

Environmental Report 2005



Hong Kong Observatory

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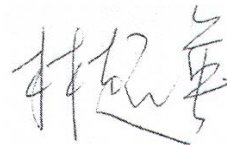
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1. Director's Message

I am pleased to present the seventh Environmental Report of the Hong Kong Observatory (HKO). This report sets out the environmental policy and performance of HKO in the year 2005.

HKO is committed to supporting Government's policies on environmental protection and sustainable development. Apart from the established environmental protection activities, we organized the "guided tours" to provide a chance for the members of the public to appreciate the ecology of the mini-forest in the HKO Headquarters' compound. We joined the Solar Cart Race organized by the Friends of the Earth to enhance public awareness of energy saving. In 2005, we carried out improvement works to the weather station at Green Island to make it the first weather station in Victoria Harbour powered by both solar and wind energy.

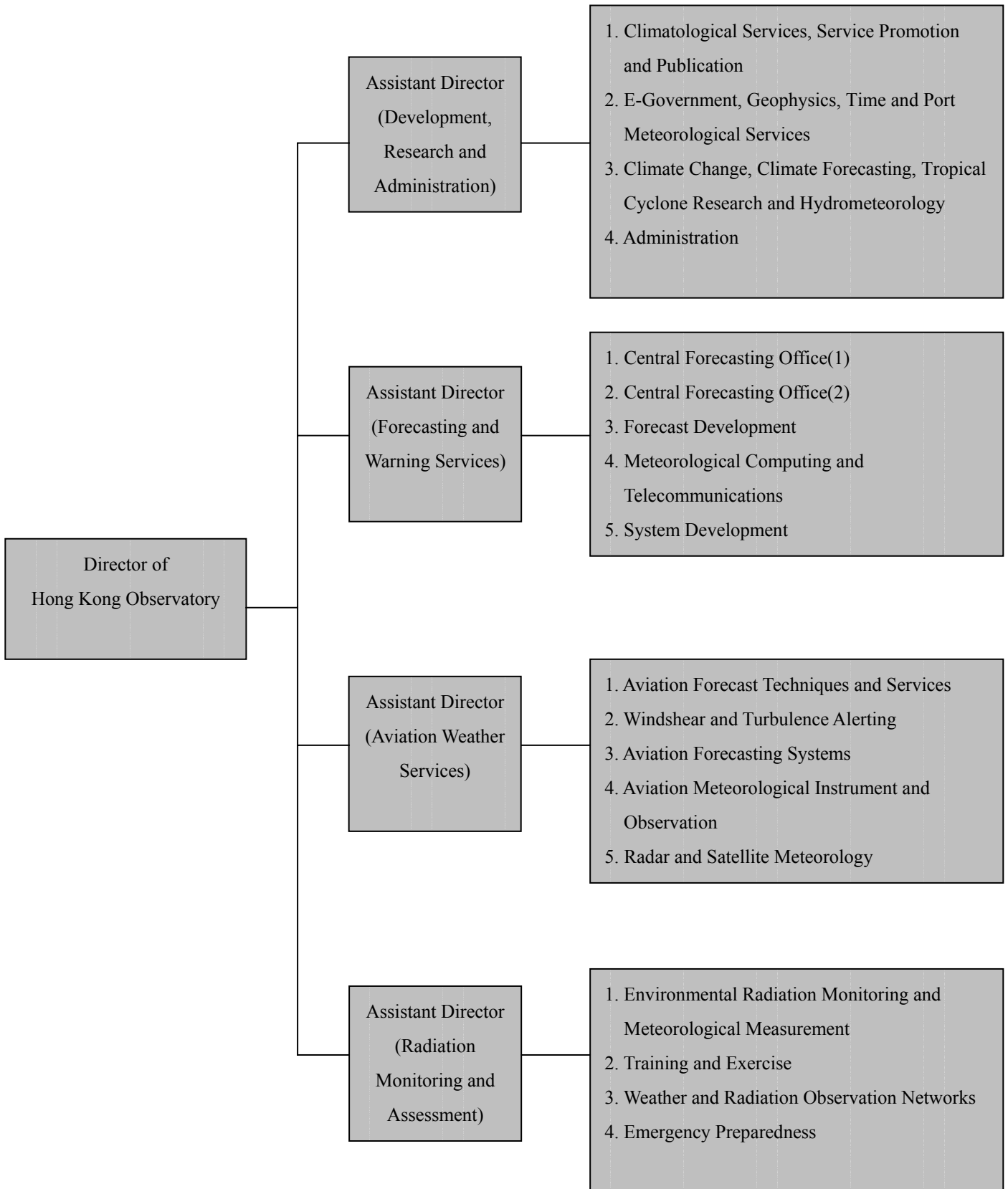
We shall continue to enhance our environmental performance and provide our services in an environmentally responsible manner. Readers are invited to give us their feedback to help us improve further.



C Y LAM

Director of the Hong Kong Observatory

2. Organization Chart



3. Staff Establishment

HKO had an approved establishment of 287 as at 31 December 2005. Details are shown in Figure 1 below :

Grade	Establishment
Directorate	5
Scientific Officer Grade	51
Experimental Officer Grade	46
Radar Specialist Mechanic Grade	22
Scientific Assistant Grade	94
Common Grades	27
General Grades	42
Total	287

Figure 1 : HKO Establishment as at 31 December 2005

4. Office Location

In 2005, HKO had 4 offices. Their locations were as follows :

- (a) Hong Kong Observatory Headquarters at 134A, Nathan Road, Tsim Sha Tsui;
- (b) Units 2304-09, 23/F, Miramar Tower at Tsim Sha Tsui;
- (c) King's Park Meteorological Station at Homantin; and
- (d) Airport Meteorological Office at Chek Lap Kok.

HKO also had three radar stations at Tai Mo Shan, Tate's Cairn and Tai Lam Chung.

The Territory was served by 69 automatic weather stations as shown in Figure 2 below:

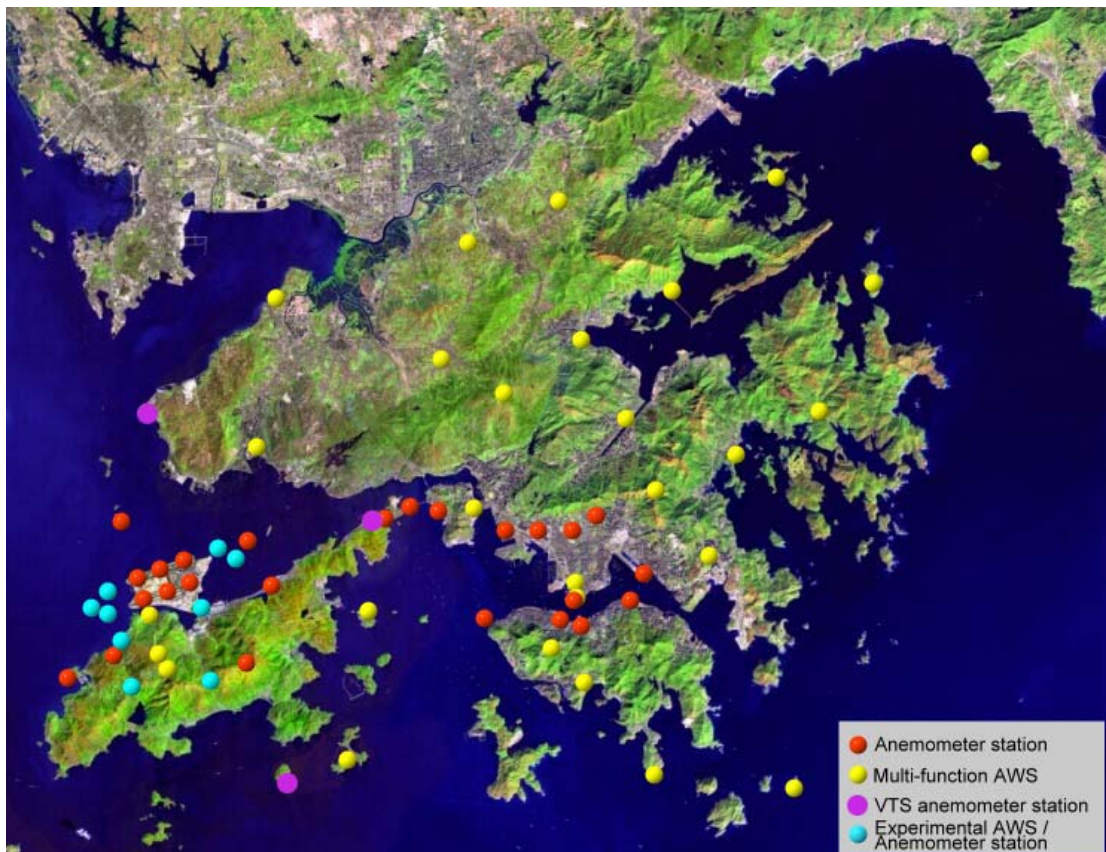


Figure 2 : Locations of automatic weather stations

5. Key Responsibilities

The Observatory is responsible for three main programmes of activities :

- (a) To provide weather services to meet the public's demand for short to medium range forecasts and warnings of hazardous weather and to provide forecasts for international aviation and shipping in accordance with the safety standards of international organizations;
- (b) To provide information on local environmental radiation levels and effects and to advise the Government on counter-measures that may be necessary during nuclear emergencies; and
- (c) To maintain the Hong Kong time standard and to provide geophysical and oceanographic information and consultative services to the public and private sectors.

6. Stakeholders

This report is prepared annually to meet the needs of :

- (a) Visitors to Hong Kong Observatory Headquarters (HKOHQ) and Resource Centre;
- (b) General public receiving HKO information via the media or by browsing our website;
- (c) Other users of HKO services including aviation, shipping, industry, engineers, public utilities, tourism, etc.; and
- (d) Government bureaux and departments.

7. Environmental Policy

We adhere to the departmental environmental policy which aims at contributing towards a clean, healthy and sustainable environment in Hong Kong through sustained and innovative initiatives and programmes. We strive to improve the environment by :

- (a) Conserving the biodiversity and preserving the natural habitat within HKOHQ and outstations;
- (b) Developing a culture of environmental protection among staff members;
- (c) Employing the best practices in green housekeeping;
- (d) Complying with the requirements of relevant environmental protection ordinances; and
- (e) Promoting public awareness of environmental sustainability issues.

8. Green Management System

The Buildings and Grounds Committee comprises the Assistant Director (Development, Research and Administration) as the Chairman and the Departmental Secretary (Green Manager) and four Senior Scientific Officers from different Branches as members. The Committee evaluates all major civil and building services works carried out on HKO premises and grounds to minimize the impact on the environment.

9. Environmental Measures Taken

We have adopted various environmental measures to implement our environmental policy. These measures are highlighted below in 8 categories :

(a) Conservation of biodiversity

The woodland at the Hong Kong Observatory Headquarters at Tsim Sha Tsui is one of the few remaining semi-natural woodlands in urban Kowloon (see Figure 3 and Figure 4 below). It serves as a refuge for the local wildlife in the urban area, in particular, the avifauna. It is home to common birds like Spotted Dove, Chinese Bulbul, Crested Bulbul, Magpie Robin, Black-necked Starling and White-eye. A family of the spectacular Blue Magpie has also taken up residence. Even Kites have bred in the Observatory ground. In spring and autumn, the woodland serves as an important stopover point for migrating birds like Flycatchers and Thrushes. Indeed, some migrants regularly stay for the whole winter, such as Brown Flycatcher, Blackbird and Grey-backed Thrush.

In 2005, we continued with our efforts to conserve the biodiversity and to preserve the natural habitat within the grounds of the HKO. The native plant species have been growing steadily. In March 2005, our staff further planted seedlings provided by the Agriculture, Fisheries and Conservation Department on the Tree Planting Day to add to the greenery. This is an on-going programme and tree planting at HKOHQ is a major annual event under the environmental programme.



Figure 3 : The greenery of the HKOHQ

English Name	Chinese Name	Scientific Name
Lebbek Tree	大葉合歡	<i>Albizia lebbek</i> (L.) Benth
Hong Kong Orchid Tree	洋紫荆	<i>Bauhinia blakeana</i> Dunn
Camel Foot Tree	宮粉羊蹄甲	<i>Bauhinia variegata</i> L.
Tall Bottle-brush	串錢柳	<i>Callistemon viminalis</i> G. Don
Chinese Banyan	細葉榕	<i>Ficus microcarpa</i> L. f.
Batavia Cinnamon	陰香	<i>Cinnamomum burmanni</i> (Nees) Blume
Flame Tree	鳳凰木	<i>Delonix regia</i> (Boj. ex Hook.) Raf.
Common Red-stem	青果榕	<i>Ficus variegata</i> var. <i>chlorocarpa</i> (Benth.) King
Buddhist Pine , Kusamaki	羅漢松	<i>Podocarpus macrophyllus</i> (Thunb.) D. Don
Chinese Red Pine	馬尾松(山松)	<i>Pinus massoniana</i> Lamb.
Longan	龍眼	<i>Dimocarpus longan</i> Lour.
Red Psychotria	山大刀	<i>Psychotria asiatica</i> L.
White Champak	白蘭	<i>Michelia alba</i>
Big-leaved Fig	大葉榕	<i>Ficus virens</i> var. <i>sublanceolata</i> (Miq.) Corner
Yellow Cow Wood	黃牛木	<i>Cratoxylum cochinchinense</i> (Lour.) Blume
Alexandra Palm	假檳榔	<i>Archontophoenix alexandrae</i> (F. Muell.) H. Wendl. & Drude
Bamboo Palm	散尾葵	<i>Chrysalidocarpus lutescens</i> H. Wendl.
Burmese Rosewood	紫檀	<i>Pterocarpus indicus</i> Willd
Lemon-scented Gum	檸檬桉	<i>Eucalyptus citriodora</i> Hook. f.
Wood-oil Tree	木油樹	<i>Vernicia montana</i> Lour.
Horsetail Tree	木麻黃	<i>Casuarina equisetifolia</i> L.
Frangipani	雞蛋花	<i>Plumeria rubra</i> L.

Figure 4 : Common Plant Species in Hong Kong Observatory Headquarters

(b) Minimization of paper consumption

- Using blank side of used papers for drafting or printing.
- Photocopying limited to the absolute minimum and on both sides of papers.
- Minimizing the use of fax cover page.
- Reusing envelopes and loose minutes jackets.
- Increasing use of email in external and internal communications.
- Circulating documents instead of providing personal copies.
- Printing of reports/publications limited to the absolute minimum and uploading publications on the HKO website.
- Placing green boxes in offices for collection of papers used on one side for reuse.

(c) Waste recovery

- Using reusable stationery items such as refillable ball pens.
- Disposing waste paper/newspapers for recycling.
- Returning used laser printer toner cartridges.
- Giving depreciated computer equipment to charitable organizations.
- Placing recycle bins in HKOHQ for the separate collection of recyclable wastes such as aluminum cans.
- Used Clothes Recycling Programme (Figure 5)

The HKO Volunteer Team and the Friends of the Earth co-organized the "Used Clothes Recycling Programme" at the HKO Headquarters in February 2005. Over 200kg of used clothes, handbags and toys were collected in the programme. The collected clothes were donated to voluntary organizations or exported to developing countries. The revenue generated from the programme was used for promoting environmental education in Hong Kong.



Figure 5 : Recycle basket placed at HKOHQ to collect used clothes from staff

(d) Energy conservation

- Using lighting fittings completed with electronic ballasts to reduce energy consumption.
- Using solar power or wind power to generate electricity for 32 automatic weather stations/radiation monitoring stations.
- Switching off lights in unoccupied areas or whenever offices not in use.
- Switching off computers and other office equipment not in frequent use.
- Adjusting the air-conditioning system with a view to keeping the room temperature to 25.5°C in summer months in line with the advice of the Environment, Transport and Works Bureau.
- Installing thermometers in all offices to facilitate maintaining the room temperature at 25.5°C in summer months.
- Replacing the dust filters for air conditioning regularly.
- Conducting regular inspection to ensure lights, office equipment and air-conditioners in offices, conference rooms and common corridors were switched off during lunch time and after office hours.

(e) Air Quality Improvement

- Designating non-smoking areas in departmental buildings.
- EMSD conducting regular in-door air quality checking.

(f) Procurement Management

- Specifying environmentally sound products such as recycled paper and refillable ball pens.
- Specifying photocopiers and printers with double-sided copying/printing and automatic energy-saving functions.
- Specifying computer workstations with automatic energy saving function.
- Specifying plain paper fax machines instead of thermal paper ones.

(g) Staff Awareness Promotion

- Putting up posters to promote economy in the use of resources.
- Issuing internal guidelines to set out the departmental green housekeeping measures for compliance and re-circulating such guidelines regularly.
- Encouraging staff suggestions on green measures through the Staff Suggestions Scheme.
- Organizing staff activities such as Tree Planting Day and visits to promote environmental awareness and to encourage staff participation.

In October 2005, we organized a special tour (Figure 6) for our staff to visit the new headquarters building of the Electrical & Mechanical Services Department (EMSD). The building has incorporated a number of energy efficient features

and renewable energy technologies which are designed for making the building more energy efficient. Such features include solar photovoltaic system for electricity generation, sun pipes which minimize the artificial lighting demand, and a water-cooled ammonia chillers system which utilises “ammonia” as refrigerant to reduce the damage to the ozone layer. These innovative energy saving building facilities are good examples for HKO to follow in the future when carrying out renovation projects.

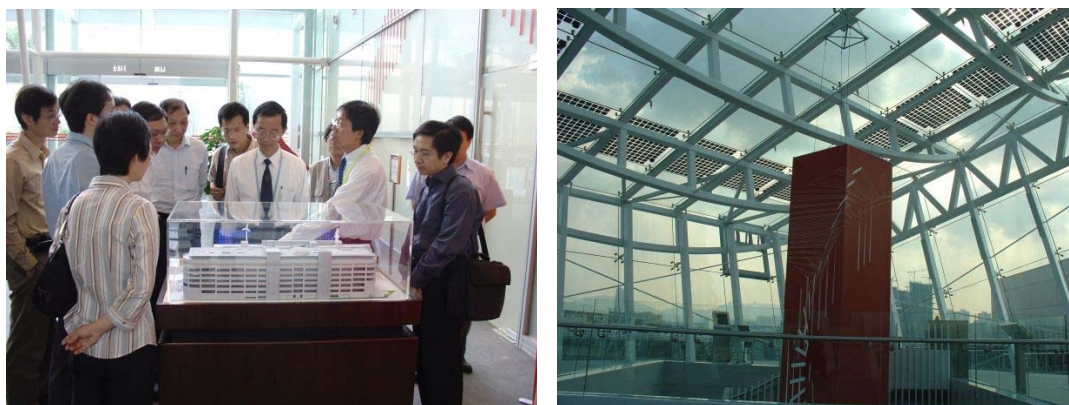


Figure 6 : HKO staff deeply impressed by the innovative facilities of EMSD Green Building

(h) Promoting Public Awareness of Environmental Sustainability Issues

I. Earth Partner Programme

Through joining in the Earth Partner programme, the Hong Kong Observatory joined hand with the Friends of the Earth (FoE) to protect the natural environment. The Earth Partner programme is a community-wide charitable environmental awareness-building programme organized by FoE. The purpose of the programme is to educate and arouse the interest of the general public by spreading the green message that everyone can make a difference in creating a better living environment.

II. Solar Cart Race

The Hong Kong Observatory won the Charity Gold Award in the Solar Cart Race organised by FoE in the Victoria Park on 16 January 2005. It was the first time the Observatory participated in the race, now into its fifth year.



Figure 7 : "Solar Wind" – the first solar cart of HKO

The Observatory joined the race to raise public interest on weather and climate, thus enhancing awareness of the environment. The name of the cart, "Solar Wind" (Figure 7), was chosen because apart from being weather elements, both the "sun" and "wind" are also sources of renewable energy. Besides its aerodynamic design which lowers air resistance, "Solar Wind" is characterised by the use of re-useable materials on the entire cart body, including aluminium cans and compact discs, to minimise waste.

III. "Don't be Cold, be Cool!" – Energy Saving Campaign on Air-conditioning

Director of the Hong Kong Observatory, Mr Lam Chiu-ying, participated as one of the models (Figure 8) in the catwalk of the energy saving campaign on air-conditioning "Don't be Cold, be Cool!" organized by FoE. The campaign aims to raise public attention to a bizarre cultural phenomenon in Hong Kong where people turn down the air-conditioner and dress up for the artificial cold weather. FoE urges the citizens to have a green summer by dressing down.



Figure 8 : DHKO go on catwalk to demonstrate how to dress down for a hot summer

IV. Guided Tour of the Hong Kong Observatory

The guided tour of the Hong Kong Observatory (Figure 9) is intended to provide a chance for the members of the public to see some elegant historical buildings and appreciate the ecology of a mini-forest in the heart of the city. The tour has been arranged in the HKO Open Day starting from 2005 and in two to three Saturdays every month. Visitors are guided by voluntary docents of the interest group “The Friends of the Observatory”, who provide explanations to the visitors.



Figure 9 : The visitors explore the special ecological environment of HKOHQ

V. World Wide Fund for Nature Flag Day

In support of the World Wide Fund for Nature Flag Day, members of the HKO Volunteer Team gave up their free time and teamed up with their family members to sell flags to shoppers and pedestrians (Figure 10). Funds raised in the Campaign were used for conservation and education programmes.



Figure 10 : HKO Volunteer Team sell flags to pedestrians

10. Environmental Performance

(a) Paper Consumption - Target 7.5% reduction not achieved

Due to several international conferences held in Hong Kong and campaigns organized for the public, the total paper consumption in 2005 increased by 370 reams or 12.8% compared with 2004 (Figure 11). Nevertheless, we managed to reduce the consumption of non-recycled paper by 1,550 reams or 55% in 2005 by promoting the use of recycled paper in the department. The use of recycled paper in 2005 accounted for 61% of the total paper consumed.

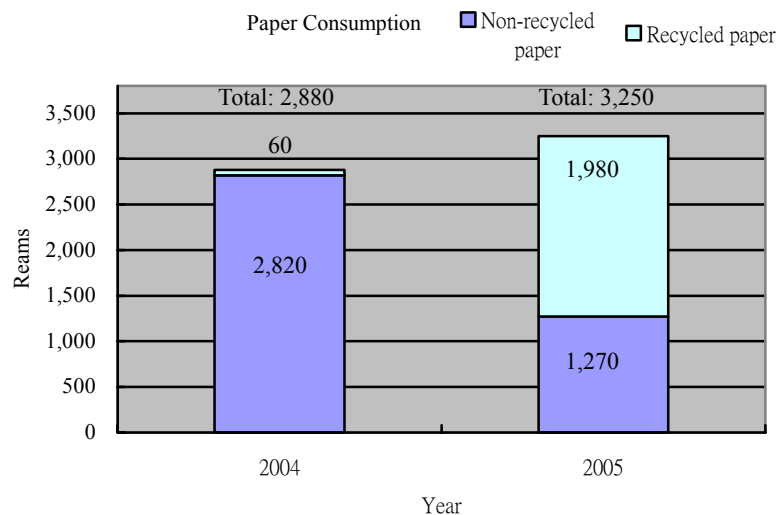


Figure 11 : Paper consumption in 2004 & 2005

(b) Envelope Consumption - Target 5% reduction not achieved

Compared with 2004, the total envelope consumption dropped by 107 nos. or 0.7% due to the increasing use of facsimile and email, although this still falls behind the target of 5% reduction in envelope consumption (Figure 12).

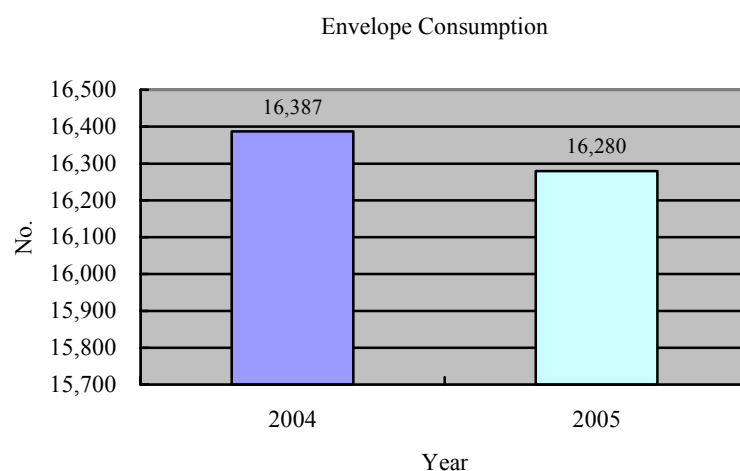


Figure 12 : Envelope consumption in 2004 & 2005

(c) Electricity Consumption – Target 4.5% reduction not achieved

The total electricity consumption increased by 280,983kwh or 8.4% compared with 2004. Main reason being that the various civil work projects carried out in 2005 had resulted in an increase in electricity consumption. The target of 4.5% reduction in electricity consumption could not be achieved (Figure 13).

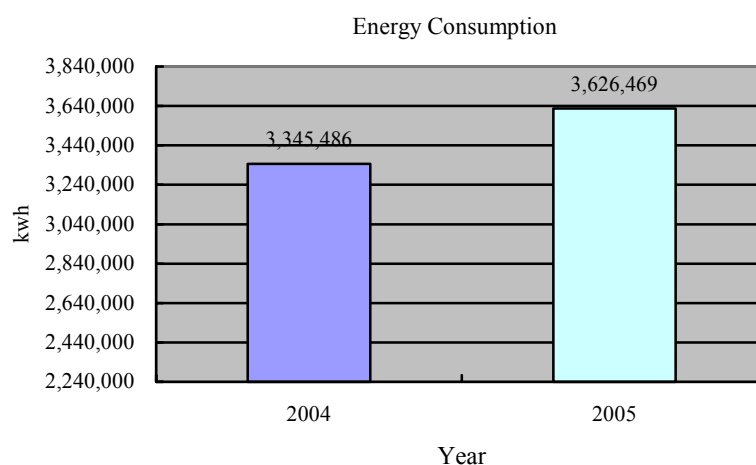


Figure 13 : Electricity consumption in 2004 & 2005

(d) No. of automatic weather station and radiation monitoring station using renewable energy

The weather station at Green Island was enhanced and became the first weather station in Victoria Harbour to be powered by both solar and wind energy. The number of automatic weather station and radiation monitoring station using solar/wind energy increased by 1 or 3.2% compared with 2004 (Figure 14).

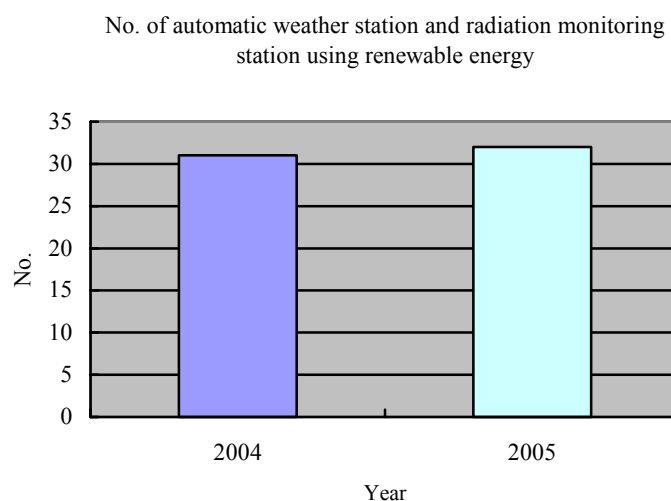


Figure 14 : No. of automatic weather station and radiation monitoring station using renewable energy in 2004 and 2005

(e) Conservation of biodiversity – Target to plant 100 seedlings achieved

We organized the 6th Tree Planting Day in March 2005 at the Hong Kong Observatory Headquarters. One hundred trees were planted on that day. This is a continuous programme and it will be organized annually (Figure 15).



Figure 15 : Tree Planting Day at HKOHQ

11. Targets for 2006

We aim at achieving the following targets in 2006 :

- 2.5% reduction in paper consumption
- 2.5% reduction in envelope consumption
- 1.5% reduction in electricity consumption
- To plant 100 seedlings and to organize weeding activities

12. Verification Statement

I have verified the information and data of the Environmental Report 2005. I confirm that the data presented in the Environmental Report 2005 are authentic and the methodology for the collection and analysis of data is appropriate. The report represents an accurate account of HKO's environmental actions and performance in the year of 2005.



Mr CHOI Siu-chuen
Green Manager
Hong Kong Observatory

13. Information and Suggestions

This report is available on our homepage at <http://www.weather.gov.hk> and at our Resource Centre at the following address:

Units 2304-2309, 23rd floor, Miramar Tower,
132 Nathan Road, Tsim Sha Tsui, Kowloon
Tel. : 2926 8250

If you wish to obtain further information or raise any suggestions about this report, please contact our Green Manager at telephone 2926 8207 or email to dsec@hko.gov.hk.

14. Feedback Form

Please complete this form and send it back to the Green Manager, Hong Kong Observatory, 134A, Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong or fax it to 2311 9448.

1. Do you find the Report informative? Yes No

2. Do you find the content of the Report Yes No
easy to understand?

3. Which green issues would you like to be included in the Report?

4. What improvement would you recommend?

5. What is your overall view of the Report?

Name:

Telephone:

Email: