

# **Agriculture, Fisheries and Conservation Department**

## **Environmental Report for 2015**

### **Profile**

The Agriculture, Fisheries and Conservation Department (AFCD) provides services to the public in three programme areas with the following aims –

- (a) Agriculture, Fisheries and Fresh Food Wholesale Markets –
  - ◆ to facilitate agricultural and fisheries production and promote its sustainable development;
- (b) Country and Marine Parks and Nature Conservation –
  - ◆ to conserve flora, fauna and natural habitats; designate and manage country parks, special areas, geoparks, marine parks and marine reserves; and control international trade in endangered species of animals and plants in Hong Kong; and
- (c) 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.

2. We are responsible for the management and operation of the Hong Kong UNESCO Global Geopark of China, Hong Kong Wetland Park, Endangered Species Resource Centre, Fisheries Education Centre, Tai Lung Experimental Station, Tai Lung Veterinary Laboratory, 24 Country Parks, 22 Special Areas, 8 Country Park Visitor Centres/ Education Centres, 4 Marine Parks, 1 Marine Reserve, 4 Animal Management Centres, 1 Plant Quarantine Station and 4 Wholesale Food Markets.

3. As at 31 March 2015, we had 1 786 civil servants working at our headquarters offices in Cheung Sha Wan Government Offices and over 50 outstations throughout the territory. The departmental expenditure for

2015-16 amounted to \$1,164.53 million.

### **Environmental Policy**

4. Our environmental policy is –
  - (a) to promote the local production of fresh food in a sustainable and environmentally responsible way; and
  - (b) to conserve and enhance our natural environment.

### **Environmental Objectives**

5. In implementing this environmental policy, we will –
  - (a) develop and promote environmentally responsible technology in agricultural and fisheries production;
  - (b) conserve and manage the natural environment through identification, designation and management of country parks, special areas, geoparks, marine parks and marine reserves;
  - (c) conserve local flora, fauna and their natural habitats through law enforcement and provision of conservation advice on development proposals and planning studies;
  - (d) conserve endangered species through controlling international trade;
  - (e) fully comply with environmental legislation and adopt environmentally responsible practices in daily operations; and
  - (f) regularly review the use of resources and seek improvement to reduce any adverse environmental impacts, such as reducing energy consumption and air pollutant emission in our operations.

### **Environmental Performance**

6. We have launched various programmes to foster environmentally responsible practices and sustainable use of natural resources in agriculture and fisheries. Highlights of 2015 are set out below –

- ◆ The Accredited Vegetable Farm Scheme continued to promote good horticultural practices and proper use of pesticides. In 2015, the total number of accredited farms in Hong Kong was 272, covering some 84 hectares of farming area.
- ◆ To promote local organic agriculture, the Organic Farming Support Service provided technical support to 270 local organic farms covering about 99.6 hectares of farming area in 2015. Organic farming helps achieve a natural balance with the environment and produce crops in an environmentally friendly and sustainable manner.
- ◆ The Department administered the local fishing vessels registration system to maintain the fishing effort in Hong Kong waters at appropriate levels.
- ◆ The Department has been vigilantly taking enforcement actions against destructive fishing practices, such as fishing with explosives, toxic substances, electricity, dredging, suction and trawling devices. Also, the Department will flexibly deploy resources to step up patrols and stringently enforce the law. During the year, 1 442 patrols were conducted to combat destructive fishing activities. The departments concerned, including Marine Department, Hong Kong Police Force and Mainland counterparts, have enhanced communication and co-operation to combat illegal fishing activities in Hong Kong waters. Joint enforcement actions will be carried out where necessary.
- ◆ The Department continued to enhance fisheries habitats and resources through deployment of artificial reefs and restocking. The accumulated volume of artificial reefs established in Hong Kong is over 170 000m<sup>3</sup>.
- ◆ The Fisheries Education Centre has been set up in the Aberdeen Fisheries Office to promote public awareness of the need and importance of fisheries conservation. During the year, the

Centre received 1 708 visitors.

- ◆ The Department continued to implement the voluntary Accredited Fish Farm Scheme to enhance the quality of cultured fish. In 2015, a total of 119 fish farms (40 freshwater fish farms and 79 marine fish farms) covering some 15.02% of total area of local fish farms have been registered under the Scheme.
- ◆ Environmentally friendly aquaculture practices have been promoted among fish farmers, such as proper disposal of fish carcasses, maintaining appropriate stocking density and the use of pellet feed to replace trash fish. Some 181 fish farms (119 mariculture farms and 62 pond fish farms) were visited in 2015 to promote good aquaculture practices.
- ◆ To promote organic fish farming, the Department has provided technical support to fish farmers in converting their fish farms into organic fish farms. Three organic fish farms received the accreditation from the Hong Kong Organic Resources Centre.

7. We have introduced measures to conserve biodiversity and protect natural habitats. We also designate and manage country parks, special areas, geoparks, marine parks and marine reserves so as to conserve and enhance our natural environment. The following projects and activities were carried out in 2015 –

- ◆ Over 410 900 seedlings were planted in the country parks to enhance the landscape and rehabilitate the areas damaged by hill fires and soil erosion. Some 80% of the seedlings planted were native species providing more suitable habitats for local fauna and wildlife.
- ◆ As one of our on-going efforts to enhance diversity of flora and fauna in the country parks, we have introduced the Country Park Plantation Enrichment Project since 2009. Under the Project, exotic plantation species, in particular the aged and weak ones, were removed for the growth of local plants. Native species, where appropriate, would be planted to speed up

the enrichment process. In 2015, over 60 000 m<sup>2</sup> plantations in different country parks were identified for the Project.

- ◆ A variety of conservation education and publicity programmes were organized for schools and the general public in 2015, including school visits, guided tours, lectures, exhibitions, workshops, competitions, tree-planting and hiking events. These programmes have attracted some 365 800 participants.
- ◆ The Country Parks Volunteer Scheme, launched in March 2010, continued to foster public participation in nature conservation work in country parks and special areas. In 2015, more than 190 new volunteers were trained to provide services and support in conservation programmes. In 2015, Country Parks volunteers served over 33 400 hours.
- ◆ Various kinds of information and themed exhibitions were provided to marshal public support and action for nature conservation at Country Park Visitor Centres/ Education Centres. Some of these Centres also offer various kinds of education programmes for schools and the public to enhance their park experience. In 2015, these Centres recorded 739 500 visitors.
- ◆ A total of 161 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. Two two-year Management Agreement projects under the New Nature Conservation Policy were completed in February 2015 and approved by the Environment and Conservation Fund Committee to continue for another 2 years from March 2015 to February 2017. The projects provide financial incentive to fishpond operators to conduct conservation measures to enhance the ecological value of fishponds and promote public awareness of aquaculture in Deep Bay.
- ◆ Removal of invasive exotic mangrove species was continued in

the Inner Deep Bay area. In 2015, over 8 000 *Sonneratia* trees were removed from the intertidal mudflat.

- ◆ A long-term territory-wide biodiversity survey was continued to update and maintain a comprehensive ecological database for Hong Kong.
- ◆ Pamphlets were produced and distributed to enhance public awareness of conservation of wildlife in Hong Kong.
- ◆ The Department is preparing the first city-level Biodiversity Strategy and Action Plan (BSAP) for Hong Kong. To enhance public understanding on BSAP and biodiversity as well as to foster partnerships with key stakeholders on biodiversity conservation, the Department co-organised the first Hong Kong Biodiversity Festival with the Environment Bureau and 20 non-government organisations and local universities from August to November 2015. Over 120 programmes and activities including exhibitions, guided tours, public lectures and workshops were held, attracting more than 160 000 participants.
- ◆ The internet-based information and experience sharing platform, the Hong Kong Live Eco-map ([www.hkecomap.net](http://www.hkecomap.net)), has been updated regularly for public browsing. Another online database, the Hong Kong Biodiversity Online ([www.hkbiodiversity.net](http://www.hkbiodiversity.net)), continued to provide the public with handy biological and ecological information. A Facebook page ([www.facebook.com/hkbf.hk](http://www.facebook.com/hkbf.hk)) has also been set up to raise interest and awareness on local biodiversity and promote biodiversity-related events to the general public.
- ◆ The Department continued to promote public awareness on endangered species protection through the Endangered Species Resource Centre. In 2015, there were over 16 800 visitors to the Centre.
- ◆ A series of education and publicity activities were organized in 2015, including seminars, talks, exhibitions and a publicity

campaign on licensing control of endangered species at different border control points.

- ◆ To arouse public awareness of the regulatory framework for genetically modified organisms (GMOs), the Department continued to distribute pamphlets, broadcast videos at the Hong Kong International Airport and update the online GMOs Register.
- ◆ The enforcement momentum to curb illegal trade in endangered species has been maintained. In 2015, there were 179 prosecutions in respect of illegal imports, exports or possession of endangered species.
- ◆ The Hong Kong Wetland Park (HKWP) was open to the public on 20 May 2006. It has attracted over 5.2 million visitors by the end of December 2015.
- ◆ An extensive school and public education programme on wetland conservation has been carried out. In 2015, over 8 700 educational activities were organized at the HKWP for some 230 000 students and members of the public.
- ◆ Through the Wetland Park Volunteer Scheme, the Department continued to promote direct public involvement in wetland conservation. More than 1 000 volunteers were registered under the scheme in 2015 to provide guided interpretation service and support conservation work in wetlands. In 2015, volunteers served over 35 000 hours in the HKWP.
- ◆ HKWP has continued to implement energy saving measures. For example, neon lights in the exhibition galleries were replaced by phases with LED lights. During broad daylight, exhibition lights at the Atrium and Viewing Gallery will be switched off to fully utilize the natural sunlight. Timer switches have been installed in office equipments (e.g. photocopier and water dispensers) and in most life support systems for live exhibit display tanks and backstage rearing tanks for generic live exhibit lighting, UV lighting and heating

systems. In addition, the operating hours of air conditioning systems in office and exhibition galleries has been shortened. In winter, windows of the Viewing Gallery were opened for natural ventilation.

8. To comply with environmental legislation and to reduce environmental impacts on our operations, we have adopted the following environmentally responsible measures –

- ◆ 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.
- ◆ T8 luminaires lighting panels have been replaced with T5 model in our headquarters office at Cheung Sha Wan Government Offices.
- ◆ We have adjusted the condensing water temperature of the cooling system, reduced the air conditioning pumps / machine numbers and shortened the operating hours of air conditioning facilities without affecting our normal operation.
- ◆ We have established a standing working mechanism with the Electrical and Mechanical Services Department (EMSD) to explore possible energy saving projects in the Department.
- ◆ We have deactivated / removed non-essential lighting, replaced light bulbs with lower wattage/ energy efficient models and adjusted the lighting hours of specific zones to suit our operational needs. Outstations have ceased procuring tungsten filament lamps for general lighting purposes since 2011.
- ◆ Since mid-2010, we have installed humidity and temperature sensors and photosensors for more effective control of market ventilation fans system and lighting system respectively at Cheung Sha Wan Wholesale Food Market (CSWWM) and Western Wholesale Food Market (WWFM). The replacement work of lighting installation for both markets, which started in mid-2010, was completed in August 2011. With these



measures, electricity saving of 3% in 2010, 8% in 2011, 10% in 2012, 10% in 2013, 9% in 2014, and 10% in 2015 as compared to the base year of 2009 were achieved.

- ◆ A 3-year energy-cum-carbon audit for the office areas of CSWWFM was conducted in 2014. This audit reported, verified and analysed the Greenhouse Gas performance and identified new energy saving opportunities. The carbon audit results revealed that about 344 tonnes of CO<sub>2</sub> equivalent was emitted from the office areas in 2013-14. Energy audit results pointed out that energy consumption of air-conditioning system took up the majority (about 80%) of the total energy consumption. Energy saving measures recommended by the audit consultant included replacing existing air-cooled chillers by high efficient type air-cooled chillers; replacing grade 5 refrigerator by grade 1 refrigerator; adding variable speed controls on chilled water pumps and air handling units, as well as de-lamping in over-illuminated areas. .
- ◆ Of these energy saving measures, two were implemented at CSWWFM in 2015. The T8 exit signs were replaced with LED exit signs on the 2/F corridor of Administration Block. As a result, electricity saving of 981 kWh per annum was achieved. Besides, the de-lamping in over-illuminated area (offices on 2/F of Administration Block) has resulted in electricity saving of 4,760 kWh per annum.
- ◆ Green and energy saving initiatives, such as installing Photovoltaic (PV) system over the covered walkway, solar hot water system, PV panel integrated lamp poles, motion detection sensors for lighting system, have been launched in the New Territories South Animal Management Centre and the Shatin Plant Quarantine Station.
- ◆ In premises such as Tai Lung Veterinary Laboratory, we partitioned the centralized air conditioning areas and shortened the air conditioning hours in non-essential zones such as common areas.

- ◆ Air conditioning in our headquarters office and central lighting were programmed to shut down at 6:30 p.m. and 8:00 p.m. respectively to sustain energy saving.
- ◆ We have continued to replace dilapidated electric appliances by new models with energy saving label.
- ◆ In 2015, our headquarters office, the Ticket Office and Visitor Centre of the HKWP, 1/F Office and Room T213 of CSWWFM, WWFM, Tuen Mun Area 44 Joint-user Complex and Wholesale Fish Market and Kowloon Animal Management Centre obtained “Good” Class Certificate under the Indoor Air Quality Certification Scheme.
- ◆ We have encouraged our colleagues to adopt the green specifications promulgated by the Environmental Protection Department for procurement of items. Also, we have incorporated environmental protection guidelines into all cleansing contracts.

## **Electricity, Petroleum, Paper and Envelope Consumption**

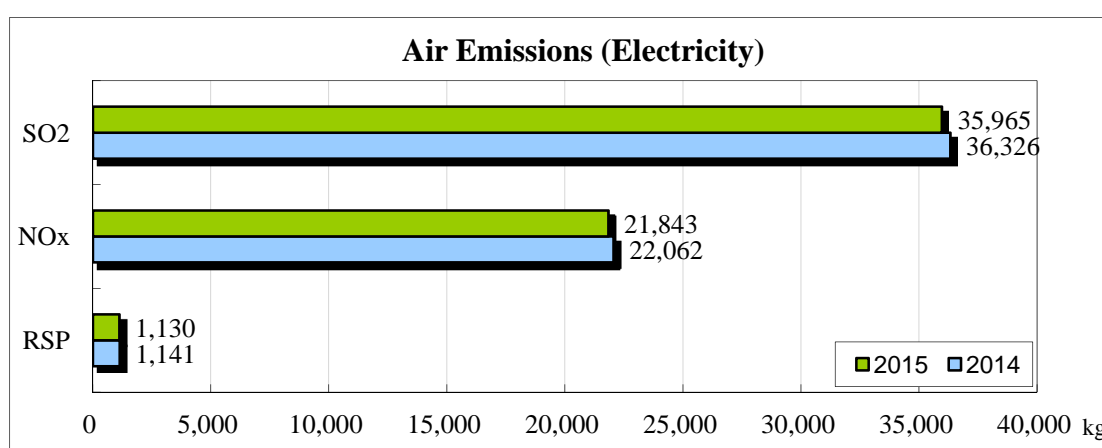
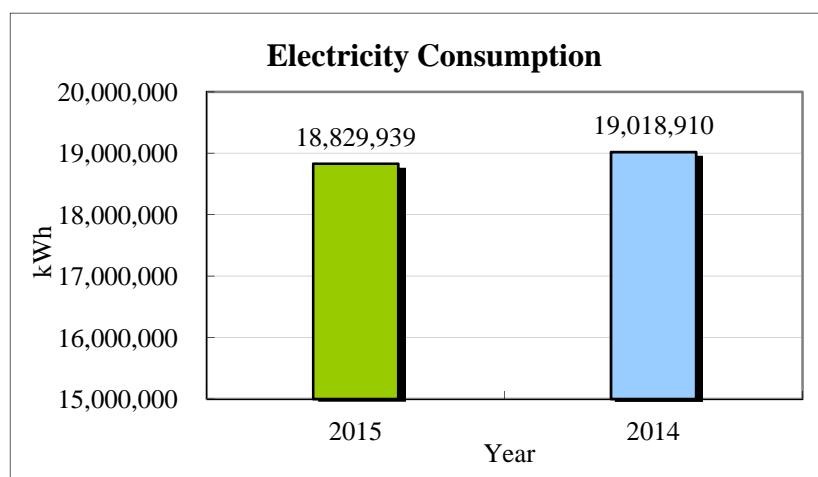
9. The major sources of our air emissions are due to use of electricity and vehicles. These air emissions mainly include Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Oxides (NO<sub>x</sub>) and Respirable Suspended Particulates (RSP).

(a) Electricity<sup>1</sup>

Our electricity consumption in 2015 was 18 829 939 kilowatt hour (kWh), leading to emission of 35 965 kilograms (kg) SO<sub>2</sub>, 21 843 kg NO<sub>x</sub> and 1 130 kg RSP. Compared with electricity consumption of 19 018 910 kWh in 2014, there was a decrease of 188 971 kWh and a drop in emission of SO<sub>2</sub> by 361 kg, NO<sub>x</sub> by 219 kg, and RSP by 11 kg.

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<sup>1</sup> Electricity consumption of our offices accommodated at joint-user buildings under the management of the Government Property Agency is not included.



- (b) Electricity Consumption of our Government Buildings  
 Electricity consumption of our government buildings<sup>2</sup> in financial year (FY) 2013-14 and FY 2014-15 is tabulated below:

	<b>Electricity consumption (million kWh)</b>	<b>Electricity consumption under comparable operating conditions (million kWh)</b>
<b>FY 2013-14 (Baseline)</b>	17.09	Not applicable
<b>FY 2014-15</b>	17.32 (+1.4%)	16.92 (-1.0%)

(i) *Change in Electricity Consumption*

<sup>2</sup> Infrastructure and open space, for example, pump houses, toilets, barbeque sites, campsites, etc., are excluded.

As set out above, the change in electricity consumption of our government buildings from FY 2013-14 to FY 2014-15 was +1.4%, taking into consideration the following major factors:

- ◆ Opening of the Hong Kong Global Geopark Volcano Discovery Centre on 15 July 2014
- ◆ Increased fish culture activities and newly set-up filtration systems
- ◆ Increase in the floor area of the Shatin Plant Quarantine Station and the New Territories South Animal Management Centre, which were relocated in November and December 2013 respectively
- ◆ Enhanced procedures in monitoring Avian Influenza on live chickens

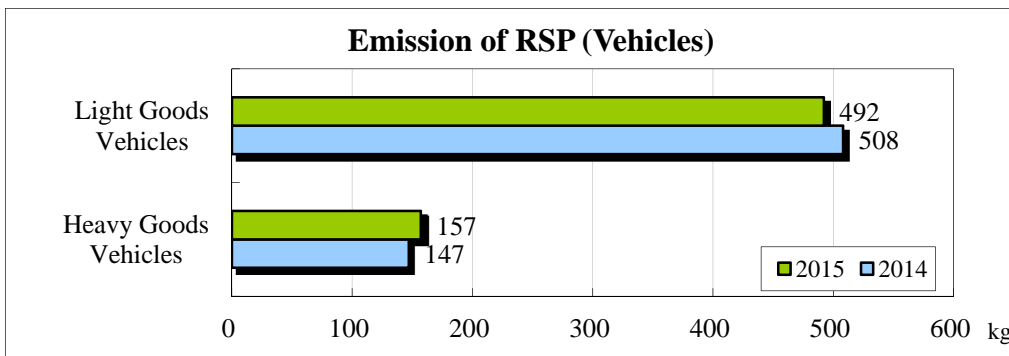
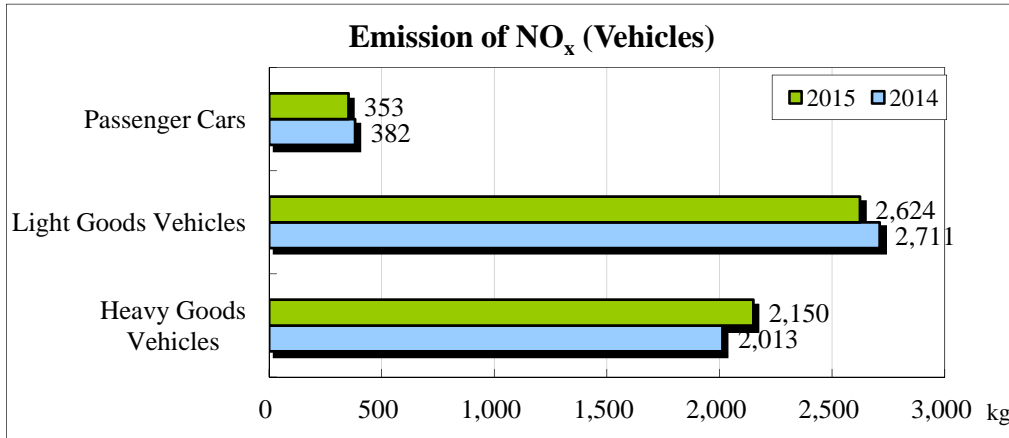
(ii) *Saving in Electricity Consumption*

Under comparable operating conditions of FY 2013-14, our saving in electricity consumption in FY 2014-15 was 1.0%. Some of the electricity saving measures are:

- ◆ Covering windows with heat insulation screen and installation of LED lighting in the Exhibition Hall of the HKWP
- ◆ Changing exhibition lighting from halogen lamp to LED lamp in the HKWP

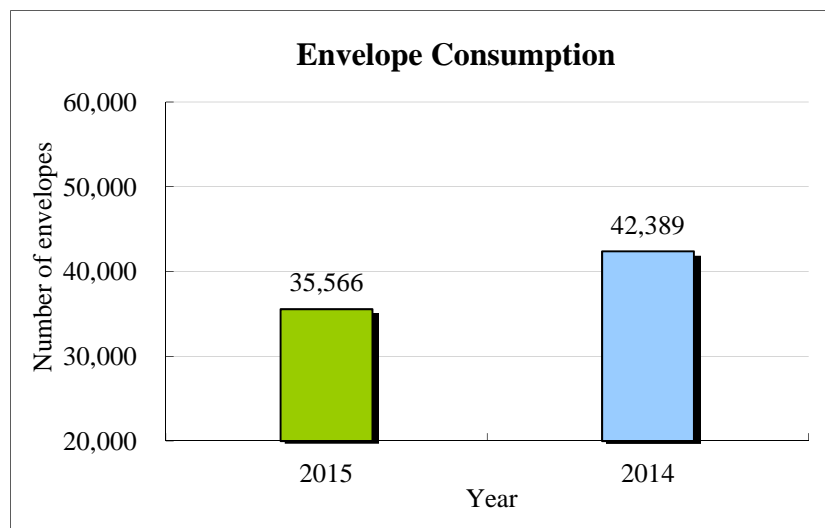
(c) **Petroleum**

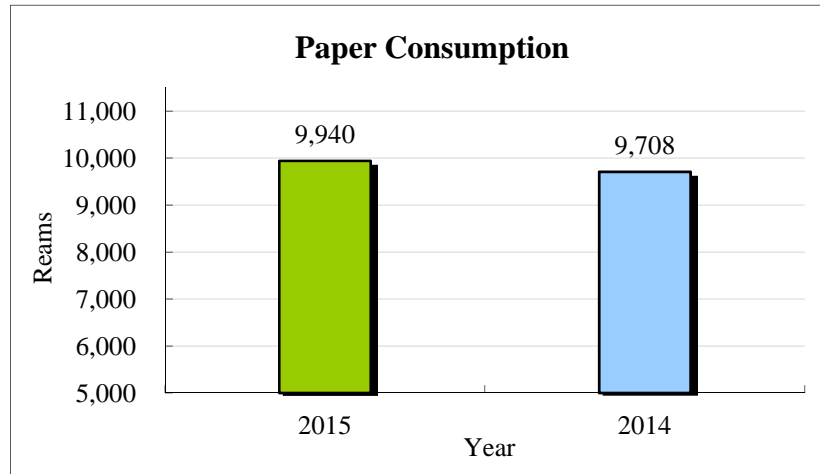
The total kilometers (km) traveled by our departmental vehicles in 2015 was 2 294 152 km (as compared to 2 364 667 km in 2014). The average emission of NO<sub>x</sub> of our passenger cars, light goods vehicles and heavy goods vehicles were 353 kg (as compared to 382 kg in 2014), 2 624 kg (as compared to 2 711 kg in 2014) and 2 150 kg (as compared to 2 013 kg in 2014) respectively. For RSP, 492 kg (as compared to 508 kg in 2014) and 157 kg (as compared to 147 kg in 2014) were emitted by our light goods vehicles and heavy goods vehicles respectively, while the emission of our passenger cars was negligible.



(d) Paper and Envelopes

In 2015, we consumed 9 940 reams of paper and 35 566 envelopes in our daily operations. Compared with the 9 708 reams and 42 389 envelopes in 2014, there was an increased paper consumption of 232 reams of paper and a drop of envelope consumption by 7 530 respectively.





10. We will continue to make our best endeavours to ensure the most cost-effective use of resources in the years ahead.

### **Green Housekeeping System**

11. We have set up a departmental green management system since 1994. A Green Manager has been appointed to coordinate the green housekeeping efforts in the Department. In addition, the Green Management Committee, chaired by a Directorate Officer, with representatives from our five operation Branches, will steer the development, implementation and monitoring of green office practices and promote environmental awareness among all staff.

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

13. To further strengthen the system and explore areas for improvement to ensure 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 our office premises. Committee members, as Leaders of the Audit Teams, are required to report their audit results at regular Committee meetings.

## **Nurturing a Green Culture**

14. We are committed to nurturing a green culture in our workplace. Green tips and relevant information are uploaded to the departmental intranet for access by all staff. To increase awareness and participation of staff in green management issues, colleagues are also encouraged to attend training and workshops on green management and energy conservation. Staff participation in the annual Staff Suggestion Scheme was encouraging in 2015. There were thirteen useful entries on green saving initiatives.

15. The 3-R principle of “Reduce, Reuse and Recycle” is practised in our offices to make effective use of resources and reduce wastage and pollution as far as possible. Examples are –

- (a) Economizing the use of paper
  - ◆ Use both sides of paper
  - ◆ Use recycled paper
  - ◆ Collect usable single-sided paper
  - ◆ Cut down on photocopying
  - ◆ Default double-sided printing for all network printers at headquarters office
  - ◆ Discard use of fax leader pages
  - ◆ Use electronic mail and soft copies for exchange of documents
  - ◆ Reduce the number of copies for distribution or circulation, if hard copy is absolutely needed
  - ◆ Reduce the use of envelopes and re-use envelopes
  
- (b) 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
  - ◆ Strict compliance with the requirement of switching off idling motor vehicle engines
  - ◆ Proactive participation in the Government’s electric vehicle trial tests
  - ◆ Encourage adoption of more electric cars in the coming

years

- ◆ Use public transport whenever possible, especially when the Air Quality Health Index is high
- ◆ Switch off electrical appliances when not in use
- ◆ Control individual light zones by using sectional light switches
- ◆ Lower the illumination level of the offices where appropriate
- ◆ Shorten 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 with new electric appliances with energy saving labels

(c) Minimizing waste 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 bureaux/departments 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, stationery and rechargeable batteries) for recycling since 2002
- ◆ Use biodegradable plastic bags where operationally feasible. Reduced use of plastics or plastic bags and similar materials that are not environmental friendly in



packaging souvenirs

- ◆ Collect used laser printer toner and ink-jet cartridges for recycling
- ◆ Circulate guidelines on green practices and waste avoidance to all staff to raise staff awareness

## **Way Forward**

16. We are committed to enhancing our green performance. We will continue to explore green saving initiatives for our offices and to encourage our staff to attend experience sharing sessions to learn more about the latest trend and technological advances in efficient use of resources and in reduction of air-emission.

17. The four wholesale food markets have accounted for about 50% of our total electricity consumption during the year. Given the significant reduction in electricity consumption in the markets after adopting power saving measures in the past few years, we will continue to explore and adopt further energy saving measures for the markets. We will regularly review and take on board energy saving measures with due regard to the ever-changing environment and new development in technology so as to further eliminate wastage and enhance more efficient use of resources. Continuous efforts will be made to secure the support of our staff and market traders in taking part in the saving drive on an on-going basis.

18. To enhance staff awareness of resources efficiency, we will regularly remind staff to observe the guidelines on green measures. We will continue to implement the annual Staff Suggestion Scheme to commend staff's contribution and achievement in resources saving, waste reduction, as well as setting good examples to foster good habits in the workplace.

## **Comments and Suggestions**

19. We welcome your comments and suggestions, which help us 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, Hong Kong  
Fax : 2311 3731  
Telephone : 1823  
Email : mailbox@afcd.gov.hk

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