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Chapter 1 - INTRODUCTION

The Food and Environmental Hygiene Department (FEHD), set up on 1 January 2000, is responsible for a wide range of services such as food safety control; import control on live food animals; management of food incidents; the provision of environmental hygiene services and facilities; combating avian flu, dengue fever and Japanese encephalitis; and the promotion of public education on food safety and environmental hygiene. Our work affects everyone in the community and has an impact on the environment. Our vision and mission are-

Vision

To work hand in hand with our community in building Hong Kong into a world-class metropolis renowned for its food safety and public hygiene.

Mission

To ensure that food is fit for human consumption and to maintain a clean and hygienic living environment for the people of Hong Kong.

In performing our functions, we also place importance on the need to protect the environment by ensuring the efficient use of resources and delivering our services in an environmentally responsible manner as far as possible. In this report, we will give an account of our environmental performance in 2011 so that our staff and stakeholders could better understand our efforts.

Chapter 2 - PROFILE OF KEY RESPONSIBILITIES

Our Services

We deliver our services through the Centre for Food Safety, the Environmental Hygiene Branch, and the Administration and Development Branch (organization chart as below). The following paragraphs give an overview of our major operations, some of which may have an impact on the environment.

Food Safety

We monitor the safety of imported and locally produced food to ensure that food available for human consumption is wholesome, unadulterated and properly labelled. We also aim to safeguard public health through testing and control of imported live food animals; and to advise the public on risk management measures in relation to food and public health matters. Our major areas of work in regard to food safety control include food surveillance and control; and risk assessment and communication.

Food Surveillance and Control

To ensure safety of food supply in Hong Kong, we undertake continuous monitoring, testing and enforcement action. Food samples are taken at import, wholesale and retail points for chemical, microbiological, radioactivity and toxicological tests to ascertain their fitness for human consumption. Pre-packaged food is also checked for compliance with food labelling laws.

Risk Assessment and Communication

Under the risk analysis model for food safety control, we conduct risk assessment on food hazards and recommend food standards. On risk communication, we emphasise the importance of tripartite collaboration among the Government, food trade and consumers in ensuring food safety. We promote food safety messages to the food trade and public through various channels. We also promote the Hazard Analysis Critical Control Point (HACCP) principles to the food trade and in particular the high risk sectors to enhance food safety.

Environmental Hygiene Services

We strive to provide and maintain a clean and hygienic living environment for the people of Hong Kong. Major environmental hygiene services that have direct environmental impact include public cleansing services, licensing and control of food businesses, provision and management of environmental hygiene and related facilities, hawker management, cremation services, and pest control operational services.

Public Cleansing Services

We are committed to keeping public places clean, tidy and free from litter. Public cleansing services range from street sweeping and washing, collection of household waste and street waste, gully cleansing, desludging of septic tanks, to managing public cleansing facilities like refuse collection points (RCPs), public toilets and bathhouses. The Department and its cleansing contractors deploy a total workforce of about 10,100 to provide these cleansing services.

We provide some 20,940 litter containers, 480 dog toilets and 1,510 dog excreta collection bins throughout Hong Kong. There are some 3,205 RCPs in Hong Kong for the temporary storage of street waste and household waste pending collection. Waste is collected at least once a day at these RCPs and some 5,160 tonnes of household waste are collected daily by refuse collection vehicles managed either by ourselves or our contractors.

Licensing and Control of Food Businesses

We license food businesses to safeguard public health and safety and conduct regular inspection to ensure hygiene standards of licensed food premises are met. We also take law enforcement actions such as prosecutions, imposition of court orders, daily fines and suspension or cancellation of licences against unhygienic premises.

Provision and Management of Environmental Hygiene and Related Facilities

We are responsible for the management of a wide variety of environmental hygiene and related facilities. In total, we manage 39 cooked food centres, 25 free-standing cooked food markets, 77 public markets, 659 public toilets, 28 public bathhouses, 11 public cemeteries, 6 crematoria and 8 columbaria and gardens of remembrance. In line with our service commitment, we will continue to improve these facilities where necessary to upgrade their quality, subject to availability of resources.

Hawker Management

On-street hawking is an economic activity with a long history. Through licensing and enforcement of legislation, we aim to minimise the environmental nuisance caused by hawking activities.

Cremation Services

We manage six crematoria for the provision of cremation services to the public.

Pest Control Operational Services

We are responsible for the pest control operational services in public places, such as control and prevention of rodents, mosquitoes and other arthropod pests with medical importance.

Administration and Development Services

Planning of Capital and Minor Works Projects

We are responsible for the planning of new capital works projects and minor improvement works to existing departmental facilities relating to markets, RCPs, public toilets, crematoria and columbaria. We will continue to do our best in reducing the environmental impact during the construction and operational phases of these projects, and in including environmentally friendly facilities as far as possible.

Public Education and Publicity

Public awareness of maintaining a clean and hygienic environment is enhanced through our public education in an integrated approach. We run a Health Education Exhibition and Resource Centre at Tsim Sha Tsui to organise publicity and educational programmes for the community. We also disseminate environmental hygiene messages through different media and various campaigns.

Pest Control Advisory Services

We give advice on pest control and prevention to government departments and the general public. Our work includes surveillance and monitoring of pest problems to prevent local transmission and investigation of vector-borne diseases.

Internal Administration Support

We maintain a departmental fleet of some 730 vehicles to provide support services, of which over 200 are specialized vehicles such as Refuse Collection Vehicles and Street Washing Vehicles.

Our Impact on the Environment

Operations and Services	Environmental Impact
Provision of public cleansing services	<ul style="list-style-type: none"> - Public places are kept clean and tidy. - Wastes (street waste and household waste) are handled in an environmentally responsible manner.
Licensing and control of food businesses	<ul style="list-style-type: none"> - Through licensing and enforcement action, the operation of food businesses is kept under control to prevent environmental nuisance (e.g. discharge of effluents, greasy waste and exhaust fumes).
Provision and management of environmental hygiene and related facilities	<ul style="list-style-type: none"> - Pollution to the environment is reduced through proper management of environmental hygiene and related facilities. - A clean and hygienic environment is maintained.
Cremation services	<ul style="list-style-type: none"> - Emission of air pollutants from new cremators is strictly controlled and monitored to meet commitments in the Clean Air Charter.
Pest control	<ul style="list-style-type: none"> - Impact on the environment in pest control operations is minimized as far as possible.
Planning of capital and minor works projects	<ul style="list-style-type: none"> - Environmental impact of our planned facilities is closely monitored and minimised as far as possible during the works and implementation periods.

Public education and publicity	- Public awareness of the importance of environmental hygiene is enhanced.
Departmental vehicles	- Emission of air pollutants is strictly controlled and monitored to meet commitments in the Clean Air Charter.
Green housekeeping	- Consumption of energy and resources (electricity, paper, water, stationery, etc.) is closely monitored to reduce environmental impact.

Chapter 3 - ENVIRONMENTAL POLICY

Our statement on environmental policy is as follows -

"The Food and Environmental Hygiene Department is committed to ensuring that all our services are delivered in an environmentally responsible manner, particularly in the collection, recycling and reduction of household waste, conservation of energy and water, and prevention of air, noise, water and soil pollution. We will also promote green housekeeping in premises under our management."

Chapter 4 - ENVIRONMENTAL OBJECTIVES AND PERFORMANCE

In line with Government's efforts in protecting the environment, we incorporate environmental considerations in the formulation of our policy and deliver our services in an environmentally responsible manner. The following is an account of our main objectives and performance in 2011.

OBJECTIVE: TO ACHIEVE WASTE REDUCTION IN OUR OPERATIONS

Our Performance

Household Waste Recycling in Waste Collection Programme

In support of the Government's "A Policy Framework for the Management of Municipal Solid Waste (2005-2014)", we have provided services to 3,303 recyclable collection points in public places, schools, clinics and government venues for the collection of waste paper, metal and plastic materials. All recyclables collected are delivered to waste recyclers for recycling.

The average weight of recyclable materials collected per month in 2011 is shown in the table below.

Recyclable materials collected	Average monthly weight in 2011 (kilograms)
Waste paper	45,510
Metal	1,330
Plastic materials	14,210

Waste Recycling in Lunar New Year Fairs

In the year, we organised a total of 14 Lunar New Year Fairs in various locations of the territory. Taking into account the large quantities of recyclables such as carton boxes, drinks bottles/cans that would be disposed by stall operators and the public visiting the fair, we set up recyclable collection points at convenient locations of each site to facilitate separate collection of such recyclables.

The total weight of recyclables collected from the Lunar New Year Fairs in 2011 is shown in the table below.

Recyclables collected	Approximate total weight (kilograms)
Waste paper	12,960
Metal	280

Plastic materials	840
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Chemical Waste Recovery and Waste Water Drainage at FEHD's Vehicle Depots

Waste lubrication oil, spent batteries and air conditioning refrigerants from FEHD vehicles are properly recovered and collected by approved contractors. During the year, we continued to use synthetic lubrication oil that can considerably lengthen each service interval for oil changing. The waste lubrication oil recovered was 10,800 litres in 2011. Proper drainage systems are also provided for our vehicle washing bays to avoid pollution to storm water drainage.

All the departmental depots are in compliance with the requirements under the Waste Disposal (Chemical Waste) (General) Regulation and Water Pollution Control Ordinance and are issued with relevant licences by Environmental Protection Department (EPD).

Use of Retread Tyres

In response to the Government's initiative on waste reduction and environmental protection, retread tyres are used on the departmental vehicle fleet whenever possible. The current ratio on brand-new tyres to retread tyres is 1:0.3.

OBJECTIVE: TO MINIMISE ENVIRONMENTAL IMPACT IN THE DELIVERY OF OUR SERVICES

Our Performance

Licensing Control and Enforcement on the Operation of Food Premises

We conduct regular inspections to licensed food premises to check compliance with the licensing requirements and conditions, which include-

- grease traps installed in food premises are functioning properly to prevent discharge of oil or grease into public drains or sewers;
- plumbing systems in food premises are properly maintained to prevent discharge of offensive or noxious effluents into public places;
- fumes and hot air are discharged in such manner as not to be a nuisance. Metal hood, air-ducts, extraction fans, grease filters/water scrubbers of exhaust systems are maintained in good order; and
- waste is properly stored in dustbins for collection.

Enforcement action will be taken against those food premises not complying with licensing requirements and conditions. During the year, we conducted 206,433 inspections to food premises and took out 4,207 prosecutions against food premises.

Environmental Hygiene Facilities

We continue to replace temporary roadside RCPs with off-street facilities in enclosed buildings equipped with modern deodorising installations to minimise environmental nuisance to nearby residents.

Besides, in 2011, 13 projects were completed under the on-going Public Toilet Refurbishment/Improvement Programme while 79 projects were completed under the phased programme to convert aqua privies into flushing toilets.

The drainage systems in our facilities including markets, hawker bazaars and RCPs are checked regularly to avoid water pollution. All cooked food markets and cooked food centres have proper drainage systems with grease traps to prevent the discharge of pollutants into surface channels.

Since February 2011, we have allowed stall tenants of public markets not to dismantle serviceable fixtures and installations, such as metal gates and security metal frame/mesh covers, upon termination of their market stall tenancies so that the fixtures and installations may be reused by new tenants. This arrangement not only reduces waste but also avoids noise and other nuisances generated from the related demolition and construction works.

Pest Control

In the prevention and control of public health pests, we have adopted an Integrated Pest Management approach to rationalise the work to minimise the impact of pest prevention and control on non-target animals and the environment.

Environmentally friendly methodologies, technologies and products are used. Non-chemical agents will be considered before adopting the use of pesticides. We are also very cautious in the choice of pesticides so that pest disinfestations are carried out effectively and with the least impact on the environment. To minimise the detrimental effect to non-target living organisms, we choose synthetic pyrethroid insecticides which generate fewer hazards to human beings. Pests and nuisance-causing animals are disinfested judiciously to avoid unnecessary disturbance to the ecological system. Advice on environmental improvement for solving pest problems is given to the parties concerned.

Mosquito Control

We continue to adopt non-chemical means as far as possible in mosquito control. Mosquito breeding can be forestalled by killing the insect at its adult and/or larval/pupal stages. We apply larvicidal oil or pesticide strictly on a need basis and to specific spots only.

In the year, the control programme against malaria transmissible mosquitoes, covering some 600 streams, is reported with favourable result with no evidence of local transmission of malaria.

In areas where malaria vector mosquitoes are detected but with a low population, local species of mosquito larvae eating fishes are released to abate mosquito breeding. To further reduce the impact on the environment, *Bacillus thuringiensis israelensis* are used for killing mosquito larvae. *Bacillus thuringiensis israelensis* produce crystal proteins which can be converted into toxins in the gut of the mosquito larva. The toxins act on larvae of limited species including mosquitoes, blackflies and non-biting midges.

Rodent Control

In drawing up rodent disinfestation programmes, we always take into account the environmental concern. Anticoagulants considered much safer than acute rodenticides are used although it takes longer time to kill a rodent. Trapping of rodents and elimination of food and harbouraging places for rodents are preferred to using chemicals.

OBJECTIVE: TO MEET THE COMMITMENTS IN THE CLEAN AIR CHARTER

The commitment in the Clean Air Charter to control the quality and volume of emissions of air pollutants has direct relevance to our cremation facilities and the departmental vehicle fleet.

Our Performance

Cremation Services

FEHD manages 6 crematoria. To control the quality and volume of emissions generated from cremation services, we have-

- monitored the operation on a daily basis and regularly serviced and maintained cremators through the Electrical and Mechanical Services Department (EMSD);
- installed a Telemetry and Monitoring System in new cremators with online computerised network supplying real time information to EPD for monitoring the pollution level of air pollutants to make sure that they operate within the statutory limit;
- used ultra-low sulphur (0.005%) diesel for cremators using diesel and used Town Gas for newly built cremators;
- used eco-coffins for the cremation of unclaimed bodies;
- encouraged the public and funeral service operators to use eco-coffins;
- imposed an additional condition on undertakers of burials requiring coffins presented for cremation to be free from metal and plastic ornaments/attachments on external surfaces; and
- imposed an additional condition requiring undertakers of burials to provide eco-coffins for sale as an option to customers.

Incorporating Environmental Considerations in the Use of Departmental Vehicles

Our fleet of some 730 vehicles of different types fully comply with the latest statutory requirements in the Air Pollution Control Ordinance (Cap. 311) and the Road Traffic Ordinance (Cap. 374) on emission. We follow the measures adopted by the Government Logistics Department (GLD) in vehicle procurement and fleet management to reduce emission of air pollutants as follows-

- replace all diesel light buses by LPG ones in phases. We now have 163 LPG light buses, 96% of our light bus fleet;
- give priority to environment-friendly vehicles when procuring departmental vehicles that are due for replacement; and
- procure specialized vehicles complying with the latest Euro V emission standard.

Moreover, to enhance environmental performance including emission reductions and enhancing energy efficiency, we will continue to participate actively in trials that explore alternatives of environment-friendly vehicles and the feasibility of using them in our fleet in order to protect the environment.

OBJECTIVE: TO PROMOTE GREEN HOUSEKEEPING WITHIN THE DEPARTMENT

We are mindful of the importance of good green housekeeping and raising environmental awareness among staff through green messages and regular reminders.

Our Performance

Green Ambassador Scheme

Following the launch of Green Drive in the Department in 2003, we have so far appointed 60 Green Ambassadors and 39 Green Assistants in the Department to co-ordinate the implementation of green housekeeping practices in every district and section, and to monitor the effectiveness of such practices.

To assist the Green Ambassadors and Green Assistants in upkeeping their knowledge on environmental management, we maintain a dedicated green management webpage on our departmental intranet with ample information on the latest green housekeeping measures, and encourage them to attend relevant seminars and workshops.

Managing Paper Consumption

Common paper-saving measures such as using paper on both sides, keeping photocopying to the minimum, reusing used paper for drafting are widely practised in the Department. In addition, we-

- frequently use the websites of the Department and the Centre for Food Safety to promote environmental hygiene and food safety messages to reduce the need to produce hard copies;
- have ceased publishing hard copy of the Department's annual report since the 2002 issue;
- have implemented the Electronic Leave Application and Processing System (eLAPS) since mid 2004 for use by staff progressively;
- have ceased publishing hard copy of the Department's environmental report since the 2008 issue;
- disseminate circulars, telephone directories, reference materials or information by emails and e-bulletin boards;
- encourage communication through electronic means;
- exercise strict control over the printing volume of publications and publicity materials;
- provide e-version of our publicity materials via the Department's homepage as far as possible;
- use duplex printers; and
- circulate the "Guideline on Economy Use of Paper" regularly to raise staff awareness.

Managing Electricity Consumption

We continue to adopt the following energy-saving measures in our offices and venues-

- standardizing the indoor temperature setting of all air-conditioned offices and venues to conform with Government standard of 25.5°C, except otherwise approved by our Green Manager based on technical and operational considerations;
- shading sun-exposed windows to prevent solar heat gain and keeping exterior doors/windows closed as much as possible to prevent leakage of conditioned air;
- de-lamping in areas if over-illuminated and utilizing natural light as far as practicable;
- designating staff to conduct regular green checks in office;
- using energy-saving lightings in our offices and facilities as far as possible and promoting the use of energy-saving bulbs by stall owners in our markets and cooked food centres;
- holding regular discussions with EMSD staff to identify energy saving opportunities and, where applicable, initiating retrofitting works on existing major electrical installations with a view to achieving better energy efficiency;
- switching off external lightings when not needed or after business hours;
- inviting EMSD to conduct energy audits and adopting relevant measures such as replacing conventional ballasts with electronic ballasts and conducting illumination reviews as recommended by EMSD;
- circulating the "Guidelines on Energy Conservation" regularly to remind staff of energy saving practices; and
- displaying energy saving stickers at conspicuous places in offices to enhance staff awareness on energy conservation.

Maintaining Good Indoor Air Quality

We care about the indoor air quality of our offices and venues and have engaged EMSD to carry out proper maintenance and retrofitting works for the ventilation and air-conditioning systems concerned, such as regular cleansing of air ducts, replacement of air sterilizers and air handling units at suitable intervals, etc. Besides, we have arranged for those offices and venues that meet the participating criteria to join the Government's Indoor Air Quality Certification Scheme. In 2011, all of the 16 offices and venues joining the Scheme were awarded Good Class certifications under the Scheme.

Promoting 4-R Principle

We promote the principle of "Reduce, Reuse, Recycle and Replace" and encourage staff to practise it in daily work where appropriate or applicable. Some examples of the 4Rs are as follows-

Reduce

- reduce paper consumption; and
- reduce the use of water by using water taps with sensor control and installing cisterns with dual flushing volumes.

Reuse

- reuse stationery such as envelopes and file jackets; and
- use blank side of used paper for drafting or printing documents for internal use.

Recycle

- collect toner cartridges and waste paper for recycling.

Replace

- replace the paper-based leave application system by the eLAPS; and
- replace paper greeting cards by e-cards during festive seasons.

Using More Green Products

We continue our efforts in using and purchasing more green products. Green products such as photocopying papers made from recycled material/renewable forests, clutch pencil and lead refill, pencil made from recycled materials, mercury-free batteries and environmentally friendly soap in liquid and cake form are maintained as our standard stock items to meet daily operational requirement. We encourage the trade-in of used ink/toner cartridges by arranging contract with trade-in requirements and also arrange the sale of used toner cartridges through auction. We also procure recycled toner cartridges for our printers in offices; and black polythene bags made from materials with at least 70% recycled plastic content for our district cleansing services.

OBJECTIVE: TO PROMOTE ENVIRONMENTAL AWARENESS THROUGH PUBLICITY AND EDUCATIONAL PROGRAMMES

Our Performance

Internal

To increase awareness among staff, we have encouraged our staff to participate in inter-departmental seminars and training in environmental management.

External

To promote public understanding of environmental hygiene, our Health Education Exhibition and Resource Centre (HEERC) organises school talks, outreaching programmes, as well as public seminars. In addition, messages on environmental protection such as the economical use of paper and plastic bags and waste reduction are also covered. A total of 2,381 public seminars, school talks and outreaching programmes were organised by the HEERC in 2011. The Mobile Education Centre (a publicity vehicle) of the HEERC conducted 181 visits to schools, housing estates and public parks in the year in its outreaching educational efforts.

It is our ongoing effort to put across messages on keeping a clean environment to the public through various means, such as television and radio Announcements in the Public Interest, display of posters and stickers as well as advertisements at bus shelters. Support is also given to cleansing campaigns organised by non-government organisations.

During the year, in collaboration with other government departments, we organised the community-wide "Anti-rodent Campaign" and the "Anti-mosquito Campaign" on the themes of "Prevent Disease Eliminate Rodent Nuisance" and

"Prevent Japanese Encephalitis and Dengue Fever Act Now". Messages on pest control were disseminated through the publicity and educational programmes under these campaigns.

Chapter 5 - THE WAY FORWARD

To strive for continuous improvement, we will -

- monitor the effectiveness of the green measures in place, and modify and improve them as and when necessary;
- review our environmental objectives regularly and make use of new techniques as far as possible; and
- promote staff awareness in and knowledge on environmental issues, and support green initiatives and campaigns organised by other organisations.

Towards a Better Environment

We plan to take forward the following environmental initiatives, which aim at helping create a better environment.

Upgrading of Cremation Facilities

The construction of new and environmentally friendly cremators at the Wo Hop Shek Crematorium and Cape Collinson Crematorium is underway. The new cremators will meet prevailing standards set by the Environmental Protection Department. We will adopt the most updated technologies, and use fuel that will increase cremation efficiency and reduce air pollutant emission, thereby minimising impact on the environment.

Promotion of Green Burial

We will continue to promote more sustainable means of interment, i.e. the scattering of cremated human ashes at sea or in Gardens of Remembrance. We will enhance the free ferry service for sea-scattering, and are planning to open more Garden of Remembrance in the coming year.

Improvement of Refuse Collection Points and Public Toilets

We plan to build more off-street RCPs equipped with features to minimise environmental nuisance to nearby residents. We will continue to carry out improvement works to public toilets and aqua privies.

Enhanced Intensive Street Washing and Gum Removal

We will continue to use high pressure hot water cleaners for street washing and gum removal to enhance street cleanliness, with a view to maintaining Hong Kong as a world class metropolitan and to meeting public expectation for a cleaner city.

Pest Control

We will continue to adopt an integrated approach in pest control operations, putting equal emphasis on judicious application of pesticides and continuous improvement of environmental hygiene. We will continue to review pest control methodologies and technologies regularly, making reference to the World Health Organisation's latest recommendations.

Green Drive

We will continue to implement green housekeeping practices and promote staff awareness of paper saving, energy saving and waste recycling. We will also work in partnership with EMSD to schedule energy audits, arrange energy saving briefings to venue managers and staff, and explore further energy saving initiatives.

Comments and Suggestions

This report can be viewed at our homepage at www.fehd.gov.hk. Comments and suggestions on the report are most welcome. Please write to our Green Manager at Food and Environmental Hygiene Department, 44/F, Queensway Government Offices, 66 Queensway, Hong Kong or email us at fehdhqgen@fehd.gov.hk.