Marine Department Environmental Report 2022

Content

A | Introduction

The Marine Department (MD) is responsible for maritime and navigational safety matters within the waters of Hong Kong. The MD pledges its full support to prevention of marine pollution since the protection of the marine environment is not only important in its own right but also instrumental in enhancing Hong Kong's position as a world-class port. This Environmental Report covers the environmental performance of the MD in 2022 and sets out our environmental targets for 2023.

Hong Kong, as an Associate Member of the International Maritime Organization, is obliged to ensure that ships within Hong Kong waters comply with all applicable international standards to protect the marine environment from pollution. To achieve the 2030 International Maritime Organization initial strategy on the reduction of greenhouse gas emission from international shipping and to reflect the latest international requirements, amendments to the Merchant Shipping (Prevention of Air Pollution) Regulation (Cap. 413P) were promulgated on 24 June 2022. Ships of 5 000 gross tonnage and above should operate in a way that their annual operational carbon intensity indicators do not exceed the required boundary. Meanwhile, ships of 400 gross tonnage and above are additionally required to be designed or modified in order to have their energy efficiency index within the required value. Both requirements came into force on 1 January 2023. In addition, amendments to the Merchant Shipping (Control of Harmful Anti-Fouling Systems on Ships) Regulation (Cap.413) were gazetted on 30 June 2022 to effect the implementation on the ban to apply or re-apply of cybutryne as biocides in anti-fouling from 1 January 2023 onward to preserve the marine life.

MD also promotes an environmentally responsible management and contributes to a greener environment by pursuing environmental-friendly operations. The Electronic Business System (eBS), as the MD's Public Portal, provides public forms submission services and accepts more public application forms in electronic format staring from 30 June 2021 in order to progressively reduce the need for paper forms and copies. We shall endeavour to identify more scope for e-services to ensure a wider use of electronic communications with a view to saving the environment.

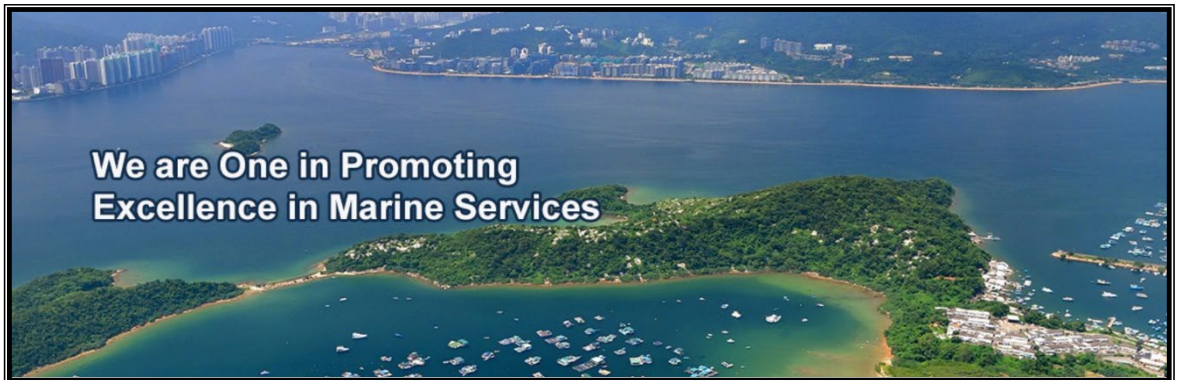
B | Green Management Structure of MD

To promote an environmentally responsible management and implement green management practice in the MD, Departmental Secretary and Executive Officer (General and Committee) are appointed as the Departmental Green Manager and the Departmental Green Executive respectively.

For all environmental protection matters at Divisional level (namely, the Planning and Services & Port Control Divisions, the Shipping & Multi-lateral Policy Divisions, the Local Vessels and Examination Division and the Government Fleet Division), the Assistant Directors of Marine formulate respective green objectives, targets and measures based on the nature of their business. Divisional Environmental Protection representatives at the senior professional level are also appointed to co-ordinate and take forward the green measures.

(a) Our Environmental Goal

"We are One in Promoting Excellence in Marine Services". MD is committed to ensuring that our services and operations are conducted in an environmental-friendly and a responsible manner conducive to a cleaner port of Hong Kong.



"We are One in Promoting Excellence in Marine Services"

(b) Our Environmental Work Focuses

(i) To ensure effective control on movement of dangerous goods in the waters of Hong Kong;

(ii) To enhance our marine refuse collection and scavenging services;

(iii) To maintain a maritime oil pollution plan to combat oil spills;

(iv) To take prosecution actions against offences of marine littering and pollution;

(v) To implement international conventions on prevention of marine pollution and enforce relevant environmental legislation on vessels;

(vi) To implement effective management systems to achieve energy saving for operations at MD's public cargo working areas, light beacon and radio station;

(vii) To adopt environmental-friendly and efficient designs for facilities and work processes at Government Dockyard;

(viii) To observe the Government's green management policy in our own workplaces to ensure efficient use of natural resources and energy;

(ix) To recommend environmental-friendly seawall designs with wave-absorbing capability in the relevant development projects;

(x) To recommend conducting a proper Marine Traffic Impact Assessment for every major marine-related development project to adequately address all potential marine impacts at each stage of the project implementation;

(xi) To implement plans and measures that are relevant to our operations for fulfilling the commitments to improve the air quality; and

(xii) To promote the awareness of indoor air quality (IAQ) by participating in the IAQ Certification Scheme.

C | Proactive Port Control

(a) Harbour Patrol

To ensure all the vessels navigating in Hong Kong comply with our marine legislation, MD officers perform patrol and take prosecution actions against marine littering offence. During inspections of tankers and oil barges, MD officers advise the operators to strictly follow the code of practice and make sure that no illegal transfer or discharge of oil would take place in the waters of Hong Kong.

MD officers also closely monitor dilapidated vessels or wrecks to prevent any possible release of marine pollutants, such as lubricant or fuel oil residue. In 2022, 202 dilapidated vessels and wrecks were removed for proper disposal.

Patrol Launch MD18

(b) Dark Smoke Emission Control

It is an offence for any vessel in the waters of Hong Kong to emit dark smoke which is as dark as, or darker than Shade 2 on the Ringelmann Chart for three minutes or more continuously at any one time. In 2022, two vessels were convicted for contravention of the marine legislation on dark smoke emission.

Educational leaflets with the Ringelmann Chart have been distributed to ship operators. Publicity campaigns have also been conducted so as to promote the importance of proper engine maintenance in reducing dark smoke emission.

Extract from the Educational Leaflet with the Ringelmann Chart
"No Excessive Dark Smoke Emission from Vessels"

(c) Dangerous Goods Control

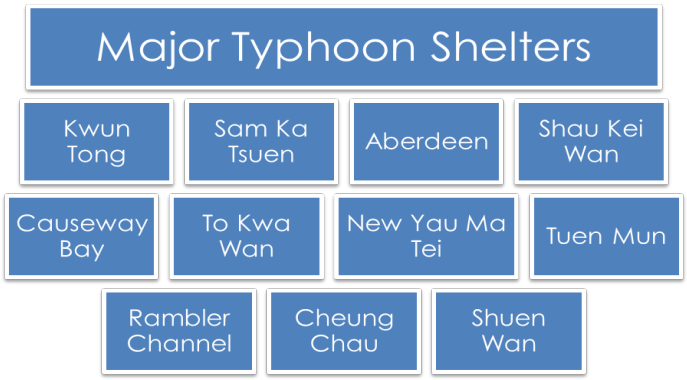
The Dangerous Goods Unit (DGU) carries out random inspections to vessels conveying dangerous goods in the waters of Hong Kong. In 2022, DGU inspected a total of 277 vessels and four vessels were convicted for contravening the legal requirements for conveying dangerous goods.

D | Efficient Marine Refuse Cleansing Services

Floating refuse is difficult to clear because it drifts with current and wind. MD is committed to keeping the harbour clean through effective and efficient marine refuse cleansing services.

MD's cleansing contractor has provided various types of vessels to clean up floating refuse in the waters of Hong Kong on a daily basis (including Sundays and Public Holidays).

The contractor also provides domestic refuse collection service to vessels in designated anchorages, berths and typhoon shelters. Currently, refuse collection vessels are stationed in the following major typhoon shelters for collecting refuse from vessels at least once a day.



In 2022, the total marine refuse collected amounted to 2 662 tonnes*.

In 2022, the Pollution Control Unit conducted 484 visits to local vessels, mariculture zones, marine works sites, yacht clubs and wholesale fish markets to publicise the message of "We are One in Keeping our Harbour Clean".

*: The actual weight of marine refuse collected by MD in tonnes.

Extract from the Educational Leaflet
"We are One in Keeping our Harbour Clean"

MD continued to take part in the District-led Actions Scheme to address the environmental hygiene issue of different districts. MD has also conducted special scavenging operations in collaboration with other government departments to improve the marine hygiene conditions of Aberdeen Typhoon Shelter, Chai Wan Cargo Basin and Shau Kei Wan Typhoon Shelter. Moreover, being a member of the Inter-departmental Working Group on Marine Environmental Management and its two Task Forces (namely, (i) Task Force on Marine Refuse and (ii) Task Force on Emergency Response to Marine Environmental Incidents), MD continues to enhance the efforts in marine environmental management. The work includes tackling marine refuse problem and strengthening its capability and preparedness on emergency response to marine environmental incidents.

A Special Scavenging Operation in November 2022

E | Preparedness in Dealing with Oil Spills

The waters of Hong Kong are susceptible to oil spills owing to its closeness to congested waterways. MD has developed a Marine Oil Spill Response Plan to tackle oil pollution incidents. The Pollution Control Unit is on 24-hour standby and responds in situ within two hours for reported oil spillage inside harbour limits. Periodical patrols and inspections on vessels engaged in re-fuelling or transferring fuels have been carried out to remind coxswains to take precautionary measures for oil spillage. In 2022, the Pollution Control Unit responded to 125 alleged oil reports, 47 of which were confirmed and cleansing actions were taken subsequently.

Extract from the Educational Leaflet
"Prevent Oil Spill into the Sea, Reduce Harbour Pollution"

F | Cleansing of Marine Hazardous and Noxious Substances Spillage

The annual marine pollution response joint exercises co-ordinated by MD and the Environmental Protection Department, code-named Oilex 2022 and the Maritime Hazardous and Noxious Substances (HNS) Exercise 2022, were held simultaneously in October 2022 in the waters off Pearl Island, Tuen Mun to test local responses in the event of pollution caused by spillage of oil and HNS in the waters of Hong Kong.

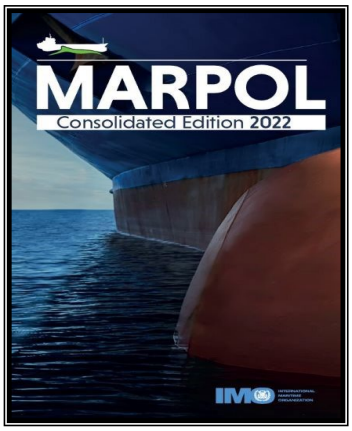
Maritime HNS Exercise 2022

Oilex 2022

The exercise hypothesised a scenario of five containers loaded with Monoisopropanolamine falling overboard into the waters off Pearl Island, Tuen Mun. Combating the simulated HNS spill, the response teams lifted the damaged containers out from the sea to stop further pollution at source. The joint annual maritime HNS spillage response exercise reaffirmed the alertness and readiness of relevant Government departments under the Maritime HNS Spill Response Plan.

G | International Conventions and Local Legislation

MD represents the Hong Kong Special Administrative Region (HKSAR) at the International Maritime Organization (IMO), an United Nations specialised agency responsible for the safety and security of international shipping as well as the prevention of pollution of the environment from ships. The HKSAR is committed to implementing the International Convention for the Prevention of Pollution from Ships (known as the MARPOL Convention) including the investigation into any accidental discharge of pollutants into the sea by vessels.



World Maritime Theme 2022

To implement the latest requirements of Annex VI to the MARPOL Convention to reduce greenhouse gas emission from international shipping, the Merchant Shipping (Prevention of Air Pollution) Regulation (Cap. 413P) was amended in June 2022. The amended regulation, which came into effect on 1 January 2023, sets out the requirements to calculate and report the attained annual operational carbon intensity indicators for ships of 5 000 gross tonnage and above, and the attained energy efficiency indexes for ships of 400 gross tonnage and above[1].

To mitigate the risks of oil pollution in Arctic waters by heavy fuel oil, the Annex I to MARPOL was amended to introduce a ban on the use and carriage of heavy fuel oil as fuel by ships in Arctic waters. Amendments were made to the Merchant Shipping (Prevention of Oil Pollution) Regulations (Cap.413A) to implement the ban, with effective date on 1 July 2024. All Hong Kong ships are prohibited to use and carry heavy fuel oil as fuel in the Arctic waters, except in certain defined emergency situations[1].

[1] See Hong Kong Merchant Shipping Information Note No.52/2022, retrievable from https://www.mardep.gov.hk/en/msnote/pdf/msin2252.pdf.

Considering the harmful effects of cybutryne on the marine environment, the Convention on the Control of Harmful Anti-fouling Systems was amended to prohibit the use of cybutryne on the anti-fouling system of a ship. The Merchant Shipping (Control of Harmful Anti-Fouling Systems on Ships) Regulation (Cap.413N) was amended in June 2022 to give effect to this change. From 1 January 2023, all ships including local vessels shall not apply or re-apply anti-fouling systems containing cybutryne[2].

To ensure the safety of sea transportation of dangerous goods in packaged form and reduce the risks of marine pollution, the IMO regularly revised the International Maritime Dangerous Goods (IMDG) Code. To implement the latest requirements of the 2020 Edition IMDG Code, three regulations under the Merchant Shipping (Safety) Ordinance (Cap.369) and the Merchant Shipping (Local Vessels) (General) Regulation (Cap.548F) were amended in June 2022. The amended regulations came into operation on 1 November 2022 and applied to all ships including local vessels[3].

Moreover, the MD has a responsibility to ensure that non-Hong Kong registered ships visiting Hong Kong comply with the requirements of various international maritime conventions. To discharge this function, Port State Control inspections will be arranged to check whether the vessels comply with the relevant convention provisions with respect to issues of marine safety and environmental protection. In 2022, 250 inspections on foreign ocean-going vessels were conducted in the waters of Hong Kong, of which one detention was made due to serious contraventions with the MARPOL requirements.

[2] See Hong Kong Merchant Shipping Information Note No.51/2022, retrievable from https://www.mardep.gov.hk/en/msnote/pdf/msin2251.pdf.

[3] See Hong Kong Merchant Shipping Information Note No.53/2022 and Marine Department Notice No.219/2022, retrievable from https://www.mardep.gov.hk/en/msnote/pdf/msin2253.pdf and https://www.mardep.gov.hk/en/notices/pdf/mdn22219.pdf.

H | Green Initiatives at Public Cargo Working Areas, Light Beacon and Radio Station

(a) Public Cargo Working Areas (PCWAs)

17 high mast floodlights in the Western District PCWA were replaced by more energy-efficient LED lights as of 2022.

To promote the use of renewable energy, installation of solar panels on the rooftop of the administration buildings of the Western District PCWA and Stonecutters Island PCWA. The installation works in Western District PCWA was completed in May 2023 and put into operation in June 2023. Preparation for the service of solar panels in Stonecutters Island PCWA is in progress. The annual electricity consumption of PCWAs could be further reduced.

Energy-efficient LED Lights in Western District PCWA

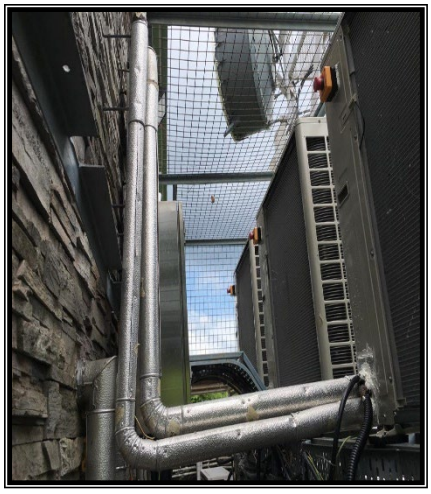
(b) Aids to Navigation

To save energy, over 90% of the aids to navigation on various beacons have been fitted with longer life-span LED lanterns which consume less electrical power. The Wong Fa Pai light beacon was also replaced with solar power and a longer life-span LED lantern in 2022 to save energy.

Wong Fa Pai Light Beacon

(c) Radio Station

To achieve the goal of energy saving and reducing electricity consumption, 8 sets of Air-Conditioning (AC) Units at East Ping Chau Radio Station and 3 sets at Kau Yi Chau Radio Station were replaced in 2022 with new inverter AC units which are more energy efficient.



AC project at East Ping Chau Radio Station

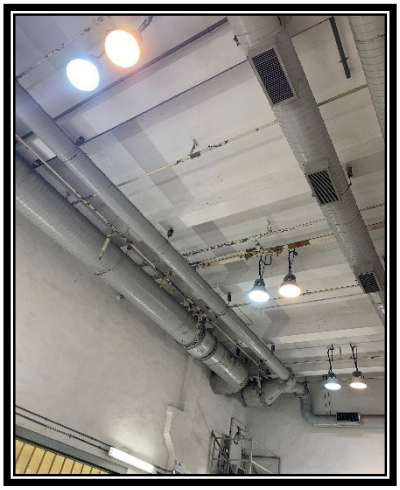
AC project at Kau Yi Chau Radio Station

I | Going Green at Government Dockyard

The Government Dockyard on Stonecutters Island is the operational and maintenance base of all government vessels. Going green is an on-going commitment of the Government Dockyard. The following environmental measures were implemented at the Government Dockyard in 2022:

- ✧ Collected 509 waste batteries and 620 used toner cartridges for recycling;
- ✧ Replaced lighting of the store and office of workshops with more energy-saving T8 LED light tubes which have weatherproof batten combined with polycarbonate diffusers and low wattage LED high bay lights;

Painting Workshop

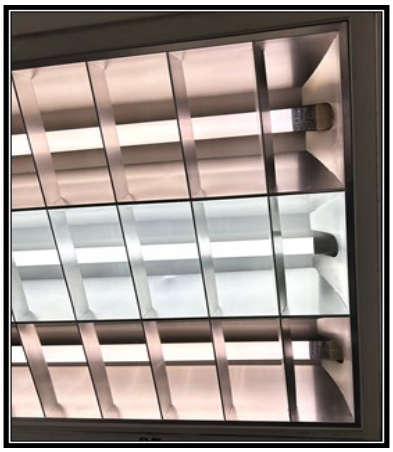


GRP & Inflatable Workshop

Store of Painting Workshop

Office of GRP & Inflatable Workshop

- ✧ Replaced unnecessary white lamps, light bulbs and fluorescent tubes with T5 LED light tubes with electronic ballasts or T8 LED light tubes;



T5 LED Light Tube with Electronic Ballast and T8 LED Light Tubes

- ✧ Installed a new 24-hour analogue time switch and multi range timer for controlling lighting systems at the workshops;

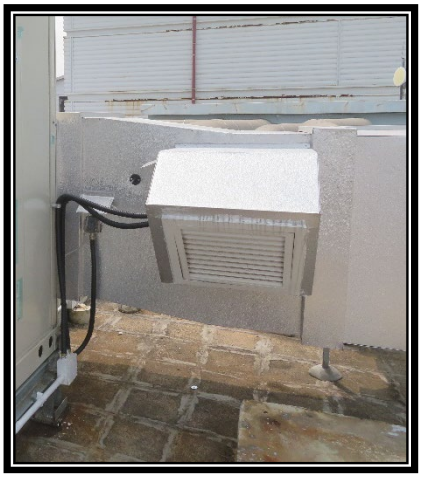
- ✧ Recovered useful parts and components from engines and equipment pending for disposal;

- ✧ Collected generated chemical wastes, including lubricating oils, filters, batteries, fluoroprotein foam and fluorescent lamps, by licensed collectors;

Newly Installed Analogue Time Switch and Multi Range Timer

- ✧ Replaced the existing air conditioner with a new Heating Ventilation and Air Conditioning (HVAC) unit on the rooftop of Block B, which uses state-of-the-art technology to treat high humidity outdoor air and supply it to the building's air handling unit to achieve the desired humidity control, especially in humid climate for better energy efficient.

Rooftop HVAC Unit



Fresh Air Intake Vent

✧ Used the Internet of Things technology for monitoring power consumption of repair yards to eliminate energy wastage;

Six Meters to monitor power consumption

✧ Displayed plants in offices; and

✧ Affixed "Save Energy" stickers to light switches to remind staff to switch lights off when not in use.

Green Fleet

(i) Green New Vessels with Environmental-Friendly Engines

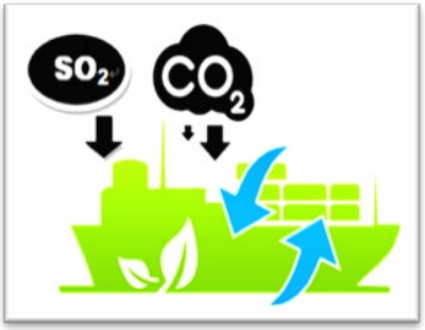
Marine diesel engines installed on new vessels procured by MD comply with the latest IMO's regulation in reducing nitrogen oxide emission.

To follow the Government's green procurement policy, main and auxiliary diesel engines (over 130kW) on new government vessels comply with the most recent MARPOL regulations (i.e. the engines are IMO nitrogen oxide Tier II emission types or above, if applicable).

In addition, MD's new vessels incorporate the use of hybrid power system and diesel-electric propulsion system to reduce fuel consumption and emission of nitrogen oxide, sulphur oxide and carbon dioxide. Shore electric power and/or solar cells are used for lighting and ventilation so as to eliminate emission of greenhouse gas by the vessel's own generator during the vessel's standby.

(ii) Existing Vessels

Since 2002, MD crew have been advised to operate vessels at economically safe speed in accordance with the engine manufacturer's recommendation. Up to 2022, ten MD vessels and 54 police diesel-driven vessels have been using renewable B5 biodiesel in order to reduce emission of greenhouse gas, e.g. carbon dioxide.



J | Green Housekeeping

We are committed to the Government's green management policy and advocate the principle of 4Rs – "Reuse, Reduce, Recycle and Replace". For instance, disposable paper cups have been replaced by reusable cups when hosting meetings. Our colleagues are also encouraged to bring their own cups to meetings. To advocate good green practice, no bottled water is distributed by the pantry service.

Reusable Cups

(a) Recyclable Materials Collection Campaign

MD's Headquarters at Harbour Building has joined the Recyclable Materials Collection Campaign organised by the Building Management Office since early 2008 to allow paper waste, plastic bottles and metal to be collected separately at the source.

Recyclable Bins in Harbour Building

In 2022, the recycled materials collected at Harbour Building amounted to 2063.63 kg, with the breakdown as follows:

Materials	Sub-Total of Amount Collected (kg)
Waste Paper	1969
Metals	17.35
Plastics	77.28
Grand Total	2063.63

In 2022, Harbour Building has also collected 25 units of fluorescent tubes for recycling purpose.

(b) "Plastic-free Takeaway" Campaign

In line with the Government's green policy, to minimise the use of disposable tableware and cultivate the habit of using reusable tableware, the catering operators in the Government Dockyard Canteen, Tuen Mun Public Cargo Working Area (PCWA) Canteen, New Yaumatei PCWA Canteen and Stonecutters Island PCWA Canteen have been ceased distributing plastic straws and poly-foam food containers to customers since 2021. Posters were placed in prominent places to remind colleagues to use reusable tableware as far as possible when buying takeaway meals and avoid asking for disposable cutlery.

Poster of Plastic-Free at Stonecutters Island PCWA Canteen

(c) Green Information Technology (IT)

By utilising clusters of blade servers and virtualisation technology, 74 physical servers and applications supporting 38 backend systems and IT infrastructure have been transformed, resided and run within a Cloud Computing environment as of end 2022.

As a total e-business solution for port formalities documents and public services, Electronic Business System (eBS) continuously evolved to save paper and travelling cost.

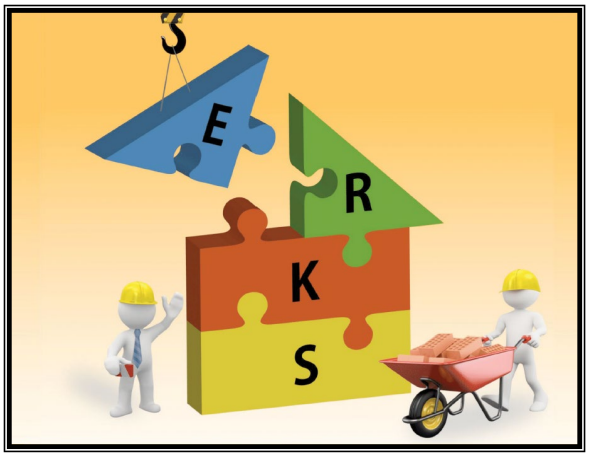
(d) E-Notices, Circulars and E-cards

In 2022, MD continued to disseminate information through the departmental intranet and departmental website to minimise the circulation of hard copies and consumption of paper. Electronic greeting cards have been sent out since 2001.

(e) Paper Saving

We endeavour to consume less paper. In 2022, MD consumed 9 991 reams of A4 recycled paper[4]. Detailed figures of paper consumption for the period between 2009 and 2022 are at ***Annex I***. To reinforce staff awareness, guidelines on green management have been re-circulated to all staff at regular intervals.

An electronic filing system (known as Electronic Record-keeping System) has been rolled out since August 2019 for Batch 1 users, April 2020 for Batch 2 users, November 2020 for Batch 3 users and June 2021 for Batch 4 users. Looking ahead, the use of information technology helps reduce paper consumption.



Electronic Record-keeping System

(f) Energy Saving

In 2022, MD consumed 17 152 273 kWh of energy. Detailed figures of energy consumption for the period between 2009 and 2022 are at ***Annex II***.

MD has participated in energy saving projects with a view to reducing energy consumption. In addition, energy wardens have been appointed since 2005 to conduct green housekeeping inspections and energy saving checks on a bi-monthly basis. In addition, Divisional Executive Officers have been tasked to perform regular checks on the completed inspection reports conducted by the energy wardens.

[4] No virgin paper (also known as woodfree paper) was consumed in 2022.

(g) Water Saving

Stickers and posters obtained from the Water Supplies Department are placed in prominent places such as pantries and washrooms to remind colleagues to reduce water consumption.

Poster and Sticker of Water Saving Placed in Toilets, MD Headquarters at Harbour Building

Poster of Water Saving in Block A Canteen, Government Dockyard

(h) Collection box for small size domestic products at Harbour Building

A collection box for small size domestic products such as face cream, lipsticks, lotion products, etc. was placed at 1/F of Harbour Building from October 2022 to January 2023.

(i) Recycling bin for beverage paper carton at Harbour Building

To promote Beverage Paper Carton recycling, a recycling bin was placed at G/F of Harbour Building from March 2022 to February 2023.

(j) Reducing fuel consumption

Our drivers continued to comply with the requirement to switch off idling engines and observe eco-driving practices.

(k) Carbon audit

Bureaux and departments are required to conduct annual carbon audits for their buildings with annual electricity consumption over 500 000 kWh. Carbon audits were carried out at the Hong Kong-Macau Ferry Terminal, China Ferry Terminal and Government Dockyard. The greenhouse gas emissions were 3 746, 1 618 and 2 236 tonnes of CO_2 or equivalent respectively for the Financial Year 2021-2022.

(l) Green Tips in "Scuttle Butt"

"Ten Housekeeping Green Tips" have been regularly circulated to staff via internal emails. Green tips and news about environmental conservation are also publicised in our staff newsletter, "Scuttle Butt", on a quarterly basis.

Extract from "Scuttle Butt" Issue No. 90 (June 2022)

Extract from "Scuttle Butt" Issue No. 91 (October 2022)

(m) Earth Hour 2022

We supported "Earth Hour 2022" organised by World Wide Fund for Nature organised by Green Sense by relaying the event information to all staff to encourage their participation at home by turning off non-essential lighting and air-conditioning respectively.

Earth Hour 2022

K | Good Indoor Air Quality

MD has joined the Indoor Air Quality (IAQ) Certification Scheme launched by EPD to promote and commend good IAQ management practice. The following premises have been classified as "Good Class" under the IAQ Certification Scheme:

- ✧ MD Headquarters (Harbour Building)
- ✧ Government Dockyard's Administration Building (Block A)
- ✧ Harbour Patrol Section Main Building and its Annex Building
- ✧ China Ferry Terminal
- ✧ Hong Kong-Macau Ferry Terminal

Indoor Air Quality (IAQ) Certification Scheme

L | Environmental Targets for 2023

To sustain our accomplishments on environmental work, we shall continue to:

- ✧ do our best to prevent and fight against all forms of marine pollution, such as marine refuse, oil spills, smoke emission, etc.;
- ✧ encourage our staff and appeal for their support for adopting green measures and participating in green activities;
- ✧ convert more aids to navigation to longer life-span LED lanterns;
- ✧ identify business areas to be transformed into an e-service under eBS;
- ✧ explore new means and pay particular attention to a wider use of electronic measures to minimise the usage of paper and energy;
- ✧ work closely with EMSD and EPD in implementing more energy-saving projects to reduce electricity consumption and identifying renewable / alternative energy;
- ✧ replace those aged air-conditioning systems by adoption of the energy-saving type chillers and variable refrigerant volume (VRV) systems to reduce electricity consumption; and
- ✧ identify more areas in Government Dockyard which can use energy-saving lighting to reduce electricity consumption and explore the possibility for installing solar panels in available spaces to generate green energy in Government Dockyard.

To fulfil our commitments under the Clean Air Charter, we will continue to:

- ✧ implement energy saving measures with a view to reducing energy consumption in Government Dockyard and ferry terminals;

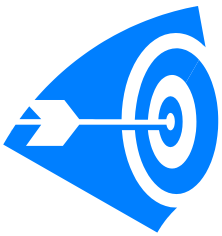
- ✧ implement the Government's green procurement policy that main and auxiliary diesel engines (over 130 kW) on new government vessels are IMO NOx Tier II emission types or above if applicable;

- ✧ encourage user departments to adopt more solar energy for their new government vessels where possible;

- ✧ review vessels' operational profile and urge all user departments to operate at the optimal conditions as far as practicable to reduce fuel consumption;

- ✧ work with EPD on using biofuel in government vessels; and

- ✧ explore with user departments who bid for government new shipbuilding projects to adopt hybrid propulsion systems and/or other green technologies, if applicable.



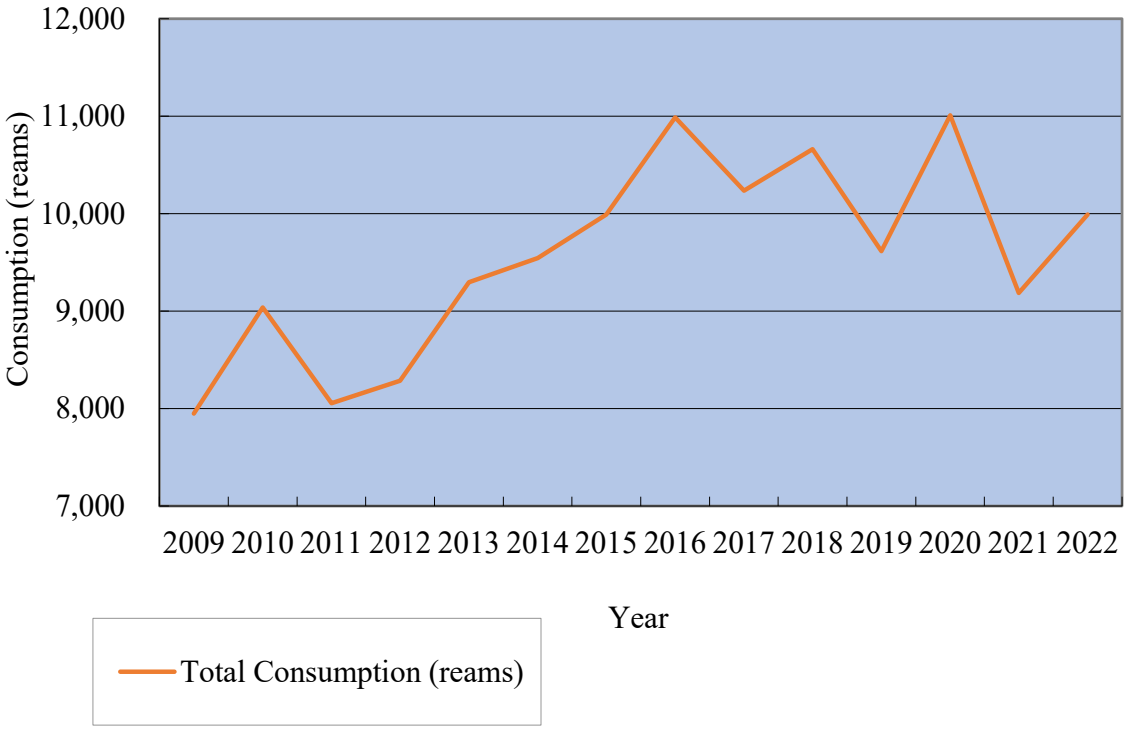
M | Information and Suggestions

We encourage knowledge and experience sharing with stakeholders on environmental issues. You are welcome to share with us your views and suggestions by the following means –

Address:	Marine Department Headquarters, 22/F, Harbour Building, 38 Pier Road, Central, Hong Kong.
Tel:	2542 3711
Fax:	2541 7194
E-mail:	mdenquiry@mardep.gov.hk

Annex I

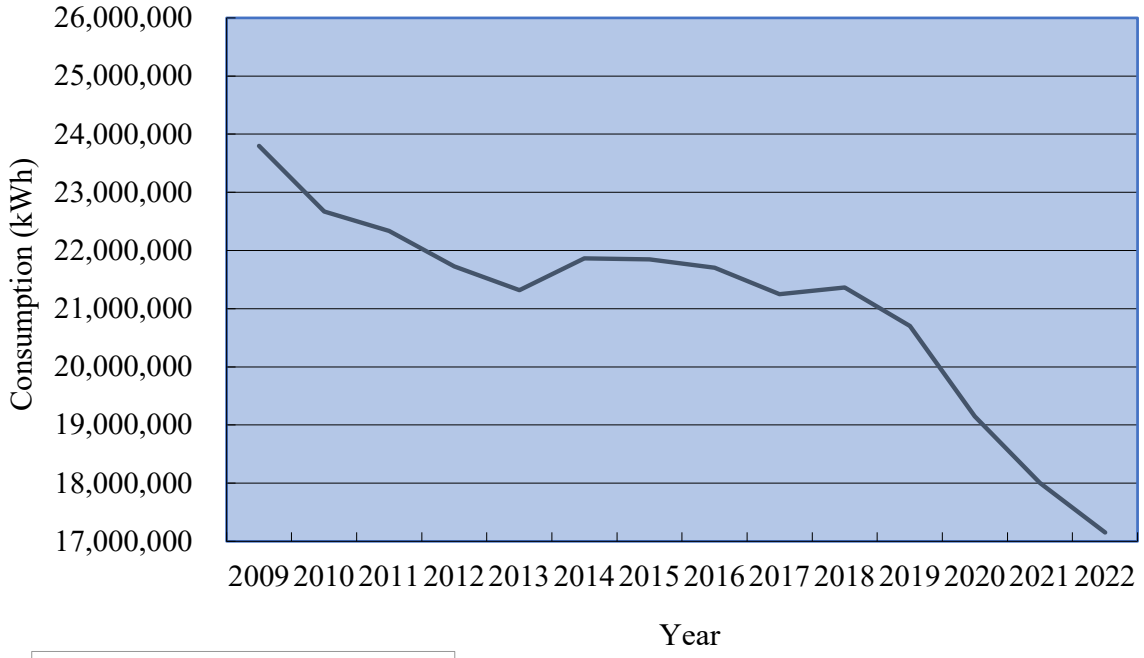
A4 Paper Consumption - MD Offices



Year	Total Consumption (reams)
2009	7,947
2010	9,038
2011	8,056
2012	8,285
2013	9,296
2014	9,545
2015	9,990
2016	10,986
2017	10,235
2018	10,660
2019	9,615
2020	11,008
2021	9,186
2022	9,991

Annex II

Electricity Consumption - MD Offices



Year	Total Consumption (kWh)
2009	23,800,719
2010	22,671,480
2011	22,336,616
2012	21,723,773
2013	21,316,588
2014	21,866,410
2015	21,844,606
2016	21,704,401
2017	21,250,261
2018	21,366,900
2019	20,700,853
2020	19,150,100
2021	18,005,484
2022	17,152,273