

# Marine Department Environmental Report 2006

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## ***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 of 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 2006, the Department continued to promote an environmentally responsible management and contribute to a greener environment by pursuing environmentally friendly operations. In a bid to prevent marine pollution caused by sunken vessels with dangerous goods on board, an automatic identification system has been installed on all mechanized local vessels which have been surveyed and found qualified to convey Class 1 dangerous goods by mid 2006. Internally, we endeavoured to cut down our energy consumption by initiating new measures such as installing reflective cellulose layers in the Macau Ferry Terminal as a heat insulation agent and using wind-generated electricity supply as a substitute for city main supply in our lighthouses.

I am pleased to see many of our green initiatives have achieved good results and are well received by our staff and the marine industry. I take this opportunity to thank my staff members for their efforts in 2006. The Marine Department undertakes to continue working hand in hand with the community to support the clean-air initiatives and also a greener Hong Kong.

(Roger Tupper, JP)  
Director of Marine

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### ***Responsibilities and Organizational Structure***

In this report, we will focus on the key areas we worked in 2006 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 mission is "We are one in promoting 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 an 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.

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### ***Environmental Goal***

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.

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### ***Work Focuses***

Our environmental work focuses on the following areas:

- (i) tightening the management and control of the movement of dangerous goods in Hong Kong waters;
- (ii) improving our refuse collection and scavenging services;
- (iii) maintaining a world class maritime oil pollution contingency planning arrangement to combat oil spills;
- (iv) stepping up prosecutions against offences of marine littering and pollution;
- (v) recommending environmentally friendly seawall designs with wave-absorbing capability in relevant development projects;

- (vi) implementing international conventions on marine pollution prevention and enforcing relevant environmental legislation on vessels;
- (vii) employing effective management systems to achieve energy savings for operations at Marine Department's ferry terminals, public cargo working areas and Government Dockyard;
- (viii) adopting environmentally friendly and efficient designs for facilities and work processes in the Government Dockyard;
- (ix) observing the Government's Green Management Policy in our own workplaces to ensure efficient use of natural resources and energy; and
- (x) 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 bring long-term benefit to the environment.

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### ***Environmental Performance in 2006***

The measures and performance relevant to environmental protection in 2006 are as follows:

#### **(a) Proactive Port Control**

##### Vessel Traffic Services

One of the objectives of the Hong Kong Vessel Traffic Services is to protect the fragile marine environment from being polluted by oil or chemicals as a result of marine accidents. The services are provided by our Vessel Traffic Centre (VTC), which monitors the movement of vessels 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.

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.



**The Vessel Traffic Centre located inside the Macau Ferry Terminal**

### Harbour Patrol

The Harbour Patrol Section (HPS) operates a fleet of 18 patrol launches to ensure that vessels are in compliance with marine regulations when navigating in Hong Kong waters. For marine pollution prevention, patrol officers regularly take prosecution actions against offenders found littering in Hong Kong waters. In 2006, we issued a total of 55 Fixed Penalty Notices to persons who had committed the offence of marine littering. In addition, the master of a vessel was fined \$500 for an offence of marine littering in a magistrate's court in March 2006.

HPS officers frequently 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 take place within these waters. Under the Shipping and Port Control Ordinance (Cap. 313) and the Merchant Shipping (Local Vessels) Ordinance (Cap. 548), the owner and master of the vessel or any person who discharges oil from a vessel commits an offence.

HPS officers are required to look for any dilapidated vessels or wrecks during their normal patrol. The dilapidated vessels or wrecks may decompose and release harmful substances, which would damage

the environment, and leakage of lubrication/fuel oil could also cause pollution. In 2006, 27 dilapidated vessels were removed for proper disposal.

In recent years, there has been a growing trend of using locally licensed wooden type cargo vessels (M2) and fishing vessels (M6) for conveying frozen poultry cargo from a number of Public Cargo Working Areas (PCWAs) to islands near the eastern territorial waters. Over the past two years, about 19 of these vessels had either grounded or capsized in the north-eastern waters of Hong Kong on passage for Mirs Bay. These vessels, which are normally fully loaded with cargoes of frozen meat or vehicle engine spare parts on deck, would not only pose a threat to navigational safety due to their unstable conditions, but also bring about environmental consequences if they founder before reaching their destination. To address this issue, HPS launched a number of special operations in 2006 and intercepted 321 of them for inspection. As a result, 83 of them were prosecuted and the rest were either directed to off load their deck cargo or required to rectify the unstable conditions before they were allowed to continue their voyage.

Containers occasionally fall overboard, mainly from River Trade Vessels (RTVs) due to improper or inadequate lashing arrangement and stability problems. To rectify this situation, a series of special operations were conducted by HPS to ensure that all RTVs stowed with containers on deck were properly loaded and secured. This preventive measure has helped reduce the risk of containers stowed with dangerous goods or pollutant cargoes on deck from falling overboard and contaminating the waters of Hong Kong.

### Smoke Emission Control

In 2006, HPS launched a series of operations against vessels emitting black smoke in the waters of Hong Kong. A total of 847 vessels including 77 ferries were monitored, and no excessive emission of black smoke was observed during these operations. However, four verbal advices were given to two ferry companies requiring them to make improvement.



### Dangerous Goods Control

The carriage of dangerous goods at sea is governed by the Dangerous Goods (Shipping) Regulations (Cap. 295C) and the Merchant Shipping (Safety) (Dangerous Goods and Marine Pollutants) Regulation (Cap. 413H). The Dangerous Goods and Project Section continued to carry out random checks on vessels for conveying dangerous goods in the Hong Kong waters. In 2006, a total of 395 vessels were inspected by the Inspection Team of the Section.

In 2005, an explosion occurred on board a local vessel while conveying Class 1 dangerous goods (Pyrotechnic Special Effects Materials) resulting in the death of one person and injury of three persons. To avoid re-occurrence of similar accidents and to prevent marine pollution due to sunken vessels with dangerous goods on board, the Marine Department has imposed more stringent measures including enhanced ship inspections and compulsory participation in Vessel Traffic Service for local vessels conveying Class 1 dangerous goods. In addition, an automatic identification system has been installed on all mechanized local vessels which have been surveyed and found qualified to convey Class 1 dangerous goods by mid 2006.



**Monitoring the unloading of Class 1 Dangerous Goods (Fireworks)  
at Hong Kong Disneyland Service Pier**



Fireworks are delivered to the Hong Kong Disneyland via sea route on a bi-weekly basis. To ensure safety of the vessel and the personnel involved in the transportation as well as to preserve the marine environment, the Marine Department staff has stepped up measures to conduct ship inspection to all vessels bringing in Class 1 Dangerous Goods (Fireworks) for the Hong Kong Disneyland.

## **(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, the total volume of marine refuse scavenged and collected in 2006 amounted to 16 210 tonnes. This represented an increase of 8.18% compared with that in the previous year.

### Contracting out Marine Refuse Cleansing Services

To improve the overall efficiency and effectiveness of its marine cleansing services, the Marine Department has, on the basis of a comprehensive review on the overall refuse collection service, implemented a reformed contract management system since July 2005. The system includes:

- ✧ full adoption of the performance-based approach for service provision;
- ✧ a relatively long contract period of five years;
- ✧ inclusion of services previously carried out by government staff and vessels in the outsourcing arrangements;
- ✧ consolidation of all the fragmented marine cleansing services into three contracts;

- ✧ provision of Marine Department's stockpile of oil pollution cleansing equipment for the use of the contractor; and
- ✧ devolution of the responsibilities of manning, operating and maintaining the Marine Department's six purpose-built marine refuse scavenging vessels to the contractor.

Since the implementation of the new contracts, the Marine Department has reorganized the overall cleansing arrangements and engaged a fleet of some 70 contractors' vessels to deliver the services.

We will closely monitor the reformed outsourcing arrangements, and continue to work with the contractors to explore ways and means to further improve operational efficiency and cost effectiveness.

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

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

In collaboration with private sector organizations, promotional activities were carried out with a view to improving cleanliness of Hong Kong waters. These included beach cleanup and trial use of modified cleanup vessels for sea surface cleansing in collaboration with the contractor.

We have also helped clean beaches and coastlines by participating in joint operations with other government departments.

## **(c) Preparedness in Dealing with Oil Spills**

### Maritime Oil Spill Response Plan

Hong Kong waters is particularly susceptible to oil spill damage, owing to its closeness to 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 two hours of reported oil spillage inside harbour limits. This pledge was 100% achieved in 2006.

In addition to providing regular anti-oil pollution training to our staff, we held a large-scale oil pollution combating exercise in November 2006 to test and practise the preparedness of government departments and the oil industry under the Marine Oil Spill Response Plan.



### **Annual Anti-Oil Pollution Exercise 2006**

### 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, Shenzhen, Macau and Hong Kong. The Plan is to enhance regional cooperation in the provision of oil combating equipment and expertise for handling major oil spills in the Zhujiang Kou (Pearl River Delta) areas and Mirs Bay.

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

### **(d) International Conventions and Local Legislation**

The Marine Department represents the Hong Kong Special Administrative Region (HKSAR) at the International Maritime Organization (IMO), a United Nation specialized agency responsible for safety and security of international shipping as well as prevention of pollution of the environment from ships.

The HKSAR is committed to implementing the MARPOL 73/78 (The International Convention on the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978 thereto), which is the principal international convention to prevent or minimize pollution to the environment due to ship operations. The Convention has six Annexes aiming to address pollution to the environment in respect of (i) oil; (ii) noxious liquid substances; (iii) packaged form harmful substances; (iv) sewage; (v) garbage and (vi) emissions into the atmosphere. With the exception of Annex VI, all have been extended and enforced in the HKSAR.

The Marine Department is working on the required legislation to extend the Annex VI (Regulations for the Prevention of Air pollution from Ships) to the HKSAR. This Annex controls emission of ozone depleting substances, nitrogen oxides, sulphur oxides and volatile organic compounds from ships. It also regulates the establishment of SOx emission control areas, the use of shipboard incineration and

the quality of fuel oil used on board ships. This Annex has already been in force internationally since 29 May 2005. The Marine Department intends to apply fully the Annex VI requirements to vessels engaged in both international and local operations.

Besides the foregoing, the Marine Department is also participating in the development work at IMO concerning management of ballast water, use of anti-fouling paints and ship recycling to minimize their impact to the environment.

### Port State Control

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

The PSC inspections help prevent sub-standard ships from proceeding to sea by securing their compliance with the relevant convention provisions in safeguarding the safety of crew, passengers and ships, and prevention of pollution.

In 2006, 596 foreign ships entering Hong Kong waters were inspected, out of which 194 deficiencies related to pollution prevention were found and 2 ships were detained due to serious contraventions with MARPOL requirements.

## **(e) Green Initiatives at Terminals, Public Cargo Working Areas and Lighthouses**

### Terminals

Energy saving is the focus of the environmental initiatives being pursued at the Macau Ferry Terminal and the China Ferry Terminal. A structured energy saving plan has been introduced to cut down energy consumption in the two terminals through reducing unnecessary lighting and scheduling the operations of escalators and travelators on a need basis. Green measures adopted in 2006 included replacement of deteriorated and inefficient components, such as centrifugal chillers and variable air volume boxes, of the

air-conditioning systems in the two terminals. In compliance with a service-wide green initiative of the Government, the indoor temperature of both terminals has been set at 25.5°C.

As a new green initiative, reflective cellulose layers have been added on the glass curtain-walls along the fly-over bridges in the Macau Ferry Terminal as a heat insulation agent with a view to reducing the demand for air-conditioning supply and power consumption. Similar measures may be introduced to other venues of the Marine Department.

#### Public Cargo Working Areas (PCWAs)

To lower power consumption, floodlights at PCWAs were adjusted and reduced to suit actual needs after operating hours. E-communication was encouraged and enhanced by introducing the use of Lotus Notes in all PCWAs.

#### Lighthouses

On a trial basis, wind-generated electricity supply by using a vertical-axis generator has been introduced at the Cape D'Aguilar lighthouse since November 2006. The cost effectiveness of using a wind generator as a substitute for the city main supply in all our lighthouses will be reviewed in light of experience gained in the Cape D'Aguilar lighthouse.

### **(f) Going Green at the Government Dockyard**

The Government Fleet Division (GFD) is responsible for the overall management of government vessels. The GFD's main activities include operating its crewed fleet, providing marine transport services to government departments and performing maintenance of government vessels. The Government Dockyard (GD) at Stonecutters Island is the GFD's operational base for operation of its crewed fleet and maintenance of government vessels. In 2005-06, the Marine Department incurred an expenditure of \$376.8 million on the management of the government fleet. As at January 2006, the government fleet was made up of 755 government vessels of different types and sizes.





### Government Dockyard at Stonecutters Island

Going green is the long-term commitment of the GFD. Over the past years, many initiatives have germinated at all fronts in the operation of the government vessels. 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 GD reviews its facilities and upgrades them with environmentally friendly products every year. Special purpose equipment had been installed in the GD for improving the environment, such as:

- (i) an odour treatment and air disinfection system was installed in the fire extinguisher workshop to treat odorous gases emitted from chemicals;
- (ii) an exhaust gas extraction system was erected in the engines testing yard to remove exhaust gases emitted during engines testing operation;

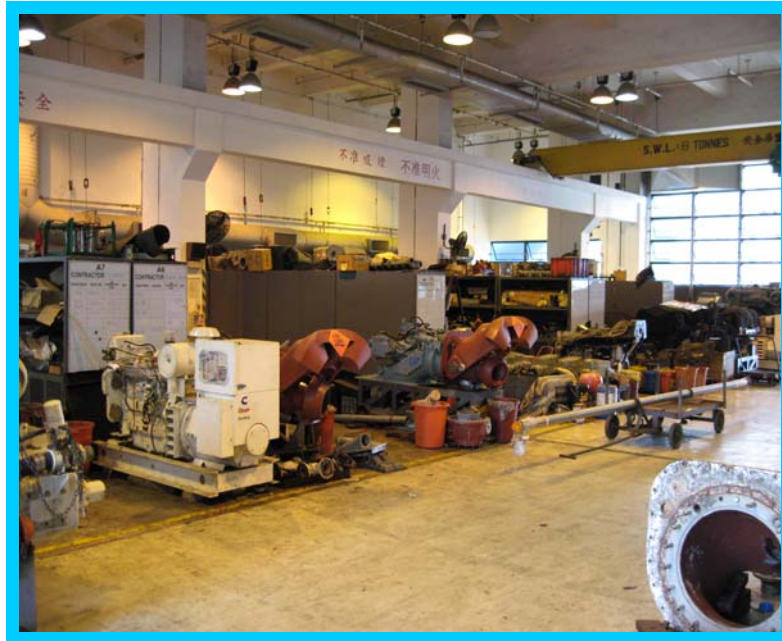


- (iii) a drainage system is used to collect hull washing in the covered shed. The hull washing is sampled and tested to ensure that the waste water complies with the required standard before being discharged to sewage plant;
- (iv) useful parts and components are recovered from disposed engines and equipment for re-use; and
- (v) timber fenders alongside the seawall had been replaced with rubber fenders since 2004. The new rubber fenders are more durable and shock absorbent, more resistant to corrosions and less susceptible to wear and tear during berthing operations, thus attaining much longer life spans with less maintenance and replacement than the conventional timber fenders.



### **Government vessel under repair in covered shed**

In 2006, energy-saving measures were adopted to reduce electricity consumption by about 2.5%. These measures included reducing unnecessary lighting, improving the air conditioning system efficiency and selecting energy saving products for GD facilities.



**Workshop inside the Government Dockyard**

The following improvement measures were completed/implemented in 2006 for environmental protection and workplace improvement:

- (i) the timber fenders of all dolphins in the GD basin were replaced with rubber fenders;
- (ii) direct digital controllers for the air conditioning system in the Administration Building were replaced to ensure a more effective control of room temperature at 25.5°C;
- (iii) fuel oil transfer pumps, transfer tanks and piping system in the fuel oil station were upgraded and improved to prevent oil spillage;
- (iv) steel storage cabinets were provided for the GD workshops to stow standard quantity paint and dangerous goods;
- (v) overhauled propulsion engines and generator sets were tested by dynamometer in the engine testing yard so as to reduce fuel oil and manpower used in sea trial;

(vi) the high bay flood lights in the GD workshops, stores and cover sheds were switched off when the areas were not in use; and

(vii) neutralization tank and monitoring system of battery workshop were improved to have the wastewater treated before it is discharged into the sewage system.

### Green Education

Video tapes are played regularly in the public TV system to promote the awareness of staff members and contractors' workers in environmental protection.

### Green New Vessels

When preparing the specification for new building vessel, we will ensure that all applicable regulations relating to environmental protection and oil pollution are complied with. Environmentally friendly engines are procured for new building vessels or for engine replacement programmes.

When evaluating tender submissions, a marking scheme is used to check how well the submitted proposals comply with the requirements. Higher points are given to proposals that use environmentally friendly products.

### Green Operation

It is also the government's policy to use ultra low sulphur diesel fuel oil and TBT free antifouling paint for all its vessels with a view to reducing the sulphur dioxide emission in the exhaust gas and minimizing the harms to the marine creatures.

## **(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) was launched in 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, but also contribute to paper saving as well as a greener environment. Phase 2 of the MD eBS providing a total e-business solution for port formalities documents and public services would be launched in 2008. The provision of e-permit and e-payment would further reduce the use of paper in our work processes.

To address public demand for the provision of e-mode examination and efficiency in releasing examination results as well as paper saving, an Online Interactive Computer Assessment System was launched in April 2006. The new system undoubtedly contributes to a greener working environment.

#### **(h) In-house Green 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, Recycle and Replace" in the consumption of materials.

##### E-Notices and Circulars

By making use of the Wide Area Network extended in 2006 to include the newly established office at the Tuen Mun Ferry Terminal, we have further promoted the use of electronic means of communication. Under the Accessibility Programme (AP), e-Services Terminals were set up at various offices so that our staff could gain access to all Government-to-Employee applications such as the e-Leave and e-Payroll & Benefits Systems, as well as departmental notices, circulars and circular memoranda that have been uploaded onto our intranet. Staff members could also access the Central Cyber Government Office and the Internet for government circulars or websites of other bureaux and departments. The creation of email accounts for all staff under the AP also facilitates internal e-communication and eliminates traditional communication in paper mode.

### Energy Warden Scheme

The Energy Warden Scheme, which was launched in August 2005, continued to operate in 2006. They conducted regular green inspections of MD workplace to ensure staff's compliance with the department's energy saving measures and also monitored implementation of other green housekeeping initiatives (e.g. paper and waste reduction).

### Setting of Indoor Room Temperature at 25.5°C in Summer Months

All office heads were required to ensure that the indoor room temperature of all the premises of the department should be set at 25.5°C in summer months to reduce energy consumption. Request for variation from the recommended temperature would be considered on the basis of operational need.

### Reduction of Hard Copies of Marine Department Newsletters

The need for production of printed copies of our departmental newsletters, i.e. Hong Kong Maritime News and Scuttle Butt, had been reviewed. The printed copies of Hong Kong Maritime News were reduced by 410 copies starting from its Issue No. 23. E-version of the Scuttle Butt was first published in the Departmental intranet in October 2005 and production of hard copies had ceased at the same time. The arrangement was well received by staff and helped save considerable amount of paper.

### Paper and Energy Savings

Reduction of paper and energy consumption continued to be two of the key green measures monitored by the Green Housekeeping Working Group. In 2006, we succeeded in reducing paper consumption by 15.7% and energy consumption by 6.9%. Detailed paper and energy consumption figures for the period between 2002 and 2006 are provided at [Annexes I](#) and [II](#).



### Use of Recycled Paper

It is one of our green targets to use more recycled paper instead of virgin paper. In 2006, over 82% of the A4 paper used by the Marine Department was recycled paper, which represented an increase of about 55% compared to 53% in 2005.

### Disposal of Empty Toners/Inkjet Cartridges for Printers

Another new green initiative was introduced in 2006 to collect empty toners and inkjet cartridges of computer printers for re-cycling through public auctions.

### Provision of Three-coloured recycled bins

Three-coloured recycled bins have been placed in the Macau Ferry Terminal and the China Ferry Terminal for collecting paper wastes, plastic bottles and aluminum cans. Similar arrangements will be extended to other out-station offices by including the provision of three-coloured recycled bins and the collection of recyclable wastes in the specifications of the cleaning contracts to be issued in 2007.

### E-Christmas Card

The Marine Department has been sending out electronic greeting cards since 2001 to reduce paper consumption.

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### ***Environmental Targets for 2007***

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;
- phase out paper pay statements to promote e-government and save paper;
- explore new measures, such as adjusting the illumination level in the offices, re-arranging grouping of lights, to further reduce energy consumption; and
- make sustainable efforts in fulfilling the commitments under the Clean Air Charter and report the progress in the Marine Department Environmental Report 2007.

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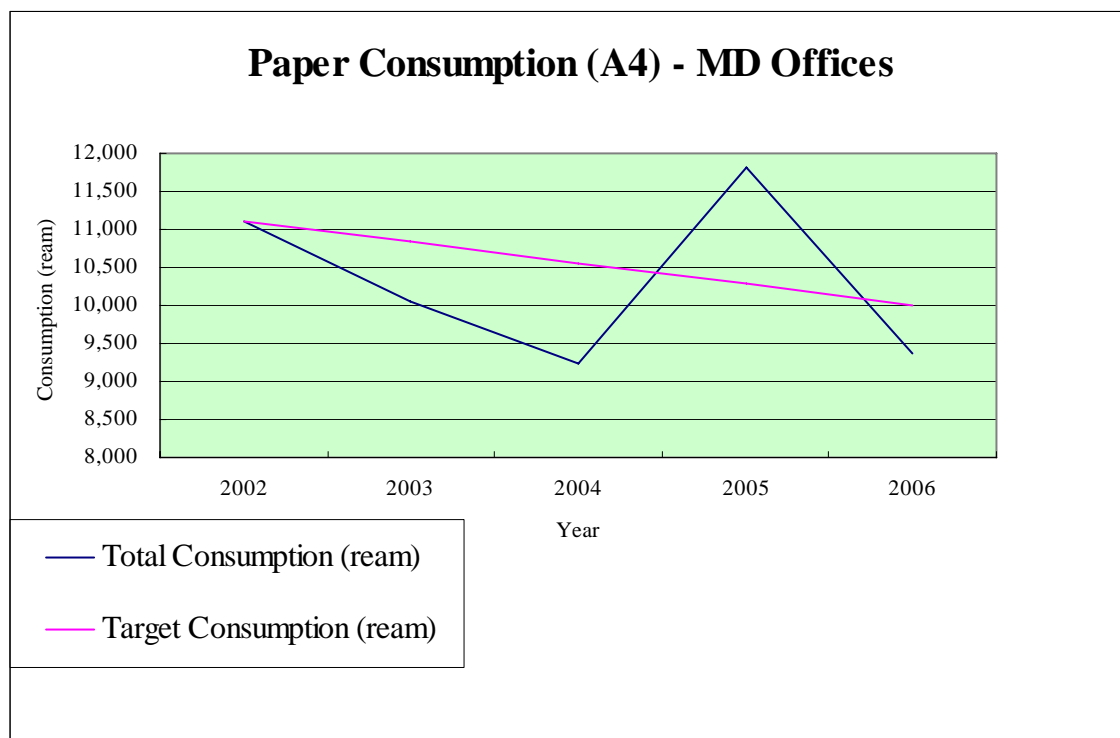


### ***Information and Suggestions***

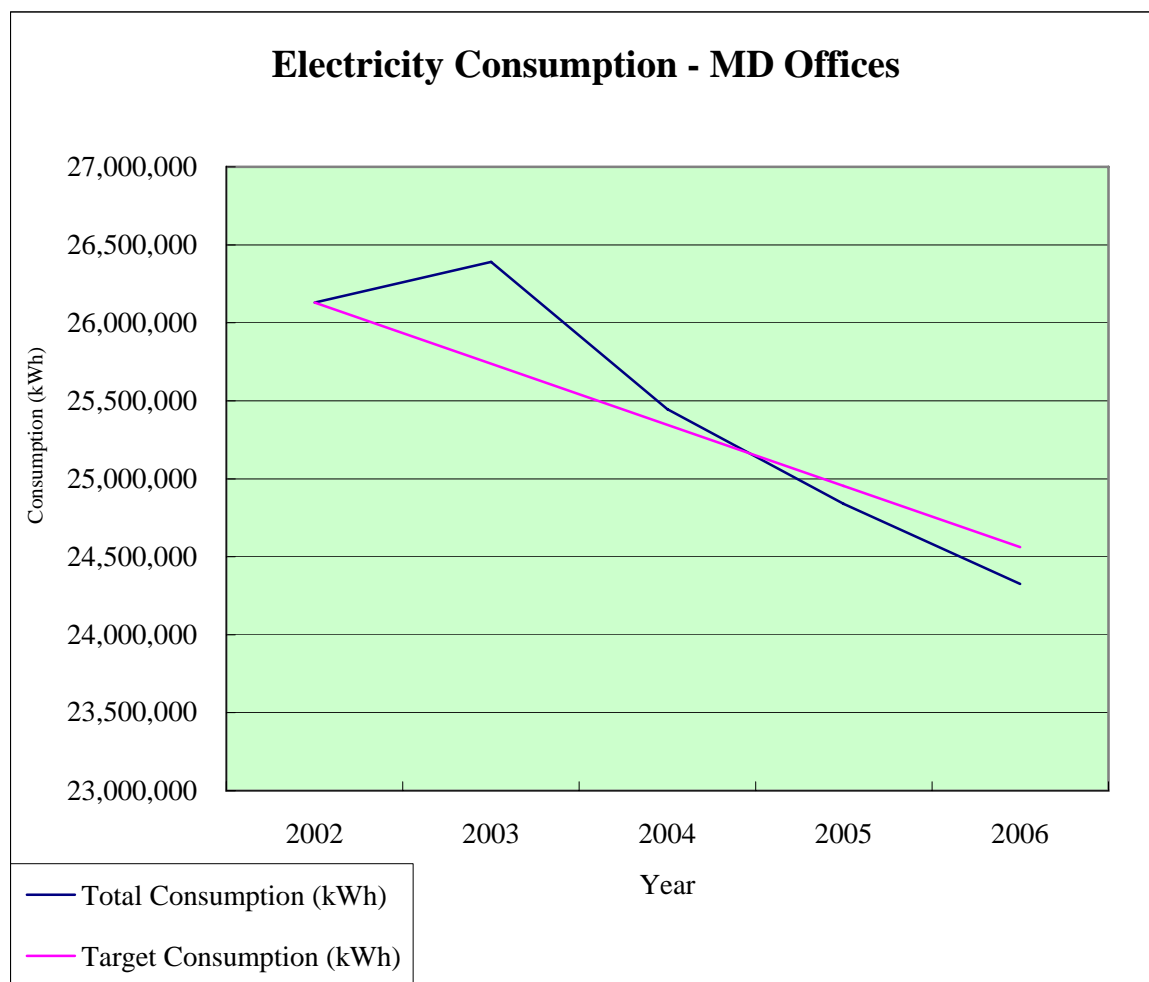
If you have any enquiries or suggestions, please write to our Green Manager (Departmental Secretary) at Marine Department, 22/F, Harbour Building, 38 Pier Road, Hong Kong. You may also get in touch with us by e-mail at [mdenquiry@mardep.gov.hk](mailto:mdenquiry@mardep.gov.hk) or by fax on [2541 7194](tel:25417194).

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<b>Year</b>	<b>Total Consumption (ream)</b>	<b>Target Consumption (ream)</b>	<b>Target +/- %</b>	<b>+/- % (compared to 2002)</b>
2002	11,110	11,110	-	-
2003	10,062	10,832	-2.5%	-9.4%
2004	9,242	10,555	-5.0%	-16.8%
2005	11,809	10,277	-7.5%	6.3%
2006	9,371	9,999	-10.0%	-15.7%



Year	Total Consumption (kWh)	Target Consumption (kWh)	Target	+/- % (compared to 2002)
2002	26,129,757	26,129,757	-	-
2003	26,389,731	25,737,811	-1.5%	1.0%
2004	25,445,750	25,345,864	-3.0%	-2.6%
2005	24,839,533	24,953,918	-4.5%	-4.9%
2006	24,326,296	24,561,972	-6.0%	-6.9%