

Environmental Report 2008



Hong Kong Observatory

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1. Director's Message

I am pleased to present the tenth Environmental Report of the Hong Kong Observatory (HKO). This report sets out the environmental policy and performance of HKO in the year 2008.

HKO is committed to supporting Government's policies on environmental protection and sustainable development. In 2008, apart from the established environmental protection activities, we have organized a series of popular science lectures with a view to enhancing public knowledge and awareness of our environment. Topics such as global warming, climate change, visibility and greenhouse effect were discussed in the talks and lectures.

HKO actively involved in public outreaching works to promote climate change in 2008. They included sending more than 20 professional speakers to schools and organizations to deliver talks on climate change, production of educational package and animation cartoon on climate change, and organization of "The Workshop on Climate Change and Climate Prediction in the Pearl River Delta Region", etc. This workshop was the first of its kind in the region, and it served as an excellent platform for experience sharing on climate change research in the Pearl River Delta Region.

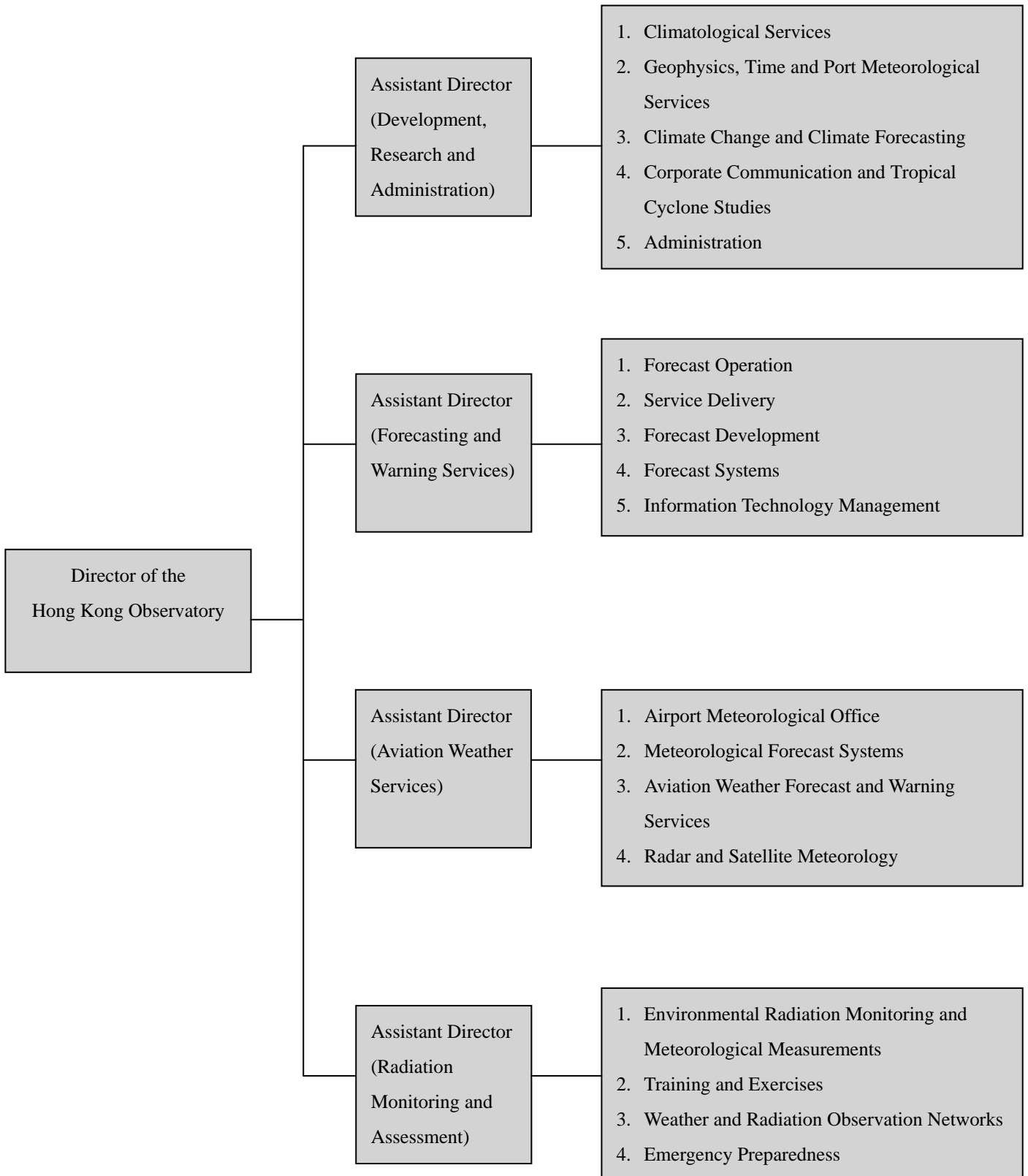
We shall continue to enhance our environmental performance and provide our services in an environmentally responsible manner. Readers are invited to give us their feedback to help us improve further.



B Y LEE

Director of the Hong Kong Observatory

2. Organization Chart



3. Staff Establishment

HKO had an approved establishment of 287 as at 31 December 2008. Details are shown in Table 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

Table 1 : HKO Establishment as at 31 December 2008

4. Financial Provision

The financial provision of HKO in 2008-09 was \$203.4 million, with \$202.2 million voted for operational expenses, and \$1.2 million for capital expenditure.

5. Office Location

In 2008, 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 Yaumatei; 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.

HKO had 73 automatic weather stations in operation as at 31 December 2008 (see Figure 1 below):

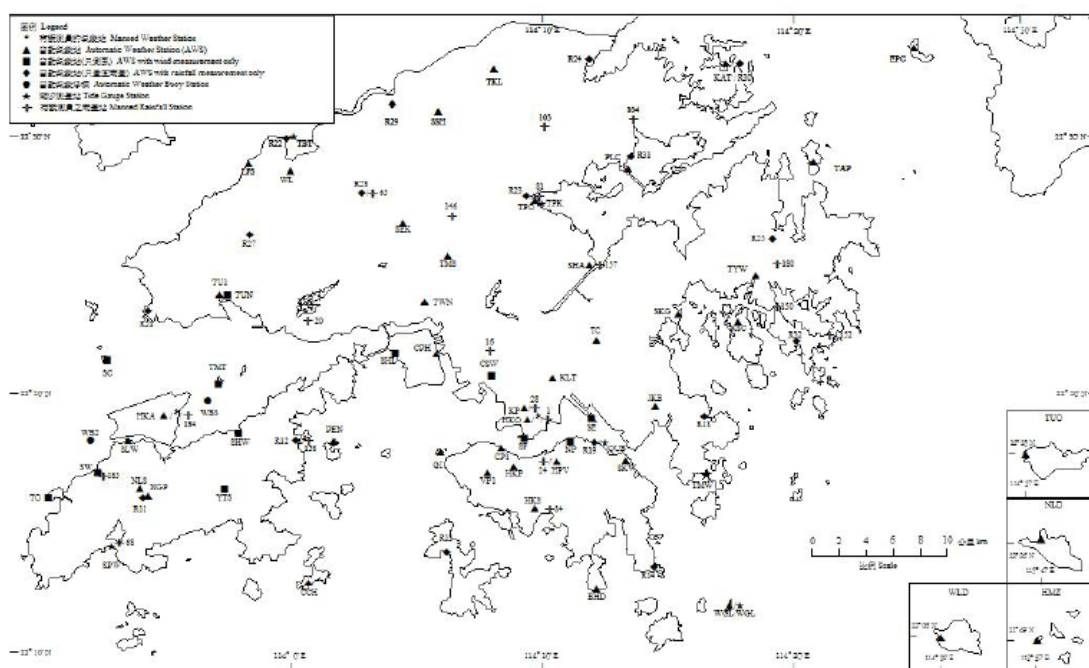


Figure 1 : Locations of automatic weather stations

6. 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, oceanographic, astronomical and climatological information and consultative services to the public and private sectors.

7. Stakeholders

This report is prepared annually to meet the needs of :

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

8. Environmental Policy

We adhere to the departmental environmental policy and meet the commitments of the Clean Air Charter, which aim 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 HKO HQ 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.

9. Green Management System

The Building, Grounds and Accommodation Committee comprises the Assistant Director (Development, Research and Administration) as the Chairman with 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.

The Hong Kong Observatory Working Group on Energy and Environment (Working Group) was established in 2006. It comprises of staff from different grades/ranks and branches with the Green Manager as convener. The Working Group aims to collect green ideas from staff and promote green awareness among all levels in HKO. It also serves as the Energy and Emission Management (EEM) Team for implementing the commitments under the Clean Air Charter. The Working Group meets regularly to formulate new green initiatives and review the environmental protection measures in force.

10. 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 HKO HQ at Tsim Sha Tsui is one of the few remaining semi-natural woodlands in urban Kowloon (see Figure 2 and Table 2 below). It serves as a refuge for the local wildlife in the urban area, in particular, the avifauna. It is home for 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 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 2008, we continued with our efforts to conserve the biodiversity and preserve the natural habitat within the grounds of HKO. We engaged private contractors to upkeep the health of our trees and add to the greenery of our grounds. In April 2008, 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 HKO HQ is a major initiative under the department's environmental programme.



Figure 2 : The greenery of HKO HQ

English Name	Chinese Name	Scientific Name
Lebbek Tree	大葉合歡	<i>Albizia lebbbeck</i> (L.) Benth
Bignay Chinalaurel	五月茶	<i>Antidesma bunius</i>
Alexandra Palm	假檳榔	<i>Archontophoenix alexandrae</i> (F. Muell.)
Hong Kong Orchid Tree	洋紫荊	<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
Horsetail Tree	木麻黃	<i>Casuarina equisetifolia</i> L.
Bamboo Palm	散尾葵	<i>Chrysalidocarpus lutescens</i> H. Wendl.
Batavia Cinnamon	陰香	<i>Cinnamomum burmanni</i> (Nees) Blume
Yellow Cow Wood	黃牛木	<i>Cratoxylum cochinchinense</i> (Lour.) Blume
Flame Tree	鳳凰木	<i>Delonix regia</i> (Boj. ex Hook.) Raf.
Longan	龍眼	<i>Dimocarpus longan</i> Lour.
Lemon-scented Gum	檸檬桉	<i>Eucalyptus citriodora</i> Hook. f.
Chinese Banyan	細葉榕	<i>Ficus microcarpa</i> L. f.
Common Red-stem	青果榕	<i>Ficus variegata</i> var. <i>chlorocarpa</i> (Benth.) King
Big-leaved Fig	大葉榕	<i>Ficus virens</i> var. <i>sublanceolata</i> (Miq.) Corner
Pond Spice	潺槁	<i>Litsea glutinosa</i>
White Champak	白蘭	<i>Michelia alba</i>
Indian gooseberry	餘甘子	<i>Phyllanthus emblica</i>
Chinese Red Pine	馬尾松(山松)	<i>Pinus massoniana</i> Lamb.
Frangipani	雞蛋花	<i>Plumeria rubra</i> L.
Buddhist Pine , Kusamaki	羅漢松	<i>Podocarpus macrophyllus</i> (Thunb.) D. Don
Red Psychotria	山大刀	<i>Psychotria asiatica</i> L.
Burmese Rosewood	紫檀	<i>Pterocarpus indicus</i> Willd
Schima	木荷樹	<i>Schima superba</i>
Wood-oil Tree	木油樹	<i>Vernicia montana</i> Lour.

Table 2 : Common Plant Species in HKO HQ

(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.
- Distributing simple internal staff notices in non-printable electronics format.
- Placing green boxes in offices for collection of envelopes and 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 and ink-jet cartridges for recycling.
- Giving depreciated computer equipment to charitable organizations.
- Placing recycle bins in HKO HQ for separate collection of recyclable wastes such as aluminum cans.
- Participating and coordinating with local charities in recycling programs.

(d) Energy conservation

- Using lighting fittings completed with electronic ballasts to reduce energy consumption.
- Using solar power or wind power to generate electricity for 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.
- Reducing servicing lifts to the minimum after normal office hours.
- Adjusting the air-conditioning system with a view to keeping the room temperature to 25.5°C in summer months.
- Providing thermometers in all offices to facilitate maintaining the room temperature at 25.5°C in summer months.
- Switching on air-conditioning units only immediately before users entering the venues.
- Replacing the dust filters for air conditioners regularly.
- Fixing solar film to window glasses to insulate heat.
- Using automatic circuit-break timers to help turn off unnecessary electrical appliances after office hours.
- Conducting regular inspection to ensure lights, office equipment and air-conditioners in offices, conference rooms and common corridors were switched off during lunch break and after office hours.

- Encouraging the use of fans and dehumidifiers in substitution of air-conditioning.
- Encouraging staff to dress down to reduce the air-conditioning demand.

(e) Air Quality Improvement

- Banning smoking in all indoor areas of HKO offices and the majority of outdoor areas of HKO HQ.
- Commissioning EMSD to conduct regular indoor 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) Promoting Staff Awareness

- Forming the Hong Kong Observatory Working Group on Energy and Environment.
- Launching the “Environmental Protection Suggestion Scheme” with cash incentives.
- Displaying and disseminating monthly report on energy, paper and envelope consumption to HKO colleagues.
- Disseminating saving tips and 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.
- Organizing staff activities such as Tree Planting Day and visits to promote environmental awareness and to encourage staff participation.

(h) Promoting Public Awareness on Environmental Sustainability Issues

I. Workshop on Climate Change and Climate Prediction in the Pearl River Delta Region

To study on topics related to climate change, trends of extreme weather, climate prediction and climate change outreaching initiatives in the Pearl River Delta Region, the "Workshop on Climate Change and Climate

Prediction in the Pearl River Delta Region", the first of its kind in the region, was jointly organized by HKO, the Guangdong Meteorological Bureau (GMB) and the Macao Meteorological and Geophysical Bureau (SMG) on 15 and 16 December 2008 at the Hong Kong Observatory Headquarters (see Figure 3 below).

During the workshop, experts from the Observatory, GMB, SMG, local universities as well as the business sector gave presentations on the above topics. It attracted some 120 participants from non-government organisations, local universities, the business sector and various bureaux and departments of the Hong Kong SAR Government.

The feedback and response to the workshop was very positive and encouraging. Participants found the workshop to be an excellent platform for experience sharing on climate change research in the Pearl River Delta Region and promoting mutual understanding between researchers and various stakeholders.



Figure 3 : Workshop on Climate Change and Climate Prediction in the Pearl River Delta Region at HKO Headquarters

II. Co-operation with Green Partners

HKO joined hands with various green groups in promoting green issues. HKO continued to be the Earth Partner of the Friends of the Earth (FoE), and assisted in community-wide environmental awareness-building programmes organised by FoE to protect the natural environment, e.g. "Light out on the Summer Solstice" and Green Christmas e-Card 2008.

HKO also cooperated with the Hong Kong and Shanghai Banking Corporation Ltd (HSBC) in promoting public awareness on climate change. An exhibition "CLIMATE IS CHANGING, ACT NOW!" was

jointly organized by HKO, GMB, SMG and HSBC at the HSBC Main Building from 16 to 28 December 2008 (see Figure 4 below). Visitors found the exhibition an excellent platform for enhancing their understanding of climate change. Many of them also expressed their wish to take action to mitigate the effects of climate change and indicated that they would use the gift stickers given out by the organizers to replace wrapping papers.



Figure 4 : "CLIMATE IS CHANGING, ACT NOW!" attracted enthusiastic visitors of all ages.

III. Research and Public Awareness Promotion on Global Warming and Climate Change

HKO conducted a series of public awareness promotion programmes and researches on global warming and climate change in 2008. A total of 65 lectures, talks and school visits were arranged to raise the consciousness and understanding of the public on the subject (see Figure 5 below).

HKO has also produced an educational package on climate change to provide students and the public the basic knowledge about climate change and its impacts on people and the natural environment. It is hoped that this educational package will encourage all to take actions to help mitigating climate change.

The package consists of an animation cartoon, a cartoon story book, PowerPoint presentations and a collection of publications and press releases on climate change. It is also available online in HKO's homepage



Figure 5 : HKO staff delivering talks to students and public on climate change

IV. Guided Tour of the Hong Kong Observatory

The guided tour of HKO HQ (Figure 6) is intended to provide an opportunity for 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 two to three Saturdays every month and in the HKO Open Day. Visitors are guided by voluntary docents of HKO's support group "The Friends of the Observatory", who provide explanations to the visitors.



Figure 6 : The visitors exploring the special ecological environment of HKO HQ

11. Environmental Performance

(a) Paper Consumption - Target 2.5% reduction achieved

Under the concerted effort of staff, the paper consumption in HKO in 2008 decreased by 100 reams or 4.3% compared with 2007 (Figure 7). The target of 2.5% reduction was achieved.

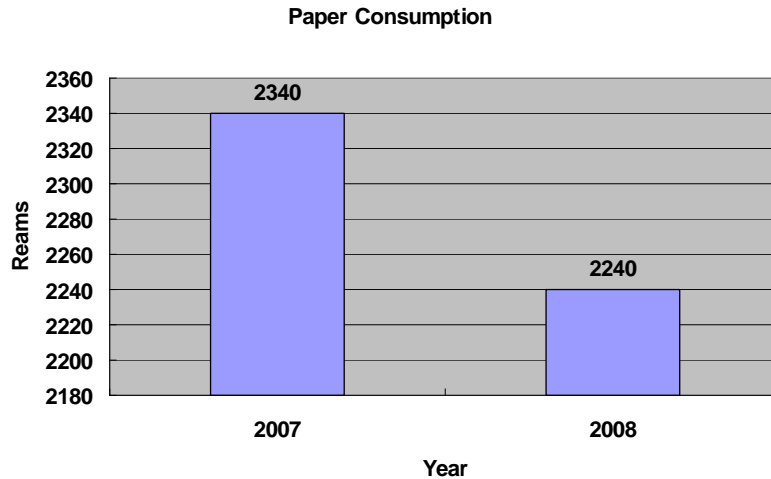


Figure 7 : Paper consumption in 2007 and 2008

(b) Envelope Consumption - Target 2.5% reduction not achieved

Compared with 2007, the total envelope consumption in HKO increased by 1,014 or 6.6% in 2008 (Figure 8). This increase in consumption was mainly due to the special arrangement of mailing the admission tickets of the 2008 HKO Open Day to thousands of members of the Friends of the Observatory in early 2008. In the coming year, HKO will keep on promoting environmental awareness among colleagues and endeavour to economise consumption with a view to meeting the target.

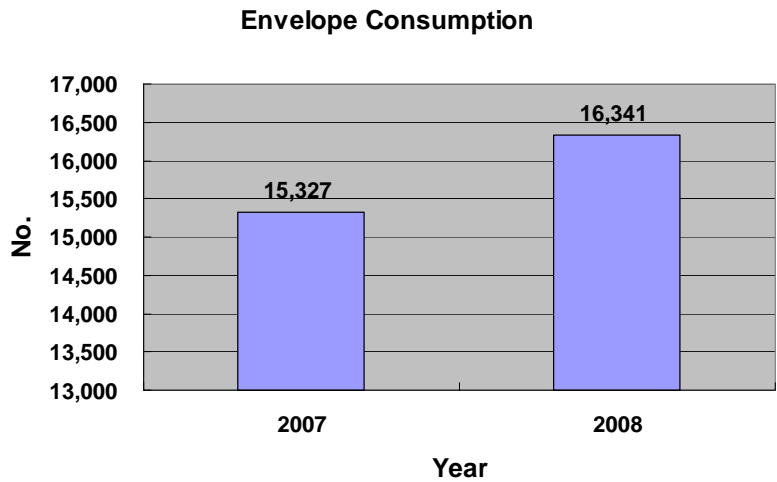


Figure 8 : Envelope consumption in 2007 and 2008

(c) Electricity Consumption – Target 1.5% reduction not achieved

In spite of the various departmental measures to save energy, the total electricity consumption in HKO in 2008 increased by 81,179 kWh or 2.4% as compared to 2007 (Figure 9). This was mainly due to the several major refurbishment projects carried out in 2008 in HKO HQ and the outstations. In the coming year, HKO will continue to strive for energy saving.

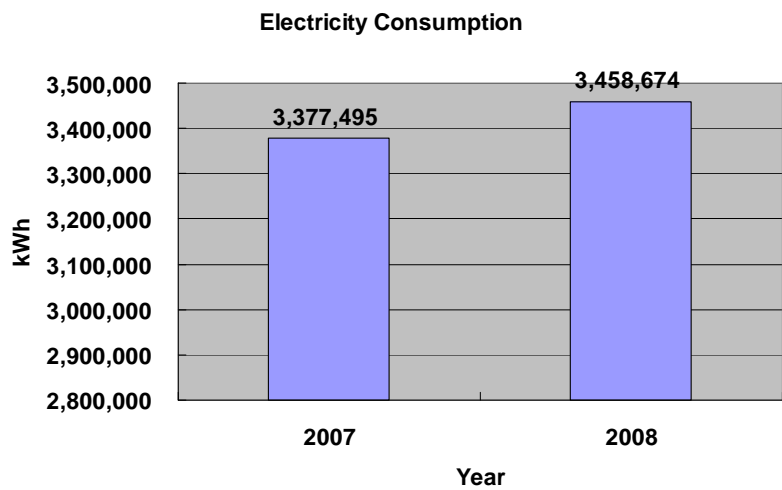


Figure 9 : Electricity consumption in 2007 and 2008

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

We organized the 9th Tree Planting Day in April 2008 at the Hong Kong Observatory Headquarters (Figure 10). One hundred trees were planted on that day. This is a continuous programme and will be organized annually.



Figure 10: Tree Planting Day at HKO HQ

12. Recognition on Environmental Protection

HKO was awarded the “Class of Good” Energywi\$e and Wastewi\$e labels under the “Hong Kong Awards for Environmental Excellence” (Figure 11) in 2008. Organised by the Environmental Protection Department and other ten associations in September 2008, this Award aimed to recognize the commitment demonstrated by organizations in creating a better environment for Hong Kong. HKO was awarded the labels in recognition of its sustainable energy conservation and waste reduction practices implemented within HKO.



Figure 11 : Energywi\$e and Wastewi\$e labels

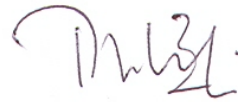
13. Targets for Fiscal Year 09/10

We aim at achieving the following targets in Fiscal Year (FY) 09/10:

- 2.5% reduction in paper consumption compared to FY 07/08
- 2.5% reduction in envelope consumption compared to FY 07/08
- 1.0% reduction in electricity consumption compared to FY 07/08
- To plant 100 seedlings

14. Verification Statement

I have verified the information and data of the Environmental Report 2008. I confirm that the data presented in the Environmental Report 2008 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 2008.



Mr CHOI Siu-chuen
Green Manager
Hong Kong Observatory

15. 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.

16. 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: