

Marine Department Environmental Report 2003

Table of Contents

[Director' s Message](#)

[Responsibilities and Organizational Structure](#)

[Environmental Goal](#)

[Work Focuses](#)

[Environmental Performance](#)

(a) [Proactive Port Control](#)

(b) [Efficient Marine Refuse Cleansing Services](#)

(c) [Preparedness in Dealing with Oil Spills](#)

(d) [International Conventions and Local Legislation](#)

(e) [Green Initiatives at Terminals and Public Cargo Working Areas](#)

(f) [Going Green at the Government Dockyard](#)

(g) [E-Communication with Customers](#)

(h) [In-house Programmes](#)

[Environmental Targets](#)

[Information and Suggestions](#)

Director' s Message

The Marine Department is responsible for maritime and navigational safety matters within the waters of Hong Kong. The Department pledges its full support to marine pollution prevention as marine environmental protection is important not only in its own right but also in enhancing Hong Kong's role as one of the major ports in the world.

Being an Associate Member of the International Maritime Organization, Hong Kong is obliged to ensure that all ships within Hong Kong waters comply with international standards with regard to marine pollution prevention.

In response to the Hong Kong Special Administrative Region (HKSAR) Government's new initiative of promoting environmentally responsible management, the Marine Department has published environmental reports since 1999 to demonstrate our environmental stewardship and performance.

This report shows how our environmental initiatives were sustained, reviewed and strengthened in 2003. I am proud that our staff members have done a good job in contributing to a greener environment and a cleaner Hong Kong Port. I take this opportunity to thank them for their efforts in 2003 and am confident that the Marine Department would continue to strive for higher environmental standards and better environmental performance in the years to come.

(Tsui Shung-yiu, JP)
Director of Marine

[Back to Top](#)



Responsibilities and Organizational Structure

In this report, we will focus on the key areas we have worked in 2003 to help improve the environment and the direct environmental impact of our day-to-day departmental activities.

This report is primarily intended for Hong Kong citizens, our various business partners, other government departments, our own staff and other local and international maritime organizations.

Overview of the Department

The Marine Department, headed by the Director of Marine, is responsible for all navigational matters in Hong Kong and the safety standards of all classes and types of vessels. Our stated mission is "to promote excellence in marine services".

Staffed by well-qualified and experienced professional and technical officers, we provide a wide spectrum of services which can be broadly classified into five areas, each of which is headed by an Assistant Director:

- Government Fleet
- Multi-lateral Policy
- Planning and Services
- Port Control
- Shipping

The Administration Branch in the departmental headquarters provides administrative support services, human resource management, and finance and accounting support to the operational divisions.

Our headquarters are located at Harbour Building, 38 Pier Road Central. Other major venues include the Government Dockyard at Stonecutters Island, the Macau Ferry Terminal at Sheung Wan, the China Ferry Terminal at Tsimshatsui and eight Public Cargo Working Areas in different locations.

Green Management Structure

To promote environmentally responsible management and enhance green management practice in Marine Department, the Departmental Secretary and the Assistant Department Secretary/Committee and General have been appointed as the Green Manager and the Green Executive respectively.

For all environmental protection matters on a divisional level, the respective Assistant Directors formulate their own green objectives, targets and measures based on the nature of their business. Divisional Environmental Protection Representatives (DEPR) of senior professional level have been appointed to take up the role of coordinator in related matters. For example, the DEPRs will co-ordinate and prepare divisional inputs for compiling the annual departmental Environmental Report.

[Back to Top](#)



Environmental Goal

In our mission to promote excellence in marine services, we are committed to ensuring that our services and operations are conducted in an environmentally friendly and responsible manner conducive to a cleaner Port of Hong Kong.

[Back to Top](#)

Work Focuses

Our environmental work focuses on the following areas:

- (a) Tightening the management and control of the movement of dangerous goods in Hong Kong waters;
- (b) Improving our refuse collection and scavenging services;
- (c) Maintaining a world class maritime oil pollution contingency planning arrangement to combat oil spills;
- (d) Stepping up prosecutions against offences of marine littering and pollution;
- (e) Recommending environmentally friendly seawall designs with wave-absorbing capability in relevant development projects;
- (f) Implementing international conventions on marine pollution prevention and enforcing relevant environmental legislation on vessels;
- (g) Employing effective management systems to achieve energy savings for operations at Marine Department's ferry terminals, public cargo working areas and Government Dockyard;
- (h) Adopting environmentally friendly and efficient designs for facilities and work processes in the Government Dockyard;

- (i) Observing the Government's Green Management Policy in our own work places to ensure efficient use of natural resources and energy; and
- (j) Recommending a proper Marine Traffic Impact Assessment be conducted for every major development project to adequately address all potential marine impacts at each stage of the project implementation. This will not only ensure marine traffic safety in Hong Kong waters but also will bring long-term benefit to the environment.

[Back to Top](#)

Environmental Performance

The measures and performance relevant to environmental protection in 2003 are as follows -

(a) Proactive Port Control

Vessel Traffic Services

One of the objectives of the Hong Kong Traffic Vessel Services is to protect the fragile marine environment from oil or chemicals caused by marine accidents. The services are provided by our Vessel Traffic Centre (VTC), which monitors all vessels' movements within Hong Kong waters round the clock through a series of radar system. It provides traffic information and warning to navigators so that they can take early actions to avoid collision or running aground.



The Vessel Traffic Centre located inside the Macau Ferry Terminal

In busy waterways, such as Ma Wan Channel and Kwai Chung Container Terminal Basin, vessel traffic is closely monitored by a marine traffic control station. An advance vessel traffic monitoring system is put into operation, which further enhances efficiency of marine traffic management.

Harbour Patrol

As the enforcement arm of the Marine Department, the Harbour Patrol Section (HPS) operates a fleet of patrol vessels to ensure compliance with marine regulations by ships in Hong Kong waters. For marine pollution prevention, patrol officers regularly bring prosecutions against offenders found littering Hong Kong waters. In 2003, we issued a total of 111 Fixed Penalty Notices to persons who committed the offence of marine littering.



Law Enforcement against
Marine Littering

In addition, a person in charge of a launch was prosecuted in court and was fined \$1,500 for marine littering.

HPS officers visit and examine tankers and local oil barges to ensure that they are anchored in designated anchorages and no illegal transfer or discharge of oil is allowed to take place. Under the Shipping and Port Control Ordinance (Cap. 313), the owner and master of the vessel or any person who discharges oil from a vessel commits an offence. Legal proceedings against two pollution cases related to discharge of oil in the waters of Hong Kong were pursued in 2003.

HPS officers are required to keep a look out for any mutilated vessels or wrecks during their normal patrol. The mutilated vessels or wrecks may decompose and release harmful substances, which would damage the environment, and leakage of lubrication/fuel oil could cause pollution. In 2003, 120 mutilated vessels were removed for disposal.

In recent years, many containers were found falling overboard from River Trade Cargo Vessels (RTCV). One of the root causes was due

to overloading of vessels, thus affecting their stability, and causing containerized cargo to slip off from the RTCV. These fallen containers might be stowed with marine pollutant that would pollute the marine environment in the vicinity. To address this issue, HPS launched a number of special operations in 2003 and prosecuted a total of 207 overloaded vessels. They were required to rectify the unsafe condition forthwith before they were allowed to continue their voyage within the waters of Hong Kong.



Containers fell overboard may cause serious marine pollution

Smoke Emission Control

In 2003, a special survey was carried out in which smoke emission from 544 vessels was observed. Three advisory letters were subsequently issued to masters and owners of the vessels concerned to draw their attention to the proper maintenance and operation of their vessels so as to reduce smoke emission.

Dangerous Goods Control

The carriage of dangerous goods at sea is governed by the Dangerous Goods (Shipping) Regulations (Cap. 295) and the Merchant Shipping (Safety) (Dangerous Goods and Marine Pollutants) Regulation (Cap. 413). The Dangerous Goods and Project Section has continued to carry out random checks on vessels for conveying dangerous goods in the Hong Kong waters. In 2003, a total of 518 vessels were inspected by the Inspection Team of the Section.

(b) Efficient Marine Refuse Cleansing Services

Floating refuse, being the most visible evidence of pollution in the harbour, is difficult to clear because it drifts with current and wind. The Marine Department is determined to keep the harbour clean by engaging effective and efficient marine refuse cleansing services and setting up a special taskforce to clear coastal refuse.

As a result of our continued efforts, refuse totalling 13,927 tonnes, an increase of 17.4% over the previous year, was scavenged and collected in 2003.



Special Taskforce to Clear Coastal Refuse

Contracting out Marine Refuse Cleansing Services

The Marine Department has introduced objective-based contracts for floating refuse scavenging and boat refuse collection services. Since 1 July 2002, objective-based contracts have been adopted for services in four typhoon shelters (Cheung Chau, Causeway Bay, Shaukeiwan and Tuen Mun).

Also we have drawn up clear cleanliness evaluation criteria and involved participation of other government departments to evaluate cleanliness of the marine environment and contractors' performance. A study was commissioned in May 2003 to explore feasibility of launching a new contract management system in 2005.

During 2003, we strengthened the marine cleansing contractor's fleet to 68 vessels, and to 75 in the summer time.

In addition to routine cleansing activities, we contributed our efforts to Team Clean in the following areas:

- ✧ stepping up prosecutions;
- ✧ strengthening public education;
- ✧ enhancing publicity programme, and
- ✧ conducting intensive cleansing programme for identified areas.

Also in collaboration with private sector organizations, promotional activities aimed at improving cleanliness of Hong Kong waters were carried out. These included beach cleanups and trial use of modified cleanup vessels for sea surface cleansing in conjunction with contractor.

We also helped other departments to clean beaches and coastlines by participating in joint operations.

(c) Preparedness in Dealing with Oil Spills

Maritime Oil Spill Response Plan

2003 Anti-oil Pollution



Hong Kong waters cover a relatively small area with congested waterways. Oil spills can be exceptionally damaging. Any oil spills from ships can be easily washed ashore causing irreparable environmental damage. In this regard, we have developed an effective Maritime Oil Spill Response Plan to co-ordinate departmental actions to tackle oil pollution incidents in Hong Kong waters. The Pollution Control Unit of the department is on 24-hour standby and its target is to respond on site within 2 hours of reported oil spillage inside harbour limits. This pledge was 100% achieved in 2003.

Regional Maritime Oil Spill Response Plan

A Regional Maritime Oil Spill Response Plan for the Pearl River Estuary has been developed and jointly employed by the port officials of Guangdong, Guangzhou, Zhuhai, Shenzhen, Macau and Hong Kong. It is intended for combating major oil spills in the Zhujiang Kou (Pearl River Delta) areas and Mirs Bay. It would also enhance regional co-operation in handling oil spill incidents among the neighbouring ports.

We have established an effective communication channel with the neighbouring port administrations to exchange views and experience in dealing with oil spill incidents.

(d) International Conventions and Local Legislation

As an Associate Member of the International Maritime Organisation, the HKSAR is committed to implementing relevant international conventions on marine pollution prevention through the enactment and enforcement of local legislation.

In order to have a cleaner harbour and to improve the sea water quality in the HKSAR, new local legislation is being prepared by the Government to implement Annex IV ^{Note1} of MARPOL 73/78 ^{Note2} for the prevention of marine pollution by sewage from ships. The new regulations will prohibit sea-going ships to discharge untreated sewage in HKSAR waters. In addition, a study is being carried out for the implementation of Annex VI of MARPOL 73/78 in the HKSAR to prevent ships from polluting the air quality. The new local legislation will be introduced after consultation with the shipping industry by the Government.

Note1 Annex IV : Prevention of Pollution by Sewage from Ships (entry into force date 27 September 2003)

Note2 MARPOL 73/78 : International Convention for the Prevention of Marine Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (entry into force on 2 October 1983)

Port State Control

The Port State Control (PSC) Section carried out inspections on 15% of foreign ocean going ships entering the Hong Kong waters each year under our commitment with the Toyko Memorandum of Understanding.

PSC inspection, from the point of view of safety of life and pollution prevention, is to avoid a sub-standard ship from proceeding to sea by securing her compliance with the relevant convention provisions in safeguarding the safety of crew, passengers and ships, and prevention of pollution.

In 2003, 915 foreign ships entering Hong Kong waters were inspected, out of which 232 deficiencies related to pollution prevention were found and 22 ships were detained due to serious contraventions with MARPOL requirements.

(e) Green Initiatives at Terminals and Public Cargo Working Areas

Terminals

Energy saving is the focus of the environmental initiatives being pursued at the China Ferry Terminal and the Macau Ferry Terminal. A structured energy saving plan has been introduced and effectively cut down energy consumption in the two terminals by means of reduced lighting and economical air conditioning setting. Green measures taken in 2003 included installation of 600 compact fluorescent lamps in public areas of the Macau Ferry Terminal and replacement of 3 sea-water cooler chillers to improve efficiency of the air-conditioning system in the China Ferry Terminal. Environmentally friendly garbage drums for depositing paper, plastics and aluminum cans have also been used in both terminals. Planned measures to be undertaken in 2004/05 include installation of motion sensors to control lighting intensity of the Arrival Immigration Clearance Hall of the China Ferry Terminal.

Public Cargo Working Areas (PCWAs)

All cargo operators and staff in PCWAs were reminded to take adequate precautionary measures to eliminate mosquito breeding, particularly when the territory was under the threat of Dengue fever. Patrol to clean up potential mosquito breeding grounds were also stepped up within PCWAs.

(f) Going Green at the Government Dockyard

Going green is the long-term commitment of the Government Dockyard (GD). Over the past years, many initiatives have germinated at all fronts in the operation of the shipyard. They appear in the yard, in the office, to its people, on new ships and in maintenance operations.

Green Shipyard

With a view to protecting the environment of the shipyard and preserving the ecological environment in the basin, the Government Dockyard reviews its facilities and upgrades them with environmentally friendly products every year. The following works were completed last year for the purpose of environmental protection:

- (i) Upgrading of the drainage and surface waste water collection system for the buoy yard to collect and control surface wastewater from discharging into the water basin. Wastewater arising from buoy cleaning etc. is drained into a foul sewer for first stage treatment. The treated wastewater is then led to the sewage treatment plant next door for further processing before discharging into the sea;
- (ii) With a view to saving electricity consumption, “Manual On/Automatic Off” timer control devices were installed to all the flood lights inside cover sheds of GD;



Effective Drainage System

- (iii) The steel mesh on fencings for GD were replaced with plastic coated meshes. The service life of mesh has been extended and there will also be savings in re-painting them;
- (iv) Waste bins for different type of industrial waste were placed in GD yard. Contractors and staff members of GD are encouraged to deposit waste to appropriate bins for recycling;
- (v) To reduce noise pollution and improve engine performance, heat shields and exhaust gas pipes of GD's travel hoists were modified to achieve better combustion. As a result, less harmful exhaust gas is emitted from the engines;
- (vi) All existing wooden cradles used for vessels' docking were replaced by steel cradles. There is a reduction in both maintenance work for the cradles and consumption of timber each year; and



New Steel Cradles

- (vii) Noise surveys/measurements were carried out regularly for all plant equipment. Any deficiencies found were rectified immediately to reduce noise emission.

Green Office

- (i) Extraction fan systems were installed to the photocopying room to facilitate safe removal of dust, gases or vapour generated from the operation of photocopiers;
- (ii) To reduce the demand for air conditioning, windows in all offices were coated with reflective film to block sun rays;

- (iii) Office lighting panels were fitted with deep-cell parabolic louvers to provide glare shielding and efficient distribution of light; and
- (iv) All staff and workers were encouraged to contribute their efforts to save energy in the use of lift. Posters were posted near the lift lobby to remind them to use staircase to ascend one level or descend two levels.

Green Education

Video tapes obtained from the Environmental Protection Department were played regularly in the public TV system to promote environmental awareness of all staff members and contractors' workers.

Green New Vessels

- (i) When preparing the specification for new vessel building, we ensured that all applicable regulations related to environmental protection and oil pollution were complied with; and
- (ii) When evaluating tender submissions, a marking scheme was used to check how best the submitted proposals complied with the requirements. Higher points were given to proposals that used environmentally friendly products.

Green Maintenance

- (i) With a view to identifying the most suitable environmentally friendly paint for government vessels, a one-year paint test had been completed to identify the most suitable paint type and suppliers. Only those paints complying with the environmental and other criteria would be used on our vessels; and



Monitoring of Painting Conditions

- (ii) Each Government vessel was provided with a chart showing her fuel consumption and speed relationships. The most economical

speed shown on the chart was recommended to the users. Using this speed, the vessel's fuel consumption and exhaust gas discharged to the atmosphere could be minimized.

(g) E-Communication with Customers

To cope with the fast growing e-commerce environment in the 21st century, Phase 1 of the Marine Department's Electronic Business System (MD eBS) has been implemented since December 2003 to provide an electronic submission channel for the handling of port formalities documents required by the department. The MD eBS will not only save the shipping community's resources and operating costs involved in preparing paper application and submitting port formalities in person for acquiring the department's service, but also contribute to paper saving as well as a greener environment.

By end of 2003, about 90% of Marine Department's conventional paper forms that are amenable to electronic mode of delivery have been provided with e-option and uploaded onto our web-site for public use. Apart from downloading conventional forms and submitting them in paper mode, our clients may also use some of the electronic forms for direct fill-in and submit them electronically.

[Back to Top](#)

(h) In-house Programmes

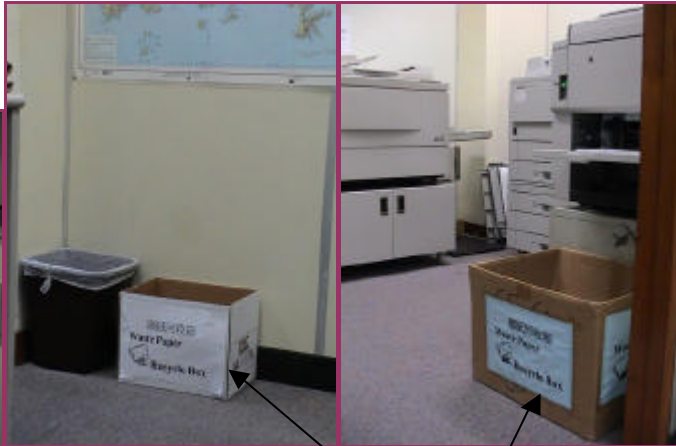
We are committed to the Government's Green Management Policy in our daily operations at the offices to ensure efficient use of natural resources and energy. We follow and advocate the principle of "Reduce, Reuse and Recycle" in the consumption of materials.

Green Housekeeping

We regularly circulate to all staff the departmental green housekeeping measures and tips on paper and electricity saving. Staff are always encouraged to make full use of the blank side of used paper and to print on both sides of the paper.

Since 2003, besides the three-colored waste separation bins placed outside our office building, separate boxes for collecting recyclable paper, aluminium cans and plastic bottles have also been placed inside offices and pantries.

Boxes are placed in the pantry
for collecting aluminium cans
and plastic bottles



Boxes are placed inside office and copying room
for collecting recyclable paper

For energy saving, all the fluorescent tubes for the offices at our headquarters were replaced by energy-saving type, i.e. T5 type, in 2003.

E-Notices and Circulars

With the wider use of electronic means of communication and following the major revamp of the Marine Department website in July 2003, all important departmental notices and circular memoranda were uploaded onto our intranet. Staff are encouraged to read the e-version or the circulated copy of these notices/circulars and to avoid keeping a personal copy in paper form.

Green Training and Education

We train staff to assume their environmental responsibilities. In 2003, 11 staff participated in the environmental workshops on “Green Management”, “Waste Reduction” and “Paper Saving and other Green Office Initiatives” organized by various training institutes like the Environmental Protection Department and the Hong Kong Productivity Council in 2003.

[Back to Top](#)



Environmental Targets

To make our service and workplace environmentally friendly and responsible as well as to protect the natural resources of the world, we WILL:

- strive our best to prevent and fight against all forms of marine pollution, such as marine refuse, oil spill, smoke emission etc.;
- continue to review the designs and materials used for the existing facilities, e.g. seawall designs, paint/fuel for vessels, or electrical machines etc., so that more new environmentally friendly technologies, designs and products will be adopted for delivering our services;
- continue to encourage our staff and appeal for their greater support for adopting more green measures and participating more in green activities initiated by the department or the community;
- continue to explore new means and pay particular attention to a wider use of electronic measures to minimize the usage of paper and energy;
- review our departmental publications, e.g. departmental reports, newsletter, department handbook, performance pledge etc., and encourage a wider use of electronic means in disseminating messages, e.g. uploading the publications onto the website and/or using CD-ROM to keep the number of printed publications to the absolute minimum; and
- set up a Green Housekeeping Working Group instead of a Green Management Committee as pledged in our Environmental Report 2002 to oversee and enhance green housekeeping matters in the department, such as paper and energy saving, water conservation, indoor air quality improvement and green procurement of office products.

[Back to Top](#)

Information and Suggestions

If you have any enquiries or suggestions, please write to our Green Manager (Departmental Secretary) at Marine Department, 22/F, Harbour Building, 38 Pier Road, Hong Kong. You may also get in touch with us by e-mail at mdenquiry@mardep.gov.hk or by fax on [2541 7194](tel:25417194).

[Back to Top](#)