2012 Environmental Report

Transport Branch
Transport and Housing Bureau

CONTENTS

INTRODUCTION

The Transport and Housing Bureau (THB) headed by the Secretary for Transport and Housing (STH) is responsible for policy matters in two portfolios, viz., Transport and Housing, handled by the Transport Branch (TB) and the Housing Department (HD) respectively. This environmental report covers the environmental performance of TB. On the part of the environmental performance of HD, please visit its website at http://www.housingauthority.gov.hk/mini-site/hasr1011/index.html.

Under the Permanent Secretary for Transport and Housing (Transport), TB oversees the operation of four executive departments, namely, the Civil Aviation Department, the Highways Department, the Marine Department and the Transport Department.

KEY RESPONSIBILITIES OF THE TRANSPORT BRANCH

We are responsible for the formulation of policies relating to the development of transport infrastructure, provision of transport services, traffic management, maritime transport and logistics, air services and civil aviation management. In the process of policy-formulation, sustainability is a key consideration.

The major areas of policy responsibilities include –

➢ planning for and implementing the construction and improvement of our transport infrastructure, with emphasis on railways;

➢ promoting the usage of public transport services by improving their quality and co-ordination;

➢ improving cross-boundary rail and road interchanges;

➢ managing road use, reducing traffic congestion and promoting road safety;

➢ supporting environmental improvement measures in transport-related areas;

➢ enhancing and promoting Hong Kong as an international and regional transportation and logistics hub;

➢ enhancing, in partnership with the Airport Authority (AA), the competitiveness of the Hong Kong International Airport (HKIA) and promoting Hong Kong as an international and regional aviation centre;

➢ promoting shipping safety and ensuring continued compliance with relevant international standards of ships registered in or visiting Hong Kong; and

➢ enhancing the competitiveness of the Hong Kong Port and strengthening Hong Kong's position as an international shipping and maritime centre.

ENVIRONMENTAL GOALS OF THE TRANSPORT BRANCH

We are committed to –

➢ ensuring that our policies are environment friendly;

➢ ensuring that all programmes and operations under our purview are conducted in an environmentally responsible manner; and

➢ enhancing environmental awareness of staff.

We have set the following objectives in order to achieve the above committed goals -

LAND AND WATERBORNE TRANSPORT

➢ We will continue to provide transport infrastructure and services in an environment friendly manner.

CIVIL AVIATION

➢ We aim to ensure that the legislative framework and administrative measures are effective in minimising the environmental impact of aircraft operations.

➢ We will continue to work with AA and the Civil Aviation Department (CAD) to ensure that the environmental impact of airport development and operations is minimised and that parties concerned are proactive in minimising pollution and disturbance from activities at HKIA.

PORT AND MARITIME SERVICES

➢ We aim to ensure that our legislative framework and administrative measures are effective in minimising the environmental impact of shipping and port operations.

➢ We will continue to work, in conjunction with the Environmental Protection Department (EPD) and the port and maritime community, to ensure that the environmental impact generated from shipping, port development and operations is minimised.

LOGISTICS

➢ We will continue to work with the logistics community to promote measures to protect the environment and to ensure that the environmental impact of logistics operations is minimised.

ENVIRONMENTAL MANAGEMENT AND PERFORMANCE

LAND AND WATERBORNE TRANSPORT

Hong Kong is one of the most densely populated cities in the world. A safe, efficient, reliable and environment friendly transport system is important to the sustainable development of the city. On environmental management, we will continue to press ahead with the following initiatives -

➢ priority for efficient and environment friendly transport modes;

➢ reduction in traffic congestion and better inter-modal co-ordination;

➢ greater emphasis on pedestrian facilities; and

➢ application of Information Technology (IT) to transport management.

☐ *Priority for Efficient and Environment Friendly Transport Modes*

Railways are environment friendly, safe and efficient mass carriers in Hong Kong, carrying about 40% of our public transport passengers. At present, the total length of our railways under operation is about 219 km.

We are taking forward the following five railway projects in full swing–

➢ West Island Line;

➢ South Island Line (East);

➢ Kwun Tong Line Extension;

➢ Shatin to Central Link; and

➢ Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link.

Upon completion of these railway passenger lines by 2020, the total length of railways in operation in Hong Kong will be increased to about 280 km.

We launched the consultancy study on the Review and Update of the Railway Development Strategy 2000 in March 2011 to further our policy for better use of railways as the backbone of the passenger transport system. Development of rail transport will significantly speed up passenger flow, alleviate road traffic congestion and reduce vehicle-induced air pollution. The study is expected to be completed in 2013.

The Government will continue with its efforts to enhance the co-ordination between railway and other public transport modes to avoid unnecessary duplication of public transport resources and alleviate traffic congestion. Railway developments and supporting infrastructure will be designed and built to better serve community needs.

As far as electric vehicles (EVs) are concerned, the Transport Department (TD) will continue to formulate measures to facilitate the introduction of EVs into, and their use in, Hong Kong with reference to international practices. To enhance the EV charging network, the Government and the private sector have joined hands to set up around 1 000 standard charging facilities.

☐   ***Reduction in Traffic Congestion and Better Inter-modal Co-ordination***

To reduce traffic in busy areas and hence the impact on the environment, we have taken the following measures -

➢   implementation of more bus-bus, bus-rail, green minibus-rail and green minibus-green minibus interchange schemes;

➢   rationalisation of bus routes and stops;

➢   introduction of Park-and-Ride schemes; and

➢   containing the growth of private cars.

Bus-Bus Interchange Schemes

Bus-bus interchange schemes are pursued as one of the measures to achieve more efficient use of bus resources, relieve congestion, minimise environmental

impact on busy corridors, and reduce the need for long-haul point-to-point bus routes.

Up to end 2012, there were about 250 bus-bus interchange schemes offering fare concessions up to $30.9 to passengers.   These schemes have been implemented near the toll plazas of Shing Mun Tunnel, Tai Lam Tunnel, Tate's Cairn Tunnel, Eastern Harbour Crossing, Western Harbour Crossing, Cross Harbour Tunnel, Aberdeen Tunnel, Lion Rock Tunnel and Tsing Ma Control Area, as well as other areas in the territory.   Through the provision of fare discount incentives and selection of convenient interchanging locations, the implementation of these schemes is well received by the public.   These schemes have improved the bus network and facilitated inter-district travel whilst minimising the need for introducing additional bus routes.   A new bus-bus interchange was opened in December 2012 on Tuen Mun Road (Kowloon-bound).   It enhances the efficiency of bus services around the area along Castle Peak Road and Tuen Mun Road.   It also provides passengers from various sub-districts of Tuen Mun with a bus network of more extensive coverage at concessionary fares.   On average, some 120 000 passengers use these interchanges every day.

Bus-Rail and Green Minibus-Rail Interchange Schemes

To promote the interchange between rail and other public transport modes, interchange discount concessions in the form of bus-rail interchange (BRI) and green minibus-rail interchange (GRI) schemes have been introduced.   As at end 2012, five franchised bus routes and 49 green minibus routes were offering fare concessions to passengers involved in the BRI ($1.0) and GRI (ranging from $0.3 to $3.0) schemes for the Mass Transit Railway (MTR).   Besides, passengers travelling on MTR East Rail Line could enjoy free interchange on MTR feeder bus routes K12, K14, K17 and K18 at designated MTR stations along East Rail Line.   The MTR Corporation Limited (MTRCL) also offers free transfer on MTR bus routes for West Rail Line and Light Rail passengers in North-west Transit Service Area.

Green Minibus-Green Minibus Interchange Schemes

Green minibus-green minibus interchange schemes are introduced to achieve more efficient use of minibus resources and minimise environmental impact on public roads subject to financial capability of the operators concerned.   To promote the interchange between two different green minibus routes, fare concessions were offered to interchanging passengers on 55 routes (ranging from $0.1 to $9.1) as at end 2012.

Rationalisation of Bus Routes and Stops

To improve the efficiency of bus operation and to alleviate their traffic and environmental impact, the Government has been working with the franchised bus companies to rationalise bus services and improve bus stopping arrangement.   This is a policy area highlighted in the 2013 Policy Address.   A new "area approach" is adopted whereby the bus routes for a whole district would be rationalised in a holistic fashion instead of on a route-by-route basis to bring greater benefits to the public.   A pilot scheme would be launched for North District in the latter half of 2013.

Through route amalgamation, truncation, modification and frequency adjustment, about 252 bus trips passing through Central per day were removed in 2012.   On the Kowloon side, about 294 bus trips were removed from Nathan Road.

The Government has been working with the franchised bus companies on deployment of cleaner buses (i.e. those meeting the emission level of Euro IV or above) to routes serving the pilot low emission zones in Causeway Bay, Central and Mong Kok as far as practicable.   Our target is to have only cleaner franchised buses in these zones by 2015.

Park-and-Ride Schemes

Park-and-Ride (PnR) facilities are usually provided at public transport hubs strategically located on the fringe of busy business/urban areas so that motorists can leave their cars behind and switch to public transport to complete their trips.

PnR schemes have been operating under the management of TD or MTRCL at Hong Kong, Kowloon and Tsing Yi Stations of Airport Express, at Choi Yuen Road near East Rail Line Sheung Shui Station, at Hung Hom Station, at West Rail Line Kam Sheung Road Station, at Choi Hung Station of Kwun Tong Line and some commercial carparks operated by private developers located near Olympic Station of the Tung Chung Line, Hang Hau Station of the Tseung Kwan O Line, and Wu Kai Sha Station of the Ma On Shan Line.

In planning future rail stations and major transport interchanges, especially those on the fringe of the urban area, PnR facilities will be developed wherever appropriate.

Park-and-Ride Facilities

Containing the Growth of Private Cars

The rapid growth rate in the number of private cars has aggravated traffic congestion. To contain the growth of the private car fleet, the Government increased the First Registration Tax (FRT) rate of each tax band for private cars by about 15% in 2011. The Government also enhanced the FRT concession rate and cap for first registered environment friendly petrol private cars from 30% and $50,000 to 45% and $75,000 respectively in 2011. This is to provide sufficient incentives to persuade new private car buyers to go for an environment friendly petrol private car instead of a traditional petrol private car.

☐　　**Greater Emphasis on Pedestrian Facilities**

Promoting better pedestrian environment is one of the means to enhance the quality of life. We continued to monitor and review the operation of pedestrian schemes in 2012. In Mong Kok, the trial part-time pedestrian scheme at Sai Yeung Choi Street South, Nelson Street, Soy Street and Tung Choi Street was being closely monitored. Comments from nearby residents and the Yau Tsim Mong District Council will be taken into consideration in the fine tuning and review of the scheme. In addition, we are taking forward preliminary feasibility studies on the development of pedestrian subway system in Causeway Bay and footbridge system in Mong Kok, so as to create space for pedestrian movements and minimise vehicle-pedestrian conflicts. We are also taking forward various measures for improving the walking environment in Yuen Long Town.

Sai Yeung Choi Street South
(part-time pedestrian scheme)

Footpath widening is another effective means to improve pedestrian environment. We are making good progress on footpath widening works and landscaping works at various locations, including Woosung Street, Ning Po Street and Parkes Street in Jordan.

Provision of escalator links / elevator systems can improve pedestrian accessibility to uphill areas and to reduce dependence on vehicular access to these areas via congested, steep and narrow access roads. In this connection, the Government has developed a comprehensive, objective, fair and transparent ranking system on the provision of hillside escalator links / elevator systems to determine the merits of the proposals received and the relative priorities for conducting preliminary feasibility studies and taking forward the projects. These escalator links / elevator systems will enable pedestrians to overcome height differences and will provide an alternative mode of transportation for pedestrians.

☐ *Application of Information Technology to Transport Management*

We continue to promote the deployment of advanced information and telecommunication technologies to enhance the performance of the transport system in Hong Kong. Such enhancement enables road users to access real-time traffic information, thus helping them to plan ahead their driving routes or transportation means in a more efficient manner. Road users will enjoy smoother journeys with reduced journey time, thereby contributing towards lower fuel consumption and vehicle emissions.

Journey Time Indication System

In light of the satisfactory performance of the Journey Time Indication System, the system was expanded to cover Kowloon and Hong Kong East in May 2010. The

system provides the latest traffic situation for motorists crossing the harbour so that they can make informed route choices and avoid congested tunnels. The real-time cross-harbour journey time is also shown on TD's website and shared via Government's Data.One for public use.

Area Traffic Control System

In view of the significant benefits of the Area Traffic Control (ATC) system in optimising the utilisation of road capacity, minimising traffic delay and reducing vehicle emissions, we have expanded the system in phases to cover majority of the districts. Out of the 1 835 signalised intersections in the territory, 1 735 are under the control of the ATC system. With the greater coverage of the ATC system, overall traffic delay at intersections is minimised and journey time is reduced. Due to better co-ordination of traffic signals resulting in less stop and start activities, fuel consumption and emissions of vehicles are also reduced.

We have also replaced the conventional traffic signals with light-emitting diodes (LED) to reduce power consumption. Since October 2012, all the traffic signals over the territory have been operating with LED lamps in lieu of incandescent lamps.

Speed Map Panels

The new Speed Map Panel system will be launched in January 2013. In this project, five Speed Map Panels will be installed on strategic routes in the New Territories, and they will provide motorists with traffic conditions of the roads towards Kowloon by gantry signs in map format. The traffic information is also shown on TD's website and shared via the Government's Data.One for public use.
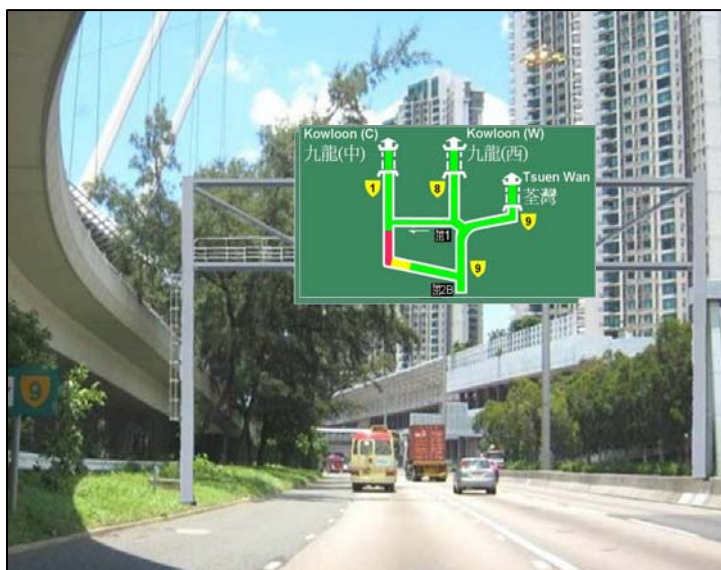
Proposed Speed Map Panel at Tai Po Road, near Shatin Racecourse

Traffic and Incident Management System

We are developing the Traffic and Incident Management System (TIMS) to enhance efficiency and effectiveness in managing traffic and transport incidents and in disseminating traffic and transport information to the public. TIMS is scheduled for commissioning in 2015.

Public Services on the Internet

To help motorists and other road users better plan their journeys, we have been providing information on road network, traffic conditions and public transport services on the Internet.

We enhanced the Road Traffic Information Service, which provides real-time traffic information on the Internet to facilitate the selection of optimum transport modes and routes, by launching a mobile version of the website in May 2010.

The Driving Route Search Service, which provides motorists with the optimum driving route options based on selection criteria such as distance, travel time, toll, etc., has been made available on the Internet since April 2010. The mobile version of the website was launched in August 2011. We are developing the mobile phone applications, which will be launched in January 2013.

Since April 2009, the Hong Kong eTransport, which is a one-stop multi-modal public transport route search system with map information, has been made available

on the Internet to provide a point-to-point search service covering various public transport modes with map display. To enable commuters to search for public transport routes anytime and anywhere, we launched the mobile version of the website and an iPhone application of the Hong Kong eTransport in August 2011, and we launched the Android application in November 2011.

CIVIL AVIATION

AA and CAD have implemented a range of initiatives to safeguard the environment. The former is responsible for the operation and development of HKIA and the latter is the regulator for civil aviation and provider of air traffic control services.

☐ *Initiatives by AA*

AA's Environmental Commitment

HKIA is committed to long-term sustainable growth and being a leading environmental performer in Hong Kong. AA's environmental policy focuses on adopting and encouraging practices that minimise pollution and maximise energy and natural resource use efficiencies.

In May 2012, AA pledged to make HKIA the world's greenest airport. AA also aims to benchmark HKIA's performance against other hub-sized airports worldwide and share best practices with other airports in the coming few years.

AA formulated its first three-year environmental plan (the Plan) in 2011. The plan is a living document that will be updated annually with targets and measures to reduce the environmental footprint of HKIA. In 2012, the scope of the plan was expanded to cover biodiversity and green procurement, and to broaden the range of initiatives covering air quality and waste management. It will also act as an outreach tool to a wider audience within AA, the airport community and Hong Kong.

A key component of this work is AA's commitment to reduce HKIA's carbon intensity by 25% from its 2008 emission levels by 2015.

Minimising Emissions

In 2012, HKIA achieved over 10% carbon reduction and became the first airport in Asia to achieve Airports Council International's Airport Carbon Accreditation Level 3 accreditation.   Level 3 involves working with the airport community on reporting and reducing emissions, and the calculations of "Scope 3" emissions including emissions from aircraft Auxiliary Power Units (APU), aircraft landing and take-off cycles and AA staff transportation.

AA's carbon reduction effort specifically seeks to engage airport business partners in completing annual carbon audits, targeting reduction initiatives and working to reduce individual carbon footprints.   The Airport community's carbon actions can be found at http://www.hongkongairport.com/eng/csr/carbon-reduction/index.html.

To reduce both greenhouse gas and air pollutant emissions, AA promotes the use of electric, hybrid and liquefied petroleum gas–powered vehicles at HKIA.   In 2012, AA replaced 31 saloon petrol vehicles with electric vehicles and installed 54 electric vehicle chargers including three quick chargers.   From mid-2013, all new sedans in the airport's restricted area will be electric, and AA will ban fossil fuel–powered sedans starting in 2017.

In 2011, AA started a project of more than $100 million to upgrade the existing fixed ground power (FGP) and pre-conditioned air (PCA) systems.   This will eliminate the need for aircraft to use their APUs and generate both greenhouse gases and toxic pollutants while parked.   In 2012, AA upgraded 16 PCA units and replaced 70 FGP systems.   When the PCA system upgrade project is completed in 2013, the entire PCA system will use a new, low global warming potential refrigerant.   In 2014, AA will ban the use of APUs by aircraft at frontal parking stands.

Saving Energy

Lighting represents about 10% of AA's electricity consumption.   AA has continued its plan to replace conventional lights with LEDs, reducing consumption by 40% – 70% per light.   By the end of 2012, AA had replaced 40 000 conventional lights with LEDs, saving 6M kWh annually.   AA also conducted trials to replace

taxiway lights with LEDs.   AA will replace 100 000 lights with LEDs by end of 2014. AA also installed intelligent light sensors in 17 meeting rooms of HKIA Tower and in the multi-storey car park.

AA completed a successful trial of a 100m^2 green roof on the Seawater Pump House in 2011.   In 2013, AA will complete the installation of two more green roofs at Terminal 1 Limousine Lounge (120m^2) and SkyPier (4 000m^2).

Reducing Solid Waste

AA works closely with its business partners with the aim to reduce overall airport waste to landfill and waste per passenger.   To further promote best practices, AA, with the assistance from major airlines in Hong Kong, produced an online aircraft cabin waste recycling guide.

In 2012, over 100 business partners participated in the food waste recycling programme which was launched in 2011.   Around 1 800 tonnes of food waste were recycled into fish meal.   AA also successfully initiated a pilot food donation between AsiaWorld-Expo and Food Angel that provided some 400 cooked meals for underprivileged groups.

Water Treatment Upgrade

In 2012, AA completed a $34 million upgrade of its greywater treatment plant. The capacity of the plant to generate quality treated water increased from 1 500 to 6 000 cubic metres per day.

Retail Recognition Scheme

In 2012, AA organised the first HKIA Environmentally Responsible Retail Recognition Scheme award ceremony to recognise shops and restaurants taking practical steps to reduce the use of energy, minimise waste and separate recyclables. The scheme was supported by EPD and Green Power.

Environmental Awards

In 2012, AA received a number of awards recognising its efforts in environmental protection:
   Hong Kong Awards for Environmental Excellence

- Silver Award in the public organisations and utilities sector

Environmental Campaign Committee & EPD Environmental Labels
- IAQwi$e label for air quality in Terminals 1 and 2 - "Class of Good"
- Energywi$e label - "Class of Excellence"
- Wastewi$e label - "Class of Excellence"
- Carbon "Less" 12% Certificate for all AA's facilities

Friends of the Earth
- Power Smart Competition - 1st runner-up
- Take a Brake Low Carbon Action Corporate Greening Driving Award Scheme 2012
  - Gold Tier Fuel Efficiency Improvement
  - Bronze Tier Fuel Consumption Saver

Industry Awards
- "Green Pioneer in Travel Industry" organised by Weekend Weekly
- "Green Enterprise Awards 2012" organised by Capital Entrepreneur

EPD recognitions
- "Friends of EcoPark"
- Indoor Air Quality "Good Class Certificate" for Terminals 1 and 2, the North Satellite Concourse and SkyPier
- Award for Co-operative Partnership and Bronze Award (other building types) for Commendation Scheme on Source Separation of Commercial and Industrial Waste 2011/2012

Green Building Award
- Green Building Award 2012 (Merit Award/Building Project under Design – Hong Kong/New Building Category) organised by Hong Kong Green Building Council and Professional Green Building Council for the design of its new mid-field concourse.

☐ ***Initiatives by CAD***

CAD has implemented a series of aircraft noise mitigation measures and has kept close and continuous monitoring. Such measures include noise abatement departure procedures, Continuous Descent Approach procedures, and the use of

flight paths over water to avoid overflying residential areas whenever possible.

For aircraft departing to the northeast of the airport, CAD requires all airlines to adopt the noise abatement departure procedures stipulated by the International Civil Aviation Organisation.

In 2012, CAD recorded that 85% (the remaining percentage was due to weather) of arriving aircraft were able to land from the southwest of HKIA (i.e. over water) between midnight and 7 a.m.; and 99.6% of aircraft departing to the northeast of the airport were able to take the southbound route over the West Lamma Channel between 11 p.m. and 7 a.m.

Only aircraft meeting stipulated requirements in Chapter 3 in Part II, Volume 1 of Annex 16 to the Convention on International Civil Aviation are allowed to operate at HKIA. All aircraft operating at HKIA meet stringent noise standards. That said, CAD will continue with its existing efforts to encourage the airlines to speed up replacing their older and noisier aircrafts with newer and quieter ones.

CAD also provides periodic reports on its website on aircraft noise measurements. Moreover, CAD meets members of the public and maintains a hotline to handle enquiries or complaints on aircraft noise.

Rationalisation of Air Route System

Taking advantage of the latest development in satellite navigation technologies, CAD has been able to achieve rationalisation of the Hong Kong air route system with a view to enhancing its operating efficiency.

CAD has implemented new air routes with effect from 22 October 2009, which have shorter travelling distances for aircraft arriving from the west and the north of Hong Kong. Each arrival flight from the Mainland, South East Asia and Europe has been able to save up to about 210 kilometres in flight journey or 14 minutes in flight time. During 2012, more than 66 000 flights benefited from these shortened routes.

Through collaborative efforts with adjacent air traffic control centres, CAD has implemented reduction of spacing requirement between flights on air route M750/B576 transiting the Hong Kong and Taipei Flight Information Regions for Korea since July 2011. By reducing spacing requirement between flights, the air route capacity is increased and more aircrafts are able to fly at optimum and fuel efficient

altitudes, thereby achieving fuel saving and reduction of CO_2 emission.   During 2012, around 19 000 flights have used these routes.

Furthermore, CAD has implemented an additional set of noise mitigating departure procedure since February 2012, which involves the use of satellite navigation.   For aircraft departing to the northeast of the airport, the procedure makes use of modern aircraft's on-board navigation capabilities to achieve higher track-keeping accuracy, in particular during the turn around Lantau Island towards the south.   The aircraft noise footprint can therefore be confined, reducing the overall aircraft noise effect on residential areas in the vicinity of the flight path.

CAD would continue to develop and progressively apply more advanced aviation technologies and closely work with other air traffic control authorities and the airline operators to further enhance the air route system in the Hong Kong Flight Information Region.

PORT AND MARITIME SERVICES

The Marine Department (MD), which is responsible for maritime and navigational safety matters within the waters of Hong Kong, has implemented various initiatives to protect and improve the environment -

- ➢ MD launches patrol the waters of Hong Kong to ensure compliance with the marine legislation, which includes detection of offences that may cause pollution to the environment, such as littering, illegal discharge of oil, and smoke emission by ships.

- ➢ MD monitors and conducts spot checks on emissions of vessels within Hong Kong waters.   On receipt of complaint and sufficient evidence of excessive dark smoke emission causing nuisance, MD will initiate prosecution.

- ➢ MD adopts performance-based contract for the scavenging of floating refuse and collection of refuse from ocean-going ships and local vessels to ensure the effectiveness and efficiency of the marine cleansing services.

- ➢ MD maintains a Maritime Oil Spill Response Plan to co-ordinate departmental actions for handling oil pollution incidents in Hong Kong

waters and continues to fulfil the pledge to respond on site within two hours of reported oil spillage inside harbour limits.

➢ MD has signed a co-operation arrangement with the port administration of Guangdong, Shenzhen and Macao to adopt the Regional Maritime Oil Spill Response Plan for the Pearl River Estuary.

➢ MD maintains energy saving plans to minimise energy consumption in the China Ferry Terminal and the Hong Kong-Macau Ferry Terminal by economising on the use of lighting and air-conditioning.

➢ MD has adopted green measures on all fronts in the operation of the Government Dockyard (GD), including annual review and upgrading of facilities with environment friendly engines, equipment and products, regular air quality checks on indoor worksites and emission measurements for engines installed on government vessels, etc. Additional shore power supply facilities were installed at GD in 2012 with a view to further reducing noise pollution and exhausting gas emission from generators of lay-by vessels.   Moreover, solar panels were installed at GD for a water heater to reduce electricity consumption; and a food waste composting machine was also installed at GD canteen with a view to reducing the volume of food waste produced.

➢ MD implements relevant international conventions on marine pollution prevention through the enactment and enforcement of legislation.   These conventions include the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78), and the International Convention on Oil Pollution Preparedness Response and Co-operation 1990.   These conventions apply to all ships in Hong Kong waters and Hong Kong registered ships anywhere in the world.

➢ MARPOL 73/78 has six Annexes to prevent or minimise pollution from ship operations in respect of (I) oil; (II) noxious liquid substances in bulk; (III) harmful substances in packaged form; (IV) sewage; (V) garbage; and (VI) air pollution.   All six Annexes have been extended to the Hong Kong Special Administrative Region.

➢ We also work closely with operators of container terminals, mid-stream and river trade operators to preserve a clean and safe environment for sea transport.   We encourage the application of IT in port operations. For example, MD has collaborated with various Departments such as the

Department of Health (DH) and the Immigration Department to handle their popular services for the shipping sector on the e-business platform of MD, including the new e-service implemented in April 2012 on electronic application for free pratique for river trade vessels required by DH.   The Electronic Business System provides features such as auto-approval for online application, online payment via auto-pay, self-printing of Permits/Certificates, and online enquiry for application status.   Port operators have widely adopted the Electronic Data Interchange for exchanging information in day-to-day operation.   The above measures have vastly enhanced the efficiency and competitiveness of the port as well as reduced the consumption of paper.

➤ Container terminal operators have also implemented other measures, such as the use of energy saving equipment, reduction of unnecessary light fittings, installation of grease traps and oil interceptors in workshops and kitchens, engaging specialised contractors to handle waste disposal, and the use of electricity-powered cranes and liquefied petroleum gas shuttle buses to reduce air pollution.

➤ We recognise that 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.   In the course of port planning and development, we will continue to work with EPD and the Sustainable Development Unit to comply with relevant environmental impacts and sustainability assessment requirements.

LOGISTICS

We encourage the use of paperless exchange of information in the logistics industry through the promotion of wider use of IT along the supply chain.   For example, a study on cross-border supply chain visibility is underway to explore the feasibility of establishing an electronic platform for tracing cross-border movement of goods.   Besides, we had sponsored the On-Board Trucker Information System (OBTIS) pilot study which was completed in October 2011.   OBTIS is an information and communication technology platform which aims at enhancing efficiency in fleet management and connectivity between truckers and stakeholders along the supply chain.   OBTIS is now being operated on a commercial basis.

GREEN OFFICE MANAGEMENT

PAPER SAVING, ENERGY SAVING AND RECYCLING

It is our mission to improve and conserve our environment, and to optimise the use of resources to reduce pollution and waste. We strive to implement various green housekeeping measures in daily office operations with a view to maintaining a green workplace. We would minimise waste creation and recycle as far as practicable.

With the advocacy of environmental conservation over the past few years, staff awareness in this respect has been greatly enhanced and staff members have developed good practices by adopting the following green initiatives -

☐ *Paper Saving*

➢ to use recycled paper in office operations;

➢ to print and photocopy on both sides of paper;

➢ to reuse single-side used paper for drafting, printing and receiving fax;

➢ to reuse envelopes and loose minute jackets for internal transmission of documents and correspondence;

➢ to communicate and disseminate information by electronic means within bureaux/departments as well as with members of the public;

➢ to avoid printing or photocopying documents unless hard copy is absolutely necessary;

➢ to use virtual fax;

➢ to distribute soft copies by emails, diskettes or CD-ROMs instead of print-outs;

➢ to upload reports, circulars and other publicity materials on e-bulletin

board, intranet and internet websites for general reference;

➢ to serve drinks in glasses or reusable cups; and

➢ to use electronic greeting cards.

☐ *Energy Saving*

➢ to turn off some lighting when the occupancy is low, e.g. during lunch and after office hours;

➢ to use sensors to automatically switch off unnecessary lighting in office areas and public communal areas such as reception counters, corridors, lift lobbies, etc., during lunch and after office hours;

➢ to maintain office temperature at 25.5°C during the summer time;

➢ to activate the standby or hibernation mode features of personal computers;

➢ to switch off personal computers (including both monitor and computer processing unit) after office hours;

➢ to switch off non-essential servers at night, on Saturdays, Sundays and public holidays;

➢ to check the effectiveness of energy saving measures regularly; and

➢ to encourage staff to use staircase instead of taking the lift for inter-floor traffic.

☐ **Recycling**

➢ to collect used fluorescent lamps, printer toner cartridges, batteries and CD-ROM discs for recycling; and

➢ to dispose of all recyclables, such as waste paper and plastics, in separate recycling boxes.

GREEN PURCHASING

"Green" stationery items supplied by the Government Logistics Department, such as clutch pencils, refillable ball pens, recycled pencils and furniture made of chip

board, are now widely used in TB.　　Other green items, e.g. recyclable laser printer toner cartridges and box files made of recycled paper, are also ordered from contractors for office use.

It has all along been our practice to purchase only office equipment, such as photocopiers and printers, with Energy Efficiency label.　　We also use e-tender whenever applicable.

STAFF AWARENESS

The support and co-operation of staff members are always the key to the success of our green office management. We will continue to work closely with colleagues with a view to fostering a green culture and ensuring that our offices operate in an environmentally responsible manner.

VIEWS AND SUGGESTIONS

Views or suggestions in connection with this Environmental Report can be sent to us via email at environmentalreport@thb.gov.hk, by fax (fax no.: 2868 4643), or in writing to 20/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong.