone monitoring and predictive leakage analysis, were deployed to enhance safety throughout the operation. MPA worked closely with the terminal and multiple agencies to ensure that an emergency response plan and safety protocols were in place.

MPA and EnterpriseSG, through the Singapore Standards Council (SSC), will upgrade the existing TR for LNG Bunkering (TR 56) to a Singapore Standard in 2026. The Standard will enhance safety and operational efficiency, align operations with the latest regulations, and build market confidence in LNG.



LNG bunker vessel positioned alongside an LNG carrier to receive fuel

Hydrogen

Singapore launched its National Hydrogen Strategy in 2022, which outlines our approach to exploring low-carbon hydrogen as a decarbonisation pathway to achieve net zero emissions by 2050. The properties of hydrogen and its potential to be produced at scale using renewable sources make hydrogen a potential fuel to support the energy transition to a low and zero carbon future. MPA is studying the use of hydrogen and its carriers, methanol and ammonia, as alternative marine fuels.

PSA Singapore, Nanyang Technological University (NTU) and Chiyoda Corporation are testing new methods for transporting and storing hydrogen by converting it into a liquid chemical known as methylcyclohexane (MCH). At Pasir Panjang Terminal, hydrogen is extracted from the MCH and used as clean fuel to power hydrogen fuel cell electric prime movers. The first phase of this project was completed in 2025. The trial results will inform the next step for hydrogen fuel cell prime movers.



Hydrogen fuel cell electric prime mover at Pasir Panjang Terminal (Photo credit: PSA Singapore)

Ammonia

In line with Singapore's National Hydrogen Strategy, ammonia is a ready and available hydrogen carrier with an established international supply chain for industrial use. It does not produce carbon emissions when combusted and can be stored and transported over long distances.

The Energy Market Authority of Singapore (EMA) and MPA have appointed a consortium led by Keppel Ltd to carry out the next phase to provide a low-carbon or zero-carbon ammonia solution on Jurong Island for power generation and bunkering. Keppel Ltd and its partners will conduct a Front-End Engineering Design (FEED) study on the power generation proposal, while Keppel Ltd's bunkering partner, Sumitomo Corporation, will conduct a FEED study on the bunkering proposal.

MPA and EnterpriseSG have committed to developing a TR for ammonia bunkering in 2026. This will provide guidelines for the use of ammonia as a marine fuel, with a focus on custody transfer requirements, procedures and safety distances, and crew competency requirements.

Methanol

Building on two methanol bunkering operations in 2024, MPA issued licences to supply methanol as marine fuel in the Port of Singapore, starting on 1 January 2026. This followed the Call for Applications launched in March 2025. Three companies were awarded licences, after 13 applicants went through a comprehensive evaluation of their supply chain reliability, operational readiness, safety systems, and sustainability certification.

The licences are valid for five years, from 1 January 2026 to 31 December 2030. This gives licensees sufficient scope to build capabilities, strengthen supply chains, and anchor investments as the market develops. MPA will monitor the licensing framework to ensure that it continues to be responsive to demand, and is practical, robust, and aligned with global standards and developments.

To ensure safe and efficient use of methanol, MPA consulted the industry and published the Standards for Port Limit Methanol Bunker Tankers. The standards provide guidance for equipment, operational performance and efficiency in the design of methanol bunker tankers. In addition, MPA and EnterpriseSG published TR 129 on Methanol Bunkering in March 2025, to set out requirements for safe handling, transfer and measurement of methanol in bunkering operations. Singapore's first methanol bunkering trial carried out under this standard was successfully completed on 28 November 2025, when 3,012 metric tonnes were safely transferred from the tanker *MT Kara* to the container ship *Antonio Maersk* using the Mass Flow Metering System.



Methanol bunkering trial on Antonio Maersk

Chemical Spill Exercise at International Safety@Sea Week 2025

MPA conducted a multi-agency chemical spill exercise simulating a methanol spill caused by a tanker collision. It tested spill containment, evacuation procedures, and the use of advanced technologies, such as the Maritime Digital Twin, drones and Uncrewed Surface Vessels, for plume trajectory projection, air-quality monitoring, and chemical plume containment using water curtains. Eleven vessels and more than 150 personnel participated in the exercise.



MPA deployed drones with thermal imaging devices to detect methanol fire



SCDF vessel sprayed "water curtains" to disperse plumes

Esri Singapore 2025 GeoInnovation Award

MPA received the GeoInnovation Award for the Methanol Plume Simulation Web App project. Developed in collaboration with Esri Singapore and local research institutes, the web-based application builds a 3D plume model simulation across air, surface and subsea environments. This Proof-of-Concept is designed for geospatial operations and incident management as we transition to alternative fuels.



MPA officers receiving the Esri Singapore GeoInnovation Award 2025

Navigating Towards a Sustainable Maritime Future

We are taking coordinated steps to position Singapore as a multi-fuel bunkering hub:

- Biofuels showed steady uptake, and we have raised the permissible limits for biofuel blends and published a new standard to ensure biofuel quality.
- LNG adoption grew through successful operational trials, new standards and supply licensing.
- Hydrogen showed promise, with advancing research in the safe transportation and storage of hydrogen fuel.
- Ammonia made headway, with studies in ammonia power generation and bunkering and the development of standards.
- Methanol is progressing to bunkering at commercial scale, after successful trials and the issue of bunkering licences and publication of standards.

Chapter 3

Charting our Commitment to the Environment

MPA is committed to meeting our targets for Greenhouse Gas (GHG) emissions, electricity and water consumption, and waste generation, as required under the GreenGov.SG initiative.



MPA's GreenGov.SG Targets and 2025 Performance

	Greenhouse Gas Emissions (tonnes CO ₂)	Energy Utilisation Index (EUI) (kWh/m ²)	Water Efficiency Index (WEI) (litres/person/day)	Waste Disposal Index (WDI) (kg/person/day)
GreenGov.SG Targets	Peak emissions by around 2025 and net-zero emissions by around 2045	10% reduction by 2030, from average of 2018-2020 levels	10% reduction by 2030, from average of 2018-2020 levels	30% reduction by 2030 from 2022 level
Baseline EUI & WEI: Average of 2018-2020 levels WDI: 2022 level	-	124 kWh/m ²	84.3 L/person/day	0.502 kg/person/day
MPA's Targets	Peak gross emissions around 2027-2028	111 kWh/m ² by 2030	75.9 L/person/day by 2030	0.351 kg/person/day
2025 Performance	Gross emission: 11,119 t CO ₂ e	117 kWh/m ²	100.5 L/person/day	0.611 kg/person/day
	Renewables: 83 t CO ₂ e			
	Net emission: 11,036 t CO ₂ e			
Status	MPA expects to peak around 2027-2028 when new MPA buildings are fully operational	On track to meet the target	MPA will continue to monitor and implement interventions to meet our WEI target	MPA will continue to monitor and implement interventions to meet our WDI target

Greenhouse Gas Emissions and Energy Utilisation Index

MPA's total Scope 1 and 2 GHG emissions reduced by one per cent from 2024 to 11,119 tonnes CO₂ equivalent (t CO₂e). Scope 1 emissions¹ accounted for 82 per cent while Scope 2 emissions² accounted for 18 per cent of the total emissions. The decrease in Scope 1 emissions was due to overall reduction in vessel fuel consumption. Scope 2 emissions increased because of higher electricity consumption in our data centres, operational equipment sites, Port Operations Control Centres, and the addition of new office space at ALICE@Mediapolis. MPA's GHG emissions is expected to peak in 2027 or 2028 when our new buildings are fully operational.

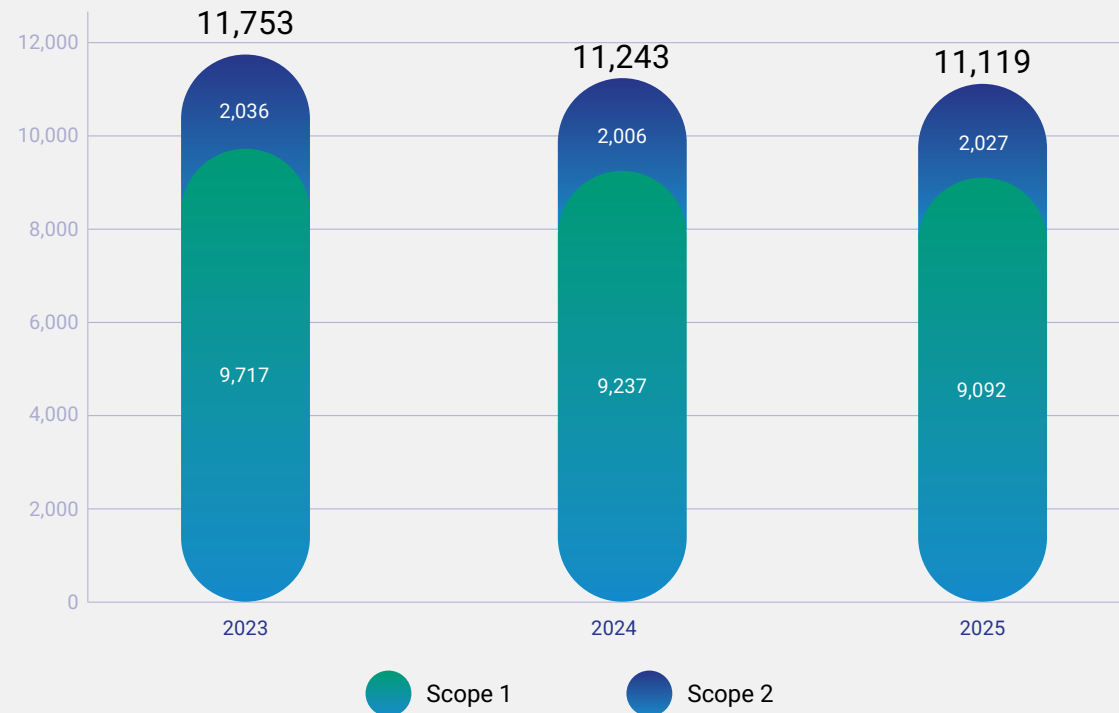
¹ Scope 1 emissions are direct emissions from sources that are owned or controlled by the reporting entity.

² Scope 2 emissions are indirect emissions that result from the use of purchased electricity, heat and steam.

³ Standard infrastructure refers to publicly accessible buildings with a computable gross floor area, such as MPA's offices and piers. Non-standard infrastructure refers to premises and assets that are either not publicly accessible or have no meaningful floor area.

Emissions Performance Overview

Chart 1. Gross GHG emissions (t CO₂e)

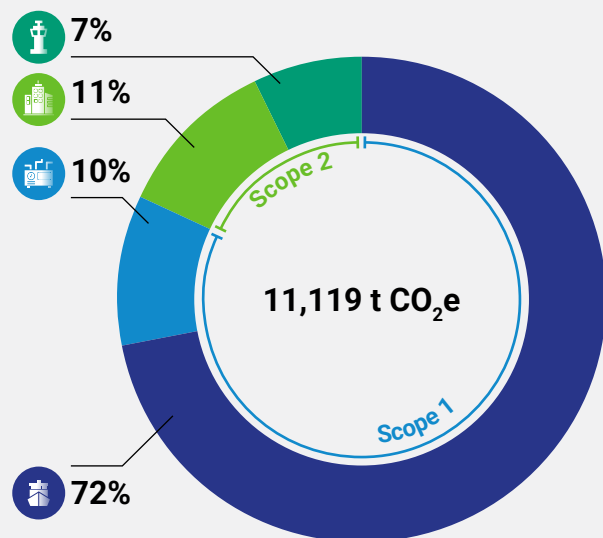


Notes:

- 1) MPA adopts the GHG Protocol Corporate Standard to calculate GHG emissions for our standard and non-standard infrastructure³, operational vessels and operational motor vehicles.
- 2) Following improvements in our data collection processes and calculation methodologies to enhance data accuracy and completeness, GHG emissions for 2023 is restated to 11,753 t CO₂e (from 11,731 t CO₂e) and for 2024 it is restated to 11,243 t CO₂e (from 11,231 t CO₂e).

Emissions Performance Overview

Chart 2. 2025 Gross Emissions (t CO₂e)



- Diesel and petrol**
(marine)
- Diesel and petrol**
(lighthouse, generators, land vehicles)
- Electricity**
(standard infrastructure)
- Electricity**
(non-standard infrastructure)

Scope 1

- Vessels: accounted for 72 per cent of total emissions
- Vehicles, on-site generators and offshore sites: contributed 10 per cent of total emissions

Scope 2

- MPA facilities: contributed 18 per cent of total emissions

Table 1. Emission Reduction

	Scope 1 (t CO ₂ e)	Scope 2 (t CO ₂ e)	Total (Scope 1 and 2) (t CO ₂ e)
Gross Emission	9,092	2,027	11,119
Emission Reduction	-	Renewable: 83	83
Net Emissions	9,092	1,944	11,036

Table 2. Total Energy Consumption for 2025

Total non-renewable energy consumption (GJ)	Total renewable energy consumption (GJ)	Total electricity consumption (GJ)	Total energy consumption (GJ)
121,483	716	5	139,706

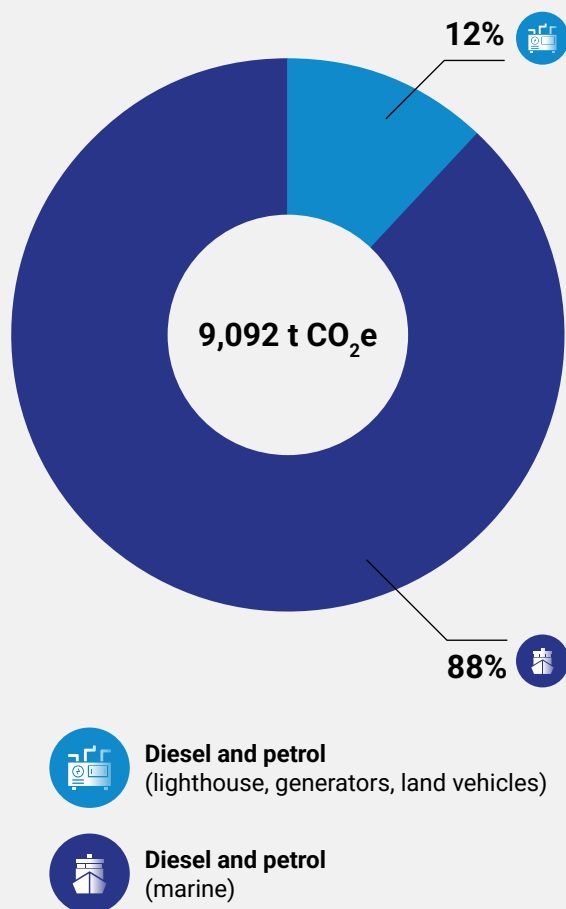
Table 3. Renewable Energy for 2025

Renewable Energy Category	Renewable Energy Source	Unit of Measure	Gross Total	Total (GJ)
Solar	Solar Panels	kWh	198,892	716

Scope 1

MPA's vessel fleet accounted for 88 per cent of our Scope 1 emissions. The remaining 12 per cent was from petrol and diesel consumed by land vehicles and backup generators.

Chart 3. Scope 1 GHG Emissions (t CO₂e)



Our GreenGov.SG Strategy

- 1 Explore use of electric and biofuel-capable craft
- 2 Leverage technology and greener fuels for hydrographic operations
- 3 Increase deployment of solar energy
- 4 Electrification of vehicles

Mitigation Measures

1 Patrol Operations and Garbage Collection/Flotsam Retrieval Services:

The deployment of our patrol craft is optimised so that coverage is maximised and surveillance overlaps are minimised. From 2030, MPA will also explore the adoption of full electric, biofueled, or net-zero hybrid patrol vessels and garbage collection and flotsam retrieval craft for our next service contract.

2 Hydrographic Operations:

MPA is expanding our use of remote and autonomous technologies for hydrographic surveys and monitoring of marine aids to navigation. We will begin trials of unmanned surface vessels (USV) for hydrographic operations in the second half of 2027. This will enable us to reduce the number of vessels from five to four by 2028 and potentially halve vessel trips for maintenance. Our current fleet includes three vessels with biofuel-ready engines, and one LNG-diesel hybrid vessel. From 2030, all vessels will be fully electric, compatible with net-zero fuels or use B100 biofuel.

3 Solarisation:

MPA is harvesting more solar energy in our existing facilities. Operations at Marina South Pier will be powered by photovoltaic panels. Their installation was completed in December 2025. We aim to fully decarbonise operations at Pulau Satumu by 2027, making it the first offshore island powered entirely by renewable energy.



Solar photovoltaic panels at Marina South Pier



Artist's impression of solarisation at Pulau Satumu

4 Vehicle Electrification:

MPA replaced its two petrol/diesel vehicles with electric vehicles in July 2025.

Scope 2

Electricity used to power MPA's facilities and operations account for 18 per cent of our total GHG emissions. Total electricity consumption increased by one per cent in 2025 to 4,862,983 kWh, driven by higher consumption in our data centres, operational equipment sites, Port Operations Control Centres, and the addition of office space. Overall, electricity consumption for standard infrastructure fell, while that for non-standard infrastructure increased. As EUI is calculated only for standard infrastructure, EUI reduced by two per cent to 117 kWh/m².

Our GreenGov.SG Strategy

- 1 Transit to green IT infrastructure
- 2 Implement smart facilities management
- 3 Build energy-efficient facilities

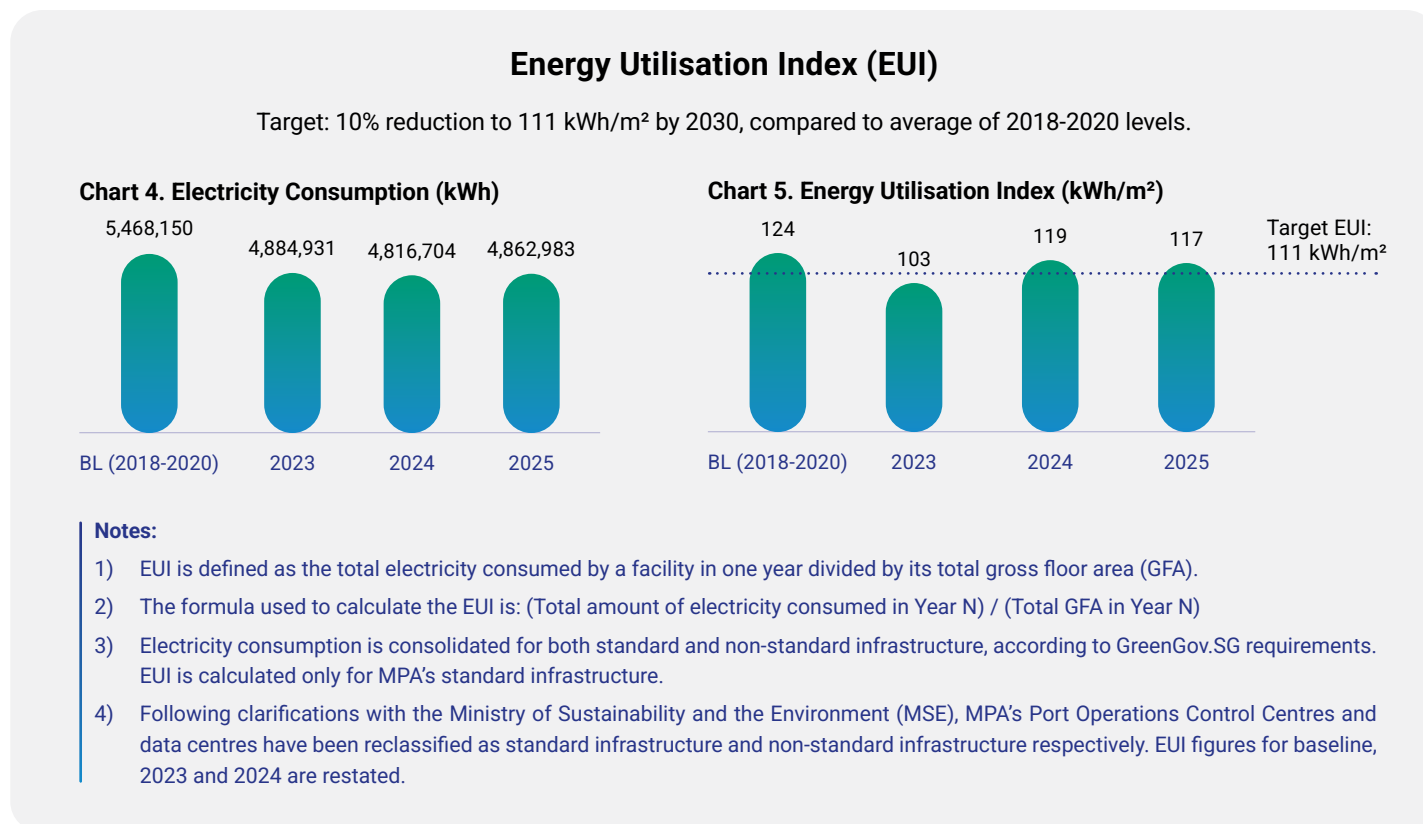
Mitigation Measures

1 Transit to Green IT infrastructure

Migration of on-premises IT servers to cloud:

By 2027, most IT server workloads at MPA's data centre will be migrated to Government on Commercial Cloud (GCC) services and commercial cloud. Commercial cloud options will be selected based on, inter alia, Power Usage Effectiveness (PUE) and sustainability considerations.

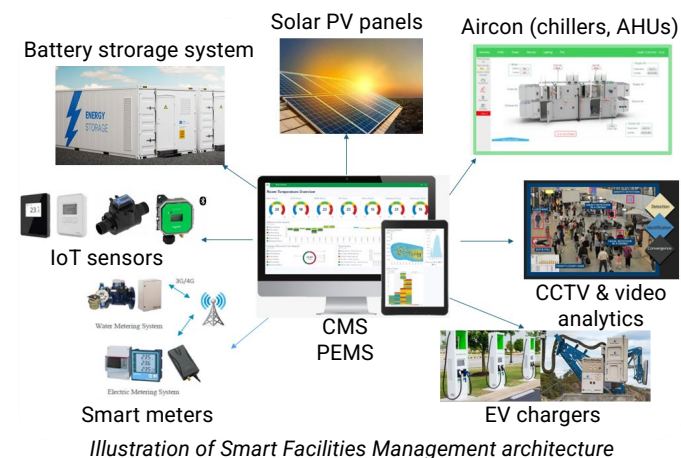
We decommissioned all 28 Solaris physical servers in 2025, and will decommission over 100 physical Windows servers and network equipment by 2027. This will save about 600,000 kWh of electricity a year.



Green Mark Platinum Data Centre: MPA's data centre will be relocated to a BCA Green Mark Platinum certified data centre by 2028.

2 Smart Facilities Management (FM) for MPA Facilities

An integrated Smart FM platform for MPA's facilities will be installed by 2027. With sensors and smart grid controllers, our electricity usage will be optimised and automatically adjusted to match solar power generation. This will reduce our dependence on the national grid.



3 Building Energy-Efficient Facilities

Maritime House: The new Maritime House features a 22-storey seafarer accommodation block and a five-storey office building. Solar systems will generate more than 200,000 kWh annually and enable over 40 per cent energy savings, avoiding 82.4 tonnes of CO₂ emissions. The project aims to attain Green Mark Super Low Energy certification, while the office block will be a zero-energy building. The new Maritime House is expected to be completed in 2027.



Artist's impression of Maritime House

Circularity in Tuas Port Development

Phase 3 of the development of Tuas Port is progressing well. As part of the whole-of-government efforts to reuse materials, a portion of the reclamation fill for Tuas Port will use excavated materials from the Land Transport Authority's projects.



Visit to Semakau landfill, 11 December 2025

Our Water and Effluents Discharge Management

Total water consumption in 2025 was 25,078 m³. Of this, 83 per cent was consumed by Marina South Pier (58 per cent), West Coast Pier (18 per cent) and Changi Point Ferry Terminal (7 per cent). The water consumed at these locations was mainly for public use and pier maintenance.

Adjusted Baseline for Water Efficiency Index (WEI)

Our GreenGov.SG baseline for WEI is relatively low as it is based on the average water consumption from 2018 to 2020, when water was used mainly for amenities and general maintenance. We expect our water usage to be significantly higher from 2027 when our new buildings become operational with water-cooled air-conditioning (AC)

systems. These are more energy efficient, using 35 per cent less electricity than air-cooled systems for the same cooling load, but use more water.

To have a fair and meaningful WEI comparison from 2027, we have adjusted the baseline¹ to a notional scenario where our existing assets also use water-cooled AC systems, based on current technologies. This provides a more like-for-like reference point that recognises the trade-off between higher water use and improved energy efficiency. (See Chart 7.)

MPA's WEI, following GreenGov.SG baseline, has seen a year-on-year reduction of around 2 per cent from 2023 to 2025. This is supported by efforts to install water-efficient fittings, rectify leaks promptly, and conduct routine inspections at our

piers. MPA's adjusted WEI fell from 148.8 litres/person/day in 2023 to 91.9 litres/person/day in 2024 after Maritime House was decommissioned. It rose to 100.5 litres/person/day in 2025 primarily because of the assumed A/C consumption from ALICE@Mediapolis.

Mitigation Measures

MPA will conserve water in our new buildings by maximising naturally ventilated spaces, raising the AC temperature, and minimising water loss in the water-cooled AC system design. We are also working on reducing the water consumption at Marina South Pier, which is in large part due to public use and maintenance washing of the pier.

¹ Virtual AC water consumption from 2018 to 2026 is estimated using gross floor area from MPA's standard infrastructure, and deriving the cooling load (in RT) using typical cooling load from the "BCA cooling load 2015 report" and typical cooling tower make-up water of 0.25 m³/day/RT.

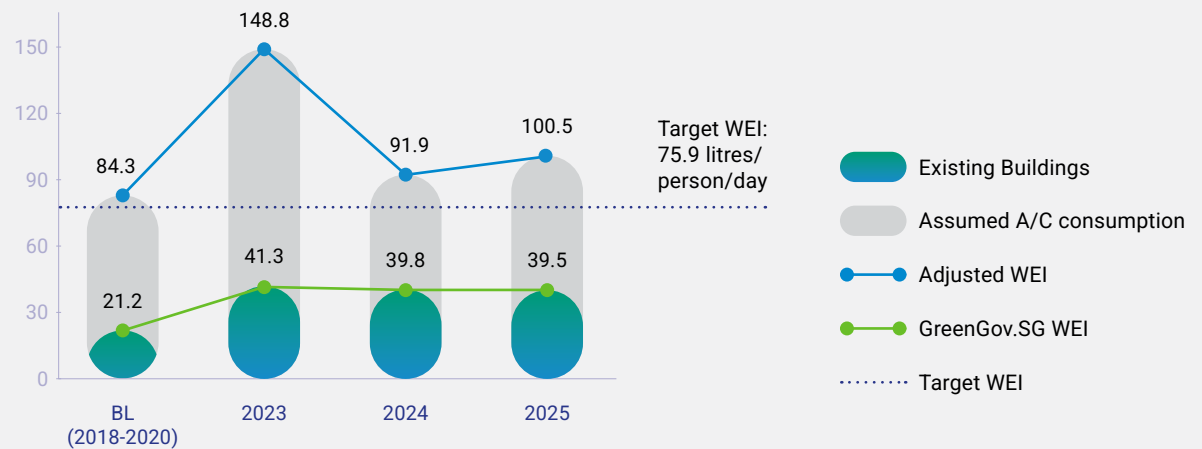
Water Efficiency Index (WEI)

Target: 10% reduction in WEI to 75.9 litres/person/day by 2030, compared to the average of 2018-2020 levels

Chart 6. Water Consumption (m³)



Chart 7. Water Efficiency Index - adjusted baseline vs GreenGov.SG baseline (litres/person/day)



Notes:

- 1) WEI is defined as the water consumption per day divided by the total public officer headcount plus visitors.
- 2) The formula used to calculate WEI is:

$$[\text{Total amount of water consumed at all Agency premises in Year N} \times 1000] / [\text{Average number of operational days in Year N at all Agency premises} \times (\text{Average number of staff per day at all Agency premises} + (0.25 \times \text{Average number of visitors per day at all Agency premises}))]$$
- 3) The water consumed by MPA comes from a third-party water source, the national water agency Public Utilities Board (PUB).
- 4) Water consumption data is extracted from water utility bills.
- 5) Following GreenGov.SG requirements, water consumption is consolidated for both standard and non-standard infrastructure. WEI is calculated only for MPA's standard infrastructure where water consumption is managed by MPA.
- 6) Following improved calculation methodologies, WEI figures for baseline, 2023 and 2024 are restated.

Our Waste Management

In 2025, MPA's Waste Disposal Index was 0.611 kg/person/day, a four per cent reduction from 2024. We remain committed to meeting our WDI target of 0.351 kg/person/day.

Total Waste Generated⁵	374,362 kg
General Waste⁶ (Total waste disposed of)	366,384 kg
Waste diverted from disposables by recycling	7,978 kg
• Paper Waste	2,939 kg
• Plastic Waste	4,915 kg
• Metal/Can Waste	124 kg

Most of our waste was from public piers. We continued our outreach efforts in 2025 by putting up banners to encourage the public to recycle, and engaged harbour craft operators to use the recycling facilities. We will continue to explore ways to reduce waste at Marina South Pier.

Total waste disposed of was 366,384 kg, a five per cent decrease from 2024. Recyclables collected rose to 7,978 kg compared to 5,684 kg in 2024. We will continue to monitor the waste generated and disposed of.



Recycling banners placed at Marina South Pier Level 3

⁵ All waste is non-hazardous waste.

⁶ All general waste is diverted to disposal. MPA's waste is collected and disposed of by the National Environment Agency.

Waste Performance Overview

Target: 30% reduction in Waste Disposal Index (WDI) to 0.351 kg/person/day by 2030, compared to 2022 levels

Chart 8. Waste Disposed (kg)

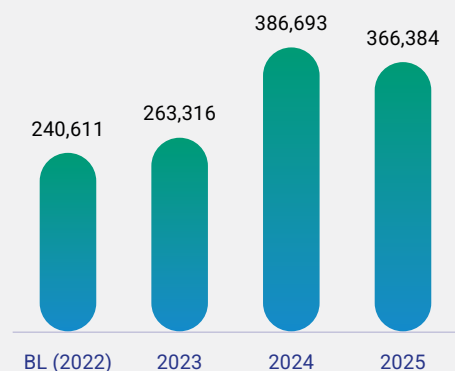
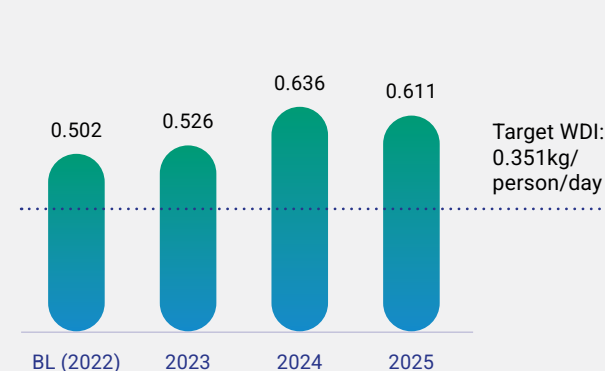


Chart 9. Waste Disposal Index (kg/person/day)



Notes:

- WDI is defined as the total waste disposed of per day divided by the total public officer headcount plus visitors.
- The formula used to calculate WDI is:

$$\frac{[\text{Total amount of waste disposed of for all Agency premises in Year N}]}{[\text{Average number of operational days in Year N for all Agency premises} \times (\text{Average number of staff per day for all Agency premises} + (0.25 \times \text{Average number of visitors per day for all Agency premises}))]}$$
- Following GreenGov.SG requirements, waste disposed of is consolidated for both standard and non-standard infrastructure. WDI is calculated only for MPA's standard infrastructure where waste disposal is managed by MPA.

Chapter 4

Maintaining Operational Excellence and Safety Standards

Safe and reliable operations in the Port of Singapore is a priority for MPA. We also foster a culture of safety within our organisation.



Ensuring a Safe Global Hub Port

Maritime Safety

MPA collaborates with industry and governments to bolster safety in our port. We conduct exercises and build capabilities to respond decisively to incidents at sea. We are also enhancing our defences to deal with cybersecurity risks.

International Safety@Sea Week, 15-18 July 2025

The International Safety@Sea Week 2025 attracted over 1,800 participants from around the world. The event focused on maritime safety advancements, including green and digital innovations. The newly appointed National Maritime Safety at Sea Council conducted its first Safety@Sea Community Conversations, which focused on near-miss reporting and fostering a culture of safety. The Council aims to build up expertise in technology and alternative fuels.



The International Safety@Sea Week 2025 was opened by Mr Murali Pillai, Senior Minister of State for Law and Transport, on 15 July 2025

Joint Oil Spill Coordination Tabletop Exercise (TTX) with Indonesia and Malaysia, 11 February 2025

The exercise strengthened regional coordination and joint response capabilities to handle oil spills in the Straits of Malacca and Singapore (SOMS). It reviewed communication protocols, asset deployment, and coordination among government agencies and commercial responders. Participants came from MPA, Indonesia's Directorate General of Sea Transportation, Malaysia's Environment Department, and the International Tanker Owners Pollution Federation (ITOPF).



MPA, as chair of the Revolving Fund Committee (RFC), hosted the TTX with Indonesia and Malaysia

Successful Rescue Operations coordinated by Maritime Rescue Coordination Centre (MRCC) Singapore

The MRCC Singapore coordinated multiple search and rescue (SAR) operations within its designated Maritime Search and Rescue Region (MSRR). When alerted, the MRCC Singapore coordinates the SAR operation and collaborates closely with relevant authorities and MRCCs. Two notable operations in 2025 were the rescue of all 18 crew members from the Vietnamese-registered freighter *Dolphin 18* on 11 January, and the successful recovery of 30 individuals from the capsized fishing vessel *Facific Memory II* on 20 May.



Rescued persons from the capsized fishing vessel *Facific Memory II* transferred to the Indonesian Coast Guard boat



Rescued persons safely on board the bulk carrier *Andros Spirit*

Safer Seas Volunteer Programme (SSVP) Seaward Exercise

The SSVP augments search-and-rescue capabilities in Singapore waters by allowing MPA to request volunteers whose craft are near an incident to help search and report sightings in man-overboard situations. MPA conducted a seaward exercise with volunteers on 3 November 2025, which simulated a missing swimmer scenario.



SSVP Seaward Exercise on 3 November 2025

Ship and Environment Safety

MPA, as the flag Administration for Singapore-registered ships, performs Flag State Control functions to ensure that these ships comply with regulations on maritime safety, security, environment and crew welfare standards. Foreign-registered ships may also be subject to our Port State Control inspections to ensure that they comply with these standards. Click [here](#) for inspections conducted by MPA.



The SRS has consistently excelled and maintained its status on the whitelist of both the Tokyo and Paris Port State Control regimes.



The SRS has maintained its QUALSHIP 21 status for nine consecutive years since 2017.



Nearly 600 Singapore-registered vessels are enrolled under the QUALSHIP 21 programme.

Cybersecurity

Maritime Shipboard Operational Technology (MariOT) System

MPA commissioned the MariOT system in 2025. This is an industrial-grade, simulator-based platform to test cybersecurity technologies and train maritime professionals, seafarers and students. It was developed in collaboration with the Singapore University of Technology and Design (SUTD) and industry partners, with support from the Singapore Maritime Institute.



Launch of MariOT system

MPA and SUTD hosted the inaugural MariOT cybersecurity training exercise from 27 to 28 March 2025. Simulating cyber threats targeting OT systems on vessels, the exercise tested participants' ability to detect cyber intrusions and carry out the appropriate incident response. Exercise observers included senior officials of international port authorities from the Port Authority Chief Information Officers Cybersecurity Network (PACC-Net) and chainPORT Cyber Resilience Working Group (CRWG).

Maritime Cyber Assurance and Operations Centre (MCAOC)

The MCAOC continues to build and support a cyber-resilient maritime ecosystem. A series of workshops and training programmes were delivered to enhance cybersecurity awareness, skills and operational preparedness among maritime companies.



Presentation by the Anti-Scam Command, Singapore Police Force to educate MPA staff and maritime companies on anti-scam strategies

Exercise Cyber Maritime

MPA hosted a Cybersecurity Tabletop Exercise (TTX) at the MCAOC during Singapore Maritime Week 2025. It involved 38 participants from 19 organisations, which included international port authorities and local companies. The exercise tested the MCAOC platform to process cyber threat information, disseminate information, report incidents and coordinate responses.



Exercise Cyber Maritime participants

Safety in the Workplace

MPA sets clear workplace safety standards that align with our Workplace Environment, Health and Safety (EHS) Policy, which is endorsed by the Chief Executive and communicated to all staff. We foster a culture where employees can stop work when they consider it unsafe and they can raise safety concerns without fear of reprisal.

Management and staff share responsibility for maintaining a safe, healthy and sustainable work environment. All staff are expected to follow safe work practices and take responsibility for their own safety and that of their colleagues. We encourage open discussions on safety and actively consider staff suggestions for improvements, including initiatives to promote mental wellness and well-being.

Ten work-related incidents were reported in 2025. Six involved MPA employees and four involved MPA contractors; all resulted in minor injuries.

	Employees		Contractors	
	Number	Rate ¹	Number	Rate
Recordable work-related injuries	5	0.58	3	N.A. ²
High-consequence work-related injuries (excluding fatalities)	1	0.12	1	N.A.
Fatalities	0	0	0	0

¹ The rate is calculated using the formula: (Number of recordable work-related injuries/number of hours worked) per 200,000 hours worked.

² The total number of contractor workers is not tracked and hence the hours worked by contractor workers are not recorded.

³ MPA also complies with the Ministry of Manpower's Workplace Safety and Health (WSH) requirements. These requirements include the WSH (General Provisions) Regulations; WSH (Incident Reporting) Regulations; WSH (Safety and Health Management System (SHMS) and Auditing) Regulations; WSH (Workplace Safety and Health Committees) Regulations; and WSH (Risk Management) Regulations.

⁴ Guidance is taken from the Ministry of Manpower document "A Guide to the Workplace Safety and Health (Risk Management) Regulations" and from the five-step risk management process – 5M factors (Mission, Management, Man, Machine and Medium).

MPA's Safety Management System

MPA's Chief Executive oversees the implementation of MPA's EHS policy through our Safety Management System (SMS)³, and reports directly to the Board. MPA's SMS is aligned with industry best practices⁴ and covers our employees, contractors and all individuals at MPA sites. Under the SMS, we have established a Hazard Identification (HAZID) technique and Hazard and Operability (HAZOP) study process to swiftly identify, evaluate and mitigate potential hazards before an operation begins.

All divisions must conduct Risk Assessments (RA) to identify, evaluate, and control risks in their respective work activities and environment. Following any incidents, the RA is reviewed to improve the effectiveness of the control measures.

The EHS Committee fosters a culture of safety. Its members come from various MPA divisions. The committee shares information and updates on MPA's safety systems and performance. Site visits are conducted to identify safety gaps and implement improvements. Three site walks were conducted in 2025.



Elevating Risk Awareness Through Leadership Development

In 2025, all Division heads attended the bizSAFE Level 2⁵ “Develop a Risk Management Implementation Plan” programme, as part of MPA’s comprehensive approach to workplace safety training. In all, 85 MPA officers, including some from the senior management team and heads of departments, have completed this programme after six in-house runs.

A lockscreen message stating the importance of conducting risk assessments for safer work was deployed to all staff to reinforce the lessons. This reflects MPA’s commitment to strengthen risk awareness by equipping our people at all levels with the knowledge and skills to identify, assess and manage workplace hazards effectively. We will continue to build a proactive safety culture where risk awareness is embedded throughout the organisation and we have a safer workplace for all employees.



Incident Reporting and Investigation

Near Miss reporting FormSG

Staff report incidents, near-misses and unsafe conditions without fear of blame.

Daily Situation Report (SITREP) Emails

Reports are included in SITREP emails, triggering immediate investigation by affected divisions.

Investigations

Affected divisions investigate to identify root causes and implement appropriate corrective and preventive measures.

EHS Meetings

Findings from investigations are reviewed to draw lessons for sharing across the organisation. Significant incidents are reported to Senior Management.

⁵ The bizSAFE programme, supported by the Ministry of Manpower, was designed to help companies build workplace safety and health capabilities. bizSAFE Level 1 recognises that a company is aware of its legal obligations under the WSH Act, and is able to develop a WSH policy. bizSAFE Level 2 recognises that a company has a trained Risk Management (RM) Champion who knows how to facilitate and mobilise relevant employees in developing risk management plans and conducting risk assessments.

Safety Training

MPA gives our workforce comprehensive safety training in areas such as medical emergencies, risk management, workplace safety, and community emergency preparedness.

Training courses:

- Occupational First Aid Course
- Shipboard Medical First Aid with CPR and AED
- Safe Transfer at Sea
- Firefighting
- Managing Work-at-Heights
- Investigation Techniques
- Methanol Bunkering
- WSH Committee Members Training
- Develop a Risk Management Implementation Plan (bizSAFE 2 course)



MPA officers completed
4843
hours of safety training.

Strengthening Safety Together



**SEE SOMETHING?
SAY SOMETHING!**

SCAN TO REPORT
A NEAR MISS



Three Categories

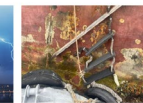
Unsafe Act
An activity that is carried out in a way that can cause injury or property damage.



Unsafe Environment
A condition in the work premise that can cause injury or property damage.



Unsafe Equipment
A fault with the work equipment that can cause injury or property damage.



Brought to you by MPA Environment, Health and Safety Committee



**SEE SOMETHING?
SAY SOMETHING!**



By reporting a near miss, you can help to:

1. Identify unsafe conditions or potential hazards
2. Improve MPA's safety culture
3. Prevent an injury or death

M P A
Brought to you by
MPA Environment, Health
and Safety Committee

Near Miss Reporting Initiative

Posters and signs with QR codes are displayed at entrances and pantries of all premises so that it is convenient for staff to report near misses for timely mitigation and follow-up.

Learning and Sharing of Best Practices

MPA EHS Committee members visited PSA Corporation and Jurong Port to exchange insights on safety management systems and stakeholder collaboration practices.



Strengthening Safety Together

Responders Plus Programme

MPA continued our partnership with Singapore Civil Defence Force (SCDF) to certify about 200 MPA staff in core life-saving skills, which included first aid, CPR, use of AED and fire extinguishers.



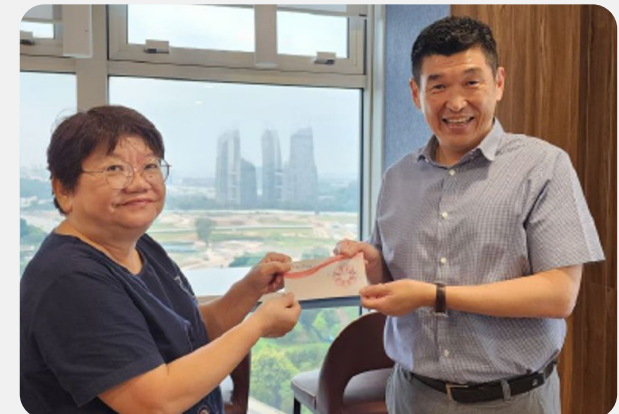
Lunch-time Safety Talks

Guest speakers from MinMed Group, SPF Traffic Police and SCDF gave talks on office ergonomics, road safety and fire safety to more than 100 MPA staff.



Safety Heroes

We introduced an initiative to recognise MPA staff who proactively look out for colleagues' safety and act to prevent workplace hazards. Two MPA officers were recognised as "Safety Heroes" for warning colleagues of workplace hazards.



Chapter 5

Anchored in People and Culture

MPA works with industry and tripartite partners to equip the Maritime Singapore workforce with skills in digitalisation and decarbonisation. We also engage staff and invest in their well-being.



Future-Ready Maritime Workforce

MPA is committed to building a resilient maritime workforce by upskilling our seafarers and shore professionals so that they are ready to meet the evolving needs of the maritime industry.

Maritime Energy Training Facility (METF)

The METF was introduced to equip the maritime workforce with skills to handle alternative marine fuels safely. The METF Digital Platform is a one-stop service for training and certification that was announced at Singapore Maritime Week (SMW) 2025. Over 50 local and international partners provide training on alternative marine fuels, such as methanol, and emerging technologies. More than 2,400 maritime professionals have been trained under the METF.

Upskilling New and Mid-Careerists

MPA works with industry, unions, institutes of higher learning and government agencies to upskill new and mid-career professionals. Key initiatives include:

- **Tripartite Maritime Training Award (TMTA):** The programme equips mid-career individuals with the International Convention on Standards of Training, and the Certification and Watchkeeping for Seafarer (STCW) 1978 for officer roles on merchant vessels. Eleven cadets had completed pre-sea training as of October 2025.
- **MPA-Singapore Maritime Foundation Joint Office for Talent and Skills:** The Joint Office supports the development of skills and transformation of the workforce in emerging areas such as data analytics, artificial intelligence, cybersecurity and sustainability. The Foundation Course in Data Analytics, co-developed with NUS, attracted 58 participants from 40 companies.

MaritimeONE and Tripartite Maritime Scholarships

Sixty MaritimeONE scholarships worth over S\$1.48 million were awarded in 2025. Over 700 scholarships totalling S\$19 million have been awarded since 2007.



MaritimeONE scholars at the award ceremony

MPA x UN Global Compact Network Singapore (UNGCNS) Carbon Accounting Workshops

MPA continued to collaborate with UNGCNS and industry associations to provide training in carbon accounting and management to maritime companies. Besides carbon reporting, we also gave updates on the latest initiatives, schemes and technologies to support companies in their carbon emission reduction journeys.

Six companies that reduced their carbon emissions were recognised with the Maritime SG LowCarbon50 Award. Another eight received honourable mentions.



MaritimeSG LowCarbon50 Awards Presentation at SMW 2025

Sail Milestone Achievement Programme (SailMAP) Recipients at the Singapore Registry of Ships Forum 2025

Three seafarers were awarded the SailMAP. Launched in 2022, the SailMAP offers up to S\$50,000 to eligible seafarers who reach career milestones.



SailMAP Award Recipients at SRS Forum 2025

Staff Development and Engagement

MPA provides targeted training and career support to develop and engage our staff.

Workforce Upskilling and Reskilling

MPA helps employees develop future-ready skills while supporting their well-being. We offer upskilling and reskilling programmes for technical and emerging skills. Our performance management framework aligns individual goals with organisational objectives.

MPA has adopted a competency-driven growth framework that positions competencies as the foundation for officers' growth and development. This framework enables more focused career conversations, with competencies as the anchor for identifying officers' developmental priorities.



90
average training hours
per employee

Employee Performance Appraisal and Feedback

The performance appraisal process evaluates each officer, aligning their work contributions with MPA's organisational goals. Annual workplans detail key projects, milestones, and plans for upskilling in different divisions. These plans are reviewed by senior management and are referenced in the mid-year and year-end appraisals. MPA uses competency frameworks and incorporates input from other managers to assess staff contributions more accurately.

Senior management and department heads are expected to conduct regular check-ins and maintain an open-door policy to support staff in their professional and career development. MPA launched a comprehensive feedback exercise to strengthen leadership development, which will be completed in 2026. This takes in feedback from supervisors, peers and direct reports.

In 2025, 100% of employees participated in the performance and career development review.

Sustainability and Future Skills

The MPA Academy trains our staff in future-ready skills. About 65 per cent of staff across various divisions completed the Sustainability Level 1 course in 2025, which imparts foundational knowledge on key sustainability issues. This course continues to be offered in 2026.



MPA staff attending the Sustainability 101 course

Career Support and Progressions

We support our staff's professional development and growth through the following initiatives:

- **Public Service Career Coach Network:** Four MPA officers have been certified as career coaches to support our staff in their career development.
- **MPA's In-Service Sponsorship Programme:** This enables our staff to acquire knowledge and skills in newer domains such as sustainability, data and cybersecurity. They will then have the potential to take on new roles in MPA. At least 40 officers have taken up the sponsorship since 2015.
- **MPA Mentoring Programme:** The programme connects officers with experienced mentors for personal and career development within MPA. There are 46 mentors, including heads of departments, who are progressively undergoing mentor training. In 2025, we conducted six group mentoring sessions with 18 mentees.
- **Collaboration and Talent Exchange with Industry Partners:** MPA works with the industry and international organisations, such as the IMO and International Energy Agency, to secure attachment opportunities for our staff. There are also placements with organisations such as the American Bureau of Shipping for marine surveyors. The attachments allow our staff to learn and develop new competencies that they can apply when they return to MPA. Since 2020, we have facilitated 23 of these attachments and secondments.
- **Language Training:** MPA sponsors the training of officers in advanced or business-level proficiency in eight languages.

Employee Engagement and Well-Being

MPA takes care of the well-being of our employees. We offer various initiatives to support their personal and professional growth, physical health and mental wellness:

- **MPA UPGRADE:** Employees with over two years of service can tap this fund to co-pay their participation in professional development or personal development activities.
- **Bursary Awards and Book Prizes:** These support the educational needs of employees' families.
- **Annual Health Checks, Flu Shots and Wellness Activities:** MPA sponsors annual health screenings and flu vaccinations for staff. MPA's well-being programmes are guided by the Corporate Health Screening Report. Employees are also encouraged to participate in various interest groups set up by MPA.
- **What 'Bout You (WBU) Wellness Initiative:** This event included talks on sleep management and nutritional awareness, a HealthierSG information booth, and live stations offering healthy refreshments such as acai bowls and fresh fruit juices.

Townhall

We organise townhalls to update officers on maritime developments, human resource matters, and transformation initiatives. The townhalls also recognise staff contributions and facilitate dialogues with the Chief Executive and senior leadership.



FIRST Awards

This recognises staff who exemplify MPA's values of Forward Thinking, Integrity, Respect, Service Excellence and Teamwork (FIRST). Twenty-five officers received the FIRST Award and three teams received the FIRST Team Award. One individual and one team were recognised as Exemplary FIRST Champions.



MPA CARES Committee

Led by the Chief Care Officer, the committee promotes employee engagement and corporate social responsibility through events such as the Dinner & Dance, Family Day and MOT Family Charity Outreach.



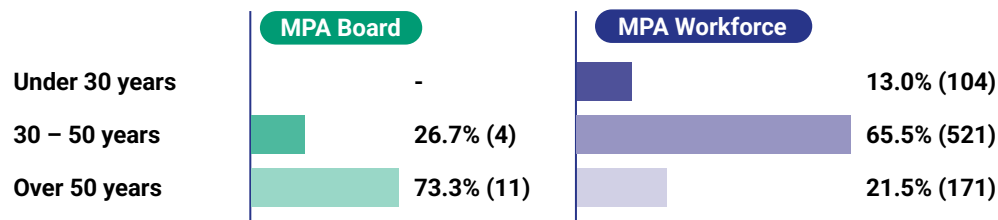
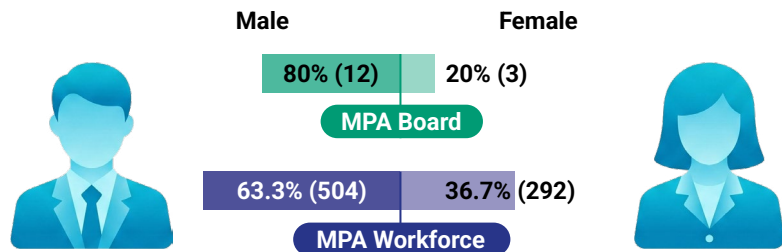
MPA Dinner and Dance 2025

A Fair Workplace

We nurture an inclusive working environment that upholds fairness and equality, and attracts talent with our fair employment practices. Our human resource policies are aligned with the Tripartite Guidelines on Fair Employment Practices by the Ministry of Manpower (MOM), National Trades Union Congress (NTUC), and Singapore National Employers Federation (SNEF).

We do not tolerate workplace discrimination. We treat all current and prospective employees equally, regardless of ethnicity, gender, religion, nationality, age and physical ability. Our commitment to a discrimination-free workplace is anchored in our ethics, conduct and discipline policy. All reports of discrimination are addressed promptly, and relevant parties are engaged so that each case can be resolved fairly and thoroughly.

MPA embraces diverse perspectives and experiences within our governance body (the Board) and workforce.



Our employment terms adhere to the Employment Act 1968 and the Retirement and Re-employment Act 1993. We offer a comprehensive benefits package to both full-time and part-time employees. The package includes work-related insurance, various leave options, work injury compensation, travel insurance, child-care leave, family care leave, medical outpatient schemes, and annual health screenings.

Family-Friendly Employment Practices

We regularly review our employment practices to make sure that employees can balance their careers with personal and family needs. Employees can opt for flexible work arrangements, such as staggered working hours, part-time employment, job sharing, and working from home.

We support the role parents play in their child's growth by offering parental leave to both female and male employees. Thirty-nine employees took parental leave. All who returned to work remained in the organisation a year later.

	Female	Male
No. of employees who took parental leave in FY2025	18	21
No. of employees who returned to work in FY2025 after taking parental leave	18	21
No. of employees who returned to work after parental leave ended in FY2024 and were still employed 12 months later	14	21
Return to work rate ¹	100%	100%
Retention rate ²	100%	100%

MPA organises additional initiatives to support families, including:

- **Juniors@Work:** An annual event when children join their parents at work and take part in experiential activities.
- **Quarterly Eat-With-Your-Family Day:** Officers can leave work early on the last Friday of the four school terms to enjoy a meal with their family.

¹ The "return to work-rate" is defined as the percentage of employees who returned to work after parental leave in comparison against the total number of employees due to return to work after taking parental leave. Total number of employees due to return to work in 2025 was 18 females and 21 males.

² The "retention rate" is defined as the percentage of employees retained 12 months after returning from parental leave in the previous FY. Total number of employees returning from parental leave in the previous FY was 14 females and 21 males.

Boosting Community Engagement

Fostering Positive Community Impact

SG60 Exhibition: Bridging Generations Through Maritime Stories

In celebration of SG60, MPA partnered PSA Singapore, Jurong Port and REACH Community Services to host over 150 seniors and volunteers to maritime-themed trails and craft workshops. The event culminated in a vibrant community art installation at the Singapore Maritime Gallery.



Environmental Stewardship and Sustainability Appreciation

Earth Hour 2025

MPA switched off all non-essential lighting across its facilities and patrol craft to commemorate Earth Hour 2025.



Tree planting for Earth Day

Together with the National Parks Board, we planted 30 trees along Fort Canning Road on 22 April 2025. The event celebrated Earth Day and contributed to Singapore's OneMillionTrees movement, which is a nationwide effort to plant a million trees in Singapore by 2030.



Beach Cleanup for International Coastal Cleanup Day

MPA, Jurong Port and PSA Singapore removed 270 kg of trash at East Coast Park on 11 September 2025. The plastic waste collected was recycled and repurposed into coasters, keychains and rulers at an event at the Singapore Maritime Gallery.



Field Trip to St. John's Island National Marine Laboratory (SJINML)

MPA officers visited the SJINML, Singapore's only offshore marine research facility, to learn about marine science research in Singapore.



GRI Content Index



Statement of use

Maritime and Port Authority of Singapore has reported the information cited in this GRI content index for the period 1 January 2025 to 31 December 2025 with reference to the GRI Standards.

For the Content Index – Essentials With Reference option Service, GRI Services reviewed that the GRI content index has been presented in a way consistent with the requirements for reporting with reference to the GRI Standards, and that the information in the index is clearly presented and accessible to the stakeholders.

GRI 1 used

GRI 1: Foundation 2021

GRI Standard / Other Sources	Disclosure	Location and/or direct answers
GENERAL DISCLOSURES		
GRI 2: General Disclosures 2021	2-1	Organisational details Page 03 Refer to Our Annual Report 2025 , Page 08
	2-2	Entities included in the organisation's sustainability reporting Page 04
	2-3	Reporting period, frequency and contact point Page 04
	2-4	Restatements of information Page 04
	2-5	External assurance Page 04
	2-6	Activities, value chain, and other business relationships Page 03, 15 – 16 Refer to Our Annual Report 2025 , Page 08
	2-9	Governance structure and composition Page 07 – 09 Refer to Our Annual Report 2025 , Page 08
	2-10	Nomination and selection of the highest governance body Refer to Our Annual Report 2025 , Page 08
	2-11	Chair of the highest governance body Page 07 – 09
	2-12	Role of the highest governance body in overseeing the management of impacts Page 09
	2-13	Delegation of responsibility for managing impacts Page 09

GRI Standard / Other Sources	Disclosure	Location and/or direct answers
GENERAL DISCLOSURES		
	2-14	Role of the highest governance body in sustainability reporting Page 09
	2-15	Conflicts of interest Processes to ensure that conflicts of interest are prevented and mitigated are set out in the Code of Conduct for MPA Board members. Instances of conflicts of interest are recorded but not disclosed to stakeholders as they involve business confidentiality and other sensitive matters.
	2-16	Communication of critical concerns Page 09 – 10, 46 Refer to Our Annual Report 2025 , Page 08
	2-17	Collective knowledge of the highest governance body Page 09
	2-19	Remuneration policies Refer to Our Annual Report 2025 , Page 08
	2-20	Process to determine remuneration Refer to Our Annual Report 2025 , Page 08
	2-22	Statement on sustainable development strategy Page 05 – 06, 15 – 16
	2-23	Policy commitments Page 10, 15 – 16 Environment, Health & Safety (EHS), Page 45 Ethics Policy, Page 10, 55
	2-24	Embedding policy commitments Page 10, 45, 55 Refer to Our Annual Report 2025 , Page 08
	2-25	Processes to remediate negative impacts Page 10, 55
	2-26	Mechanisms for seeking advice and raising concerns Page 10, 55
	2-27	Compliance with laws and regulations Page 10, 45, 55

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
GENERAL DISCLOSURES			
GRI 2: General Disclosures 2021	2-28	Membership associations	Page 15 Refer to Our Annual Report 2025 , Page 26
	2-29	Approach to stakeholder engagement	Page 13
	2-30	Collective bargaining agreements	We work closely with the Amalgamated Union of Statutory Board Employees (AUSBE) to support our employees.
MATERIAL TOPICS			
GRI 3: Material Topics 2021	3-1	Process to determine material topics	Page 11
	3-2	List of material topics	Page 12
BIODIVERSITY			
GRI 3: Material Topics 2021	3-3	Management of material topics	MPA works closely with various stakeholders to support initiatives that promote biodiversity awareness and environmental stewardship.
GRI 101: Biodiversity 2024	101-5	Locations with biodiversity impacts	Pulau Satumu’s sandy shoreline, covering approximately 300 m², is a nesting ground for the endangered hawksbill turtle. MPA will work closely with the National Parks Board if there are turtle nests. There was no turtle nesting in 2025.
ECONOMIC PERFORMANCE			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 16 Refer to Our Annual Report 2025 , page 09, 20-21
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	Refer to Our Annual Report 2025 , page 07 of the Annual Financial Statements
	201-2	Financial implications and other risks and opportunities due to climate change	Page 10

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
INDIRECT ECONOMIC IMPACTS			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 18 – 19, 33 – 36 Refer to Our Annual Report 2025 , page 21
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	Page 18 – 19, 33 – 36 Refer to Our Annual Report 2025 , page 21
	203-2	Significant indirect economic impacts	Page 18 – 19, 50 – 51 Refer to Our Annual Report 2025 , page 21
ANTI-CORRUPTION			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 10
GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	Page 10
SECURE AND RELIABLE INFORMATION TECHNOLOGY INFRASTRUCTURE			
GreenGov.SG	/	Cyber Resilience and Digital Threat Preparedness	Page 43 – 44
	/	Green Information Technology	Page 35
ENERGY MANAGEMENT AND CLIMATE MITIGATION			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 31 – 33, 35 – 36
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	Page 33, 35
	302-4	Reduction of energy consumption	Page 31 – 33, 35 – 36
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 31 – 36
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	Page 32 – 34
	305-2	Energy Indirect (Scope 2) GHG emissions	Page 32 – 33, 35
	305-5	Reduction of GHG emissions	Page 31 - 36

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
CLIMATE RESILIENCE AND ADAPTATION			
GreenGov.SG	/	Advancing Eco Transportation	Page 34
World Ports Sustainability Programs	/	Infrastructure Resilience in Ports	Page 16, 34 – 36
WATER AND EFFLUENT MANAGEMENT			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 31, 37 – 38
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	Page 37
	303-2	Management of water discharge-related impacts	MPA complies with the regulatory limits under the Sewerage and Drainage Act (Chapter 294, Sections 72 and 74) and Sewerage and Drainage (Trade Effluent) Regulations enforced by PUB.
	303-5	Water consumption	Page 37 – 38
WASTE			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 31, 39
GRI 306: Waste 2020	306-2	Management of significant waste-related impacts	Page 39 MPA engages the National Environment Agency's licensed e-waste collector to process our e-waste, such as general office IT equipment like printers.
	306-3	Waste generated	Page 39
	306-4	Waste diverted from disposal	Page 39
	306-5	Waste directed to disposal	Page 39

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
SUPPLIER ENVIRONMENTAL ASSESSMENT			
GRI 3: Material Topics 2021	3-3	Management of material topics	MPA has incorporated Green Procurement requirements into our procurement specifications, to align our suppliers with national environmental standards and best practices.
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	We adhere to the Best Practice Guide for Organising Environmentally-friendly Events Checklist issued by GreenGov. SG for events organised by MPA or within MPA premises with more than 50 participants.
EMPLOYMENT PRACTICES			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 55
GRI 401: Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Page 55
	401-3	Parental leave	Page 55
OCCUPATIONAL HEALTH AND SAFETY			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 45 – 48, 53 – 54
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	Page 45 – 46
	403-2	Hazard identification, risk assessment, and incident investigation	Page 46
	403-4	Worker participation, consultation, and communication on occupational health and safety	Page 47

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
OCCUPATIONAL HEALTH AND SAFETY			
GRI 403: Occupational Health and Safety 2018	403-5	Worker training on occupational health and safety	Page 47
	403-6	Promotion of worker health	Page 53 – 54
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Page 47
	403-9	Work-related injuries	Page 45
TRAINING AND EDUCATION			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 50 – 54
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	Page 52
	404-2	Programmes for upgrading employee skills and transition assistance programmes	Page 50 – 54
	404-3	Percentage of employees receiving regular performance and career development reviews	Page 52
DIVERSITY AND EQUAL OPPORTUNITY			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 55
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	Page 55
NON-DISCRIMINATION			
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 10, 55
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	Page 55

GRI Standard / Other Sources	Disclosure		Location and/or direct answers
PORT SAFETY AND SECURITY			
Global Maritime Forum	/	Navigating Geopolitical & Threats of Terrorism	Refer to Our Annual Report 2025 , page 03 – 05
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 41 – 44
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	Page 41 – 44
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Page 41 – 44 Refer to Our Annual Report 2025 , page 04
PUBLIC POLICY			
Global Maritime Forum	/	Defending Public Health	MPA is working with the Ministry of Health to develop the maritime sector operational response plans for future pandemics based on the new Pandemic Preparedness and Response Framework. This will include measures such as border health control screening at sea checkpoints to minimise the risk of importing diseases. MPA also supports the Ministry of Sustainability and the Environment on the Community Enforcement Framework to implement and enforce public health requirements during public health crises in maritime facilities such as piers, ports and terminals.



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