

Agriculture, Fisheries and Conservation Department

Environmental Report for 2007

Our Profile

The Agriculture, Fisheries and Conservation Department (AFCD) provides services to the public in connection with agriculture and fisheries, nature conservation and animal, plant and fisheries regulations. We have three programme areas. The aims of the programme areas are summarized as follows –

- i) Agriculture, Fisheries and Fresh Food Wholesale Markets -
 - ◆ to facilitate agricultural and fisheries production and improve productivity;
- ii) Country and Marine Parks and Nature Conservation -
 - ◆ to conserve flora, fauna and natural habitats; to designate and manage country parks, special areas, marine parks and marine reserves; and to control international trade in endangered species of animals and plants in Hong Kong; and
- iii) Animal, Plant and Fisheries Regulation and Technical Services -
 - ◆ to monitor the welfare of, and control the diseases in, animals and plants through enforcement of relevant legislation; protect public health; protect and regulate fisheries; and provide technical services.

We are responsible for the management and operation of the Hong Kong Wetland Park, Endangered Species Resource Centre, Lion Nature Education Centre, Fisheries Education Centre, Tai Lung Experimental Station, Tai Lung Veterinary Laboratory, 23 Country Parks, 17 Special Areas, four Marine Parks, one Marine Reserve, four Animal Management Centres and three Wholesale Food Markets.

As at March 2007, we had 1 830 civil servants working at our headquarters offices in Cheung Sha Wan Government Offices and over 50 outstations throughout the territory. Our establishment ceiling for 2007-08 was \$404.3 millions.

Our Environmental Policy

Our Environmental Policy is –

- i) to promote the production of fresh food in a sustainable and environmentally responsible way; and
- ii) to conserve and enhance our natural environment.

Our Environmental Objectives

In implementing this policy, we will –

- i) develop and promote environmentally responsible technology in agriculture and fisheries production;
- ii) conserve and manage the natural environment through the identification, designation and management of country and marine parks, special areas and marine reserve;
- iii) conserve local flora, fauna and their natural habitats through law enforcement and provide conservation advice on development proposals and planning studies;
- iv) conserve endangered species through controlling their international trade;
- v) fully comply with environmental legislation and adopt environmentally responsible practices in daily operations; and
- vi) regularly review the efficient use of resources and seek improvement to reduce the environmental impacts, such as reducing energy consumption and air pollutant emission in our operations.

Our Environmental Performance

We have launched various programmes to bring about environmentally responsible practices and sustainable use of natural resources in agriculture and fisheries. Highlights of 2007 are set out below –

- ◆ The "Accredited Vegetable Farm Scheme" continues to

promote good horticultural practices and proper use of pesticides. In 2007, the total number of accredited farms in Hong Kong was 193, covering about 71 hectares of farming area.

- ◆ To promote local organic agriculture, the Organic Farming Support Service provided technical support to 106 local organic farms covering about 41.8 hectares of farming area.
- ◆ The Committee on Sustainable Fisheries was set up in December 2006 to formulate the long term goals and direction for the sustainable development of the fishing industry and to conserve fisheries resources in Hong Kong waters. The Committee has been considering various fisheries management options to create a sustainable fishery in Hong Kong. Its final recommendations will be submitted to the Food and Health Bureau in late 2008.
- ◆ The government has raised the capital of the Fisheries Development Loan Fund from \$100 million to \$290 million to promote sustainable fisheries development, of which \$250 million is to help fishermen switch to sustainable fisheries or related operations and \$40 million is to help fish farmers to develop sustainable aquaculture businesses.
- ◆ The department has been vigilantly enforcing against destructive fishing practices, such as fishing with explosives, toxic substances, electricity, dredging and suction devices. During the year, 1 304 patrols were conducted to combat destructive fishing.
- ◆ The department continues to promote the enhancement of fisheries habitats and resources through deployment of artificial reefs. A total of 2 255 m³ of artificial reefs were deployed in 2007.
- ◆ The Fisheries Education Centre has been set up in the Aberdeen Fisheries Office to promote public awareness of the need and importance for fisheries conservation. During the year, the

Centre received over 4 000 visitors.

- ◆ Environmentally friendly practices have been promoted among fish farmers, such as the use of pellet feed to replace trash fish. Of the 1 072 mariculture farms, some 132 used pellet feed in 2007.
- ◆ The trial conducted at Kau Sai Fish Culture Zone has shown that specially designed artificial reefs, acting as biofilters, would lead to the establishment of a rich fish community and help remove organic wastes and improve seabed environment within the fish culture zones. In 2007, ten biofilters were deployed at Sham Wan Fish Culture Zone. Lo Tik Wan Fish Culture Zone has been identified as another suitable site for further biofilter deployment.

We have introduced various measures to conserve biodiversity and protect natural habitats. We also designate and manage country parks, special areas, marine parks and marine reserve so as to conserve and enhance our natural environment. The following projects were carried out in 2007 –

- ◆ 932,000 tree seedlings were planted at various country parks to rehabilitate areas damaged by hill fires and soil erosion. Over half of the seedlings planted were native species.
- ◆ Efforts were made to enhance the diversity of flora and fauna in country parks. Seedlings of native species were also planted within plantations of exotic species to enrich their species diversity and ecological value. Ecological enhancement sites were purposely built to attract various wildlife. For instance, artificial wetlands were constructed for attracting aquatic wildlife. Attempts were also made to breed rare fish species at artificial wetlands and the results were encouraging. Self interpretative signs and displays were installed to provide basic information of the wildlife and plants found at these sites.
- ◆ 169 environmental impact assessment applications and studies on development projects were handled.

- ◆ Conservation and management projects were undertaken in the Mai Po Inner Deep Bay Ramsar Site.
- ◆ Removal of invasive exotic mangrove species was continued in the Inner Deep Bay area.
- ◆ A long-term territory-wide ecological survey is in progress with a view to updating and maintaining a comprehensive ecological database for Hong Kong. An internet-based database, The Hong Kong Biodiversity Online (www.hkbiodiversity.net) which documents basic biological and ecological information of more than 1000 animal species, has been launched for public browsing.
- ◆ Field guides and newsletters on biodiversity of Hong Kong have been published.
- ◆ Butterfly Gardens have been established at various Country Parks to attract both target species for conservation purpose and other common species for the public to enjoy butterflies watching.
- ◆ Our Endangered Species Resource Centre continued to serve as the site to promote public awareness on endangered species protection. Over 5 500 visitors visited the Resource Centre during the year.
- ◆ A variety of education and publicity programmes on endangered species protection were organized, including seminars/talks, exhibitions, as well as a logo design competition in 2007.
- ◆ The enforcement momentum to curb illegal trade in endangered species has been maintained. 129 prosecutions in respect of illegal import, export or possession of endangered species were made last year.
- ◆ The Hong Kong Wetland Park (HKWP) was opened to the public on 20 May 2006. The Park attracted over 1.6 million

visitors by the end of December 2007.

- ◆ A variety of school and public education programmes on wetland conservation have been carrying out. In 2007, about 6 437 education activities were organized at the HKWP for about 150 987 students and the public in close guidance.
- ◆ The “Wetland Park Volunteer Scheme” continued to promote direct involvement of the public in wetland conservation works. More than 1 590 volunteers were registered in 2007 to provide guided interpretation service and support various conservation works in wetlands.
- ◆ Up to the end of 2007, the HKWP recorded about 213 species of birds, 42 species of dragonflies, 136 species of butterflies, nine species of amphibians, 17 species of reptiles, 10 species of mammals and other wildlife. The high number of species recorded demonstrated the effective ecological mitigation functions at the Park.

To comply with environmental legislation and reduce environmental impacts of our operations, we have adopted various measures to ensure that our operations are environmentally responsible –

- ◆ Energy audits were conducted at our six major energy consuming venues, namely the HKWP, Tai Lung Veterinary Lab, Tai Lung Experimental Station, New Territories (North) Animal Management Centre, Lions Nature Education Centre and Pak Tam Chung Visitor Centre, in March 2007. Upon receipt of the audit report in November 2007, we have adopted the following recommendations already :
 - ☑ implementing sleeping mode for elevators;
 - ☑ replacing the conventional “Exit” signs with LED “Exit” signs;
 - ☑ lowering the illumination level where practicable; and
 - ☑ shortening the pre-cooling time of central air-conditioning.

- ◆ We are committed to complying with the Air Pollution Control Ordinance and control Volatile Organic Compounds (VOC) emission. We distributed the VOC Regulation guidebook to all Division and Section Heads in April 2007 by email, and reminded them to adopt appropriate measures to comply with the legislative requirements.
- ◆ We have been using manual sectional switches to turn off parts of the lighting and mechanical ventilation systems in areas exposed to sunlight and natural flow of air where practicable.
- ◆ We have adjusted the condensing water temperature of the cooling system, reduce the air conditioning pumps / machine numbers and shorten the operation hours for air conditioning facilities as far as the normal operation will not be affected.
- ◆ To explore the benefits of alternate energy and potential for its use in our outstations, we commissioned the Electrical and Mechanical services Department (EMSD) to visit our venues and conduct feasibility studies on the use of solar and wind power in 2007. Subject to technical and financial viability, we will consider installing the photovoltaic panels.
- ◆ We have inactivated / removed non-essential lighting, replace lamp bulbs with lower watt and energy efficient model and adjust the lighting hours of specific zones according to the actual operational needs. In 2007, we had removed a total of 129 lamp tubes and 33 track lights in our headquarters office at the Cheung Sha Wan Government Offices.
- ◆ In major sites such as our Tai Lung Veterinary Laboratory, we have partitioned the centralized air conditioning areas and shortened the air conditioning hours in non-essential zones such as common areas, offices, etc. Provision of central lighting and air-conditioning in our headquarters office on Saturday mornings was discontinued upon implementation of the Five-day Week Phase II in January 2007.
- ◆ We have continued to replace dilapidated electric appliances by

new model with energy saving label. In 2007, we rolled out a project to identify stand-alone air-conditioners in use for 8 years or above for replacement.

Our Electricity, Petroleum and Paper Consumption

The major sources of our air emissions are the use of electricity and vehicle exhaust. These air emissions include mainly the Sulphur Dioxide (SO₂), Nitrogen Oxides (NO_x) and Respirable Suspended Particulates (RSP).

- i) Electricity^(Note)

Our electricity consumption in 2007 was 18 214 403 kWh, which led to the emission of 34 791.5 kg SO₂, 21 128.7 kg NO_x and 1 092.9 kg RSP. Compared with the electricity consumption in 2006, a saving of 8.5% was achieved – a reduction in the emission of SO₂ by 3 229.8 kg, NO_x by 1961.6 kg and RSP by 101.4 kg.
- ii) Petroleum

The overall kilometers (km) traveled by our departmental vehicles in 2007 was 3 011 889 km. The average emission of NO_x of our passenger cars, light goods vehicles and heavy goods vehicles were 617.5 kg, 3 649 kg and 3 700.3 kg respectively. For RSP, a total of 711.3 kg was emitted by our light goods vehicles and heavy goods vehicles, while the emission of our passenger cars was negligible.
- iii) Paper

In 2007, we consumed 10 794 reams of paper in our daily operations. Compared with the 11 773 reams in 2006, we had reduced our paper consumption by 979 reams, i.e. saving of 8.3%, through concerted efforts of every staff member of the department.

Notwithstanding the savings achieved in 2007, we will continue to make our best endeavours to ensure the most cost-effective use of resources in the years ahead.

Note: Electricity consumption of our offices accommodated at joint-user buildings under the management of the Government Property Agency are

not included.

Our Green Housekeeping System

We set up our green management system in 1994. A Green Manager is appointed to coordinate the green housekeeping efforts in the Department. Together with representatives of our five functional Branches, the Green Manager is a member of the Green Management Committee, which is chaired by a Directorate Officer to steer the development, implementation and monitoring of green office practices and to promote environmental awareness among staff.

To assist the Green Manager in the daily monitoring and implementation of agreed green policy and practices, a group of Assistant Green Managers, who are usually officers in charge of outstations, have also been appointed. They are required to monitor the green housekeeping performance of their premises and report monthly.

To further strengthen the system and explore improvement opportunities for ensuring the green targets are achieved, Environmental Audit Teams have been formed since 2000. Led by the Green Management Committee members, the Audit Teams are tasked to carry out green audits in various office premises. Committee members, as Leaders of the Audit Teams, are required to report their audit results at regular Committee meetings.

Cultivating a Green Culture

We are committed to cultivating a green culture in our workplace. Green tips and relevant information are uploaded to the departmental intranet for access by all staff members. To increase the awareness and participation of staff in green management issues, colleagues are also encouraged to attend training and workshops on green management and conservation. In 2007, we attended the seminar of the Second Hong Kong Energy Efficiency Awards to share the successful experience of other organizations and departments. We also participated in the workshops on the Clean Air Charter to familiarize ourselves with the requirements and community efforts to contest pollutant emission.

The principles of “reduce, reuse and recycle” are practiced in our offices to economize the use of resources and reduce wastage and pollution. Examples

are –

- i) Economizing the Use of Paper
 - ◆ Use both sides of paper.
 - ◆ Cut down on photocopying.
 - ◆ Default double-sided printing for all network printers at HQ office.
 - ◆ Discard use of fax leader pages.
 - ◆ Use electronic mail and soft copies within and outside the department for exchange of documents.
 - ◆ Reduce the number of copies for distribution/circulation, if hard copy is absolutely needed.
 - ◆ Reduce the use of envelopes and re-use envelopes.

- ii) Energy conservation
 - ◆ Check vehicles regularly to ensure that they are in good conditions to enhance fuel efficiency.
 - ◆ Control fuel consumption and reduce pollutants emission by encouraging staff to share pool car for duty visits and site visits.
 - ◆ Use public transport whenever possible, especially when the Air Pollution Index is high.
 - ◆ Switch off electrical appliances when not in use.
 - ◆ Individual light zones are controlled by sectional light switches.
 - ◆ Lower the illumination level of the offices where appropriate.
 - ◆ Shorten the central lighting hours.
 - ◆ Shade sun-exposed windows and keep exterior doors/windows closed as much as possible.
 - ◆ Maintain room temperature of all air-conditioned office premises at 25.5°C during summer months.
 - ◆ Use manual sectional switches to turn off parts of the lighting and mechanical ventilation systems in those areas of the wholesale food markets exposed to sunlight and natural flow of air as appropriate.
 - ◆ Replace dilapidated electric appliances by new electric appliances with saving labels.

- iii) Waste minimization and recycling

- ◆ Use refillable ball pens.
- ◆ Separate collection of used and waste paper.
- ◆ Encourage staff to use their own cups instead of paper cups.
- ◆ Minimize use of products which are not environmentally friendly such as correction fluid.
- ◆ Re-use loose minute jackets.
- ◆ Proactively inform other departments/bureaus the minimum number of hard copies of reports, newsletters, circulars, publications, etc. required and request soft copies whenever feasible.
- ◆ Introduce recycle bins in offices to encourage separation of wastes (paper, plastic bottles, aluminum cans, CDs, stationary and rechargeable batteries) for recycling since 2002.

To provide staff with a healthy workplace and in support of the Government's smoke-free workplace policy, we have prohibited smoking in all workplaces in this Department since 1 April 1996, including both office and non-office environment.

The Way Forward

To further enhance our green performance, we will continue to explore opportunities to apply saving measures in our offices. We will continue following up on the energy audit report's recommendations and study the possibility of using solar energy in our premises. The replacement of stand-alone air conditioners over 8 years by new models with energy saving label will be completed in 2008. Meanwhile, we will continue to encourage our staff to attend experience sharing sessions to learn more about the latest development in efficient use of resources and air-emission reduction.

Since the three wholesale markets accounted for over 50% of our total electricity consumption during the year, we will continue to explore all possible energy saving measures in the markets. One of our focuses will be the possible improvement in motor efficiency given the fact that electric motors are the major prime movers of various mechanical systems such as HVAC system, water pumping system, sewer treatment plant system & etc in our markets.

Since May 2007, eight high efficiency motors with auto frequency control have been installed in the Western Wholesale Food Market to replace the existing motors. So far, an average saving of 12% in electricity consumption is recorded. We plan to replace the remaining motors in the Western Wholesale Food Market and the Cheung Sha Wan Wholesale Food Market, subject to the replacement schedule of the Electrical and Mechanical Services Department and availability of funding. We anticipate substantial savings when the project is completed.

In order to enhance colleague's awareness of resources efficiency, we will continue holding commendation scheme to commend staff's contribution and achievement in resources saving and waste reduction by setting good examples and fostering good habits in the workplace.

Comment and Suggestion

We welcome your comment and suggestion to further improve our green performance. You may send us your views through any of the following channels --

Post : 5/F, Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road,
Kowloon.

Fax : 2311 3731

Telephone : 2708 8885
(24-hour Interactive Voice Response System)

Email : mailbox@afcd.gov.hk

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