



Environmental Report 2004



Hong Kong Observatory

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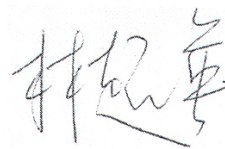
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1. Director's Message

I am pleased to present the sixth Environmental Report of the Hong Kong Observatory (HKO). This report sets out the environmental policy and performance of HKO in the year 2004.

HKO is committed to supporting Government's policies on environmental protection and sustainable development. Apart from the established environmental protection activities, a series of popular science lectures delivered by distinguished meteorologists were jointly organized by HKO and the Hong Kong Science Museum. Topics such as green house effect, global warming, ecosystem impact of climate change, and interaction between organism and the nature were discussed in the lectures. In 2004, we completed studies on the long-term sea level change in Hong Kong in the past and on the future temperature change in Hong Kong in relation to global warming. The results were publicized to raise public awareness on global warming.

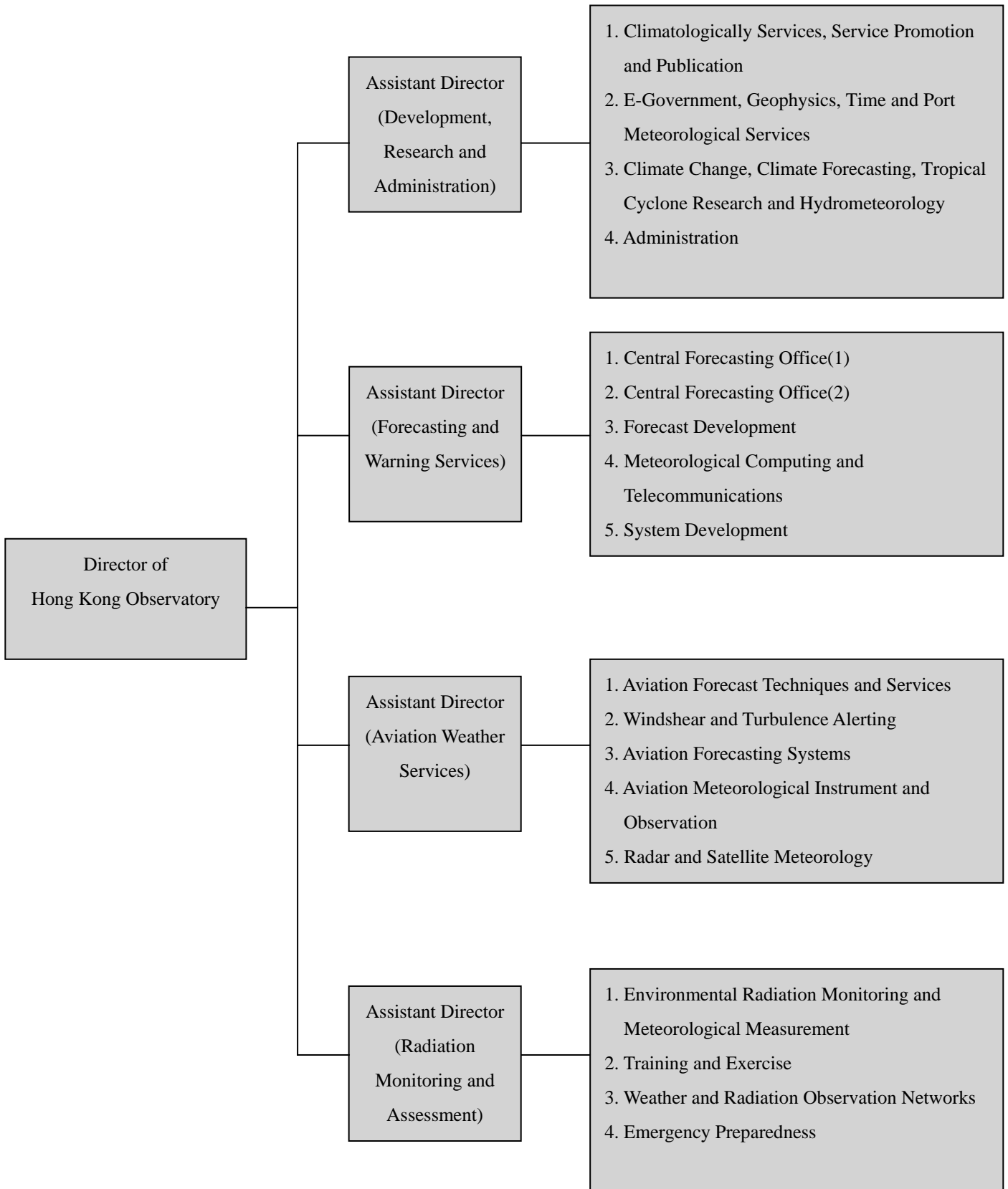
We shall continue to enhance our environmental performance and provide our services in an environmentally responsible manner. Readers are invited to give us their feedback to help us improve further.



C Y LAM

Director of the Hong Kong Observatory

2. Organization Chart



3. Staff Establishment

HKO had an approved establishment of 318 and a strength of 283 as at 31 December 2004.

Grade	Strength
Directorate	5
Scientific Officer Grade	50
Experimental Officer Grade	45
Radar Specialist Mechanic Grade	22
Scientific Assistant Grade	89
Common Grades	28
General Grades	44
Total	283

Table 1 : HKO Strength as at 31 December 2004

4. Office Location

In 2004, 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 1.

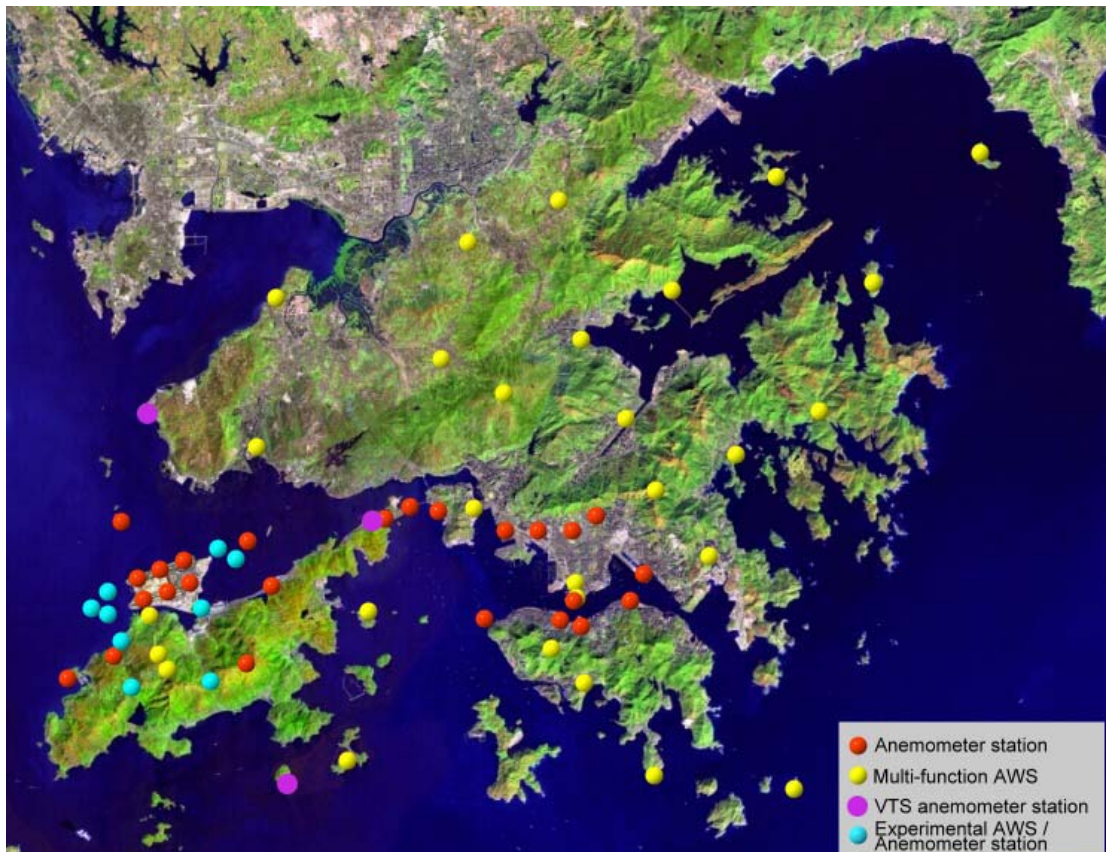


Fig. 1 : Locations of automatic weather stations

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 9 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 (Fig.2 and Table 2). 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 2004, 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 particular, the understorey species which were previously much depleted have thrived and re-established themselves. In April 2004, 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 a continuous programme and tree planting at HKOHQ is a major annual event under the environmental programme.

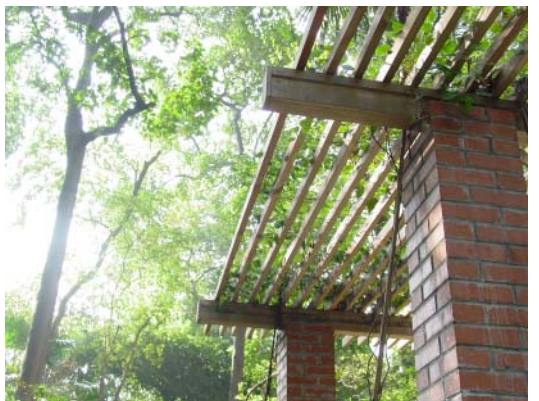


Fig. 2 : The greenery of the HKOHQ

English Name	Chinese Name	Scientific Name
Lebbek Tree	大葉合歡	<i>Albizia lebeck</i> (L.) Benth
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
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 Fig	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 x alba</i> DC.
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.

Table 2 : 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 fax and 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 of waste paper/newspapers for recycling.
- Returning used laser printer toner cartridges.
- Giving depreciated computer equipment to charitable organizations.
- Colored recycle bins (Fig.3) are placed in HKOHQ for the separate collection of recyclable wastes such as aluminum cans.



Fig. 3 : Colored recycle bins placed in HKOHQ

(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.
- Keeping the room temperature at a reasonable level to avoid unnecessary electricity consumption in air-conditioning.
- 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 are 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

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

(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 to promote environmental awareness and to encourage staff participation, e.g. Tree Planting Day and Green Trail, etc.

(h) Green Training and Education

We train staff to assume their environmental responsibilities. In 2004, our staff participated in a series of seminars on Energy Saving organized by Electrical and Mechanical Services Department. Professionals from Environmental Protection Department were invited to deliver a talk on the PATH model (Pollutants in the Atmosphere and Their Transport over Hong Kong). The model is designed to calculate air pollutant concentrations as a result of change in traffic emissions.

(i) Promoting Public Awareness of Environmental Sustainability Issues

I Popular science lectures delivered by distinguished meteorologists

A series of popular science lectures (Fig.4) delivered by distinguished meteorologists were jointly organized by HKO and the Hong Kong Science Museum. Topics such as green house effect, global warming, ecosystem impact of climate change, and interaction between organism and the nature were discussed in the lectures.



Fig. 4 : Popular science lectures delivered by distinguished meteorologists

II Studies relating to Global Warming

HKO undertook and completed studies on the long-term sea level change in Hong Kong in the past (Fig.6) and on the future temperature change in Hong Kong (Fig.7) in relation to global warming. The results were publicized in

press conference to raise public awareness on global warming and the need to conserve energy and forests.

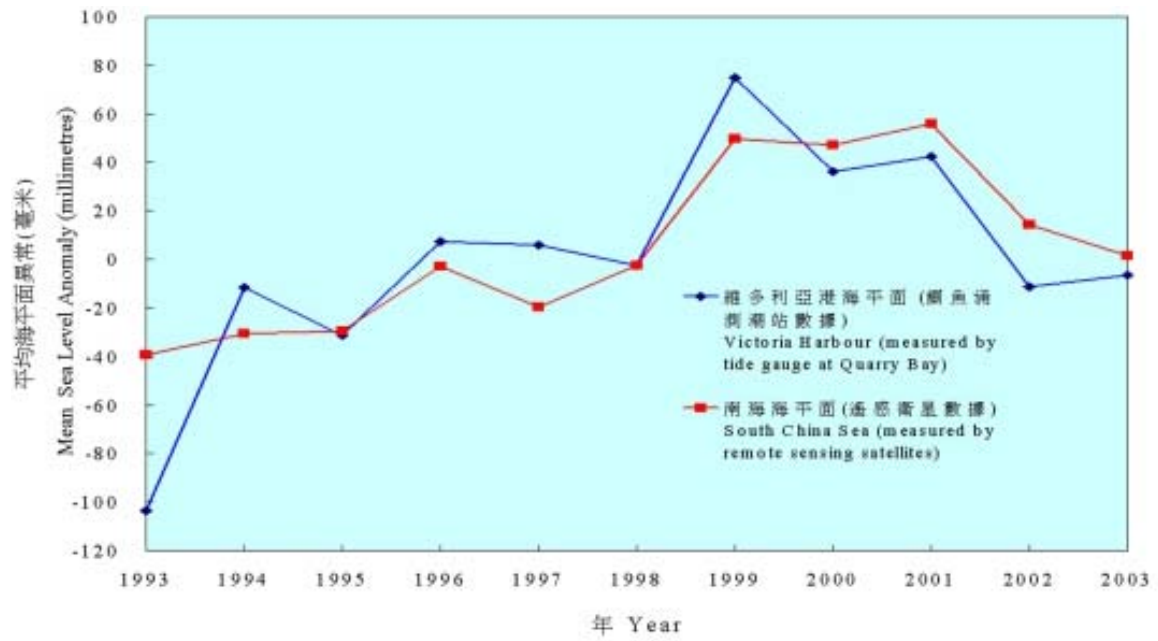


Fig. 5 : Mean Sea Level Anomaly

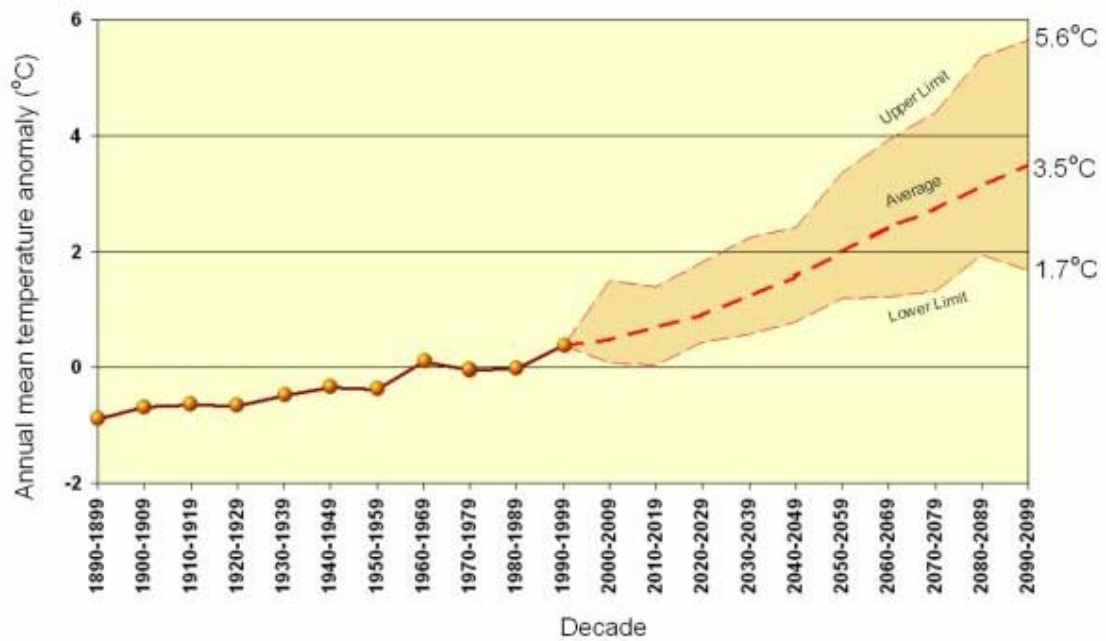


Fig. 6 : Past and projected mean temperature for Hong Kong

III Distribution of souvenirs to the public

Water is part of the theme of World Meteorological Day 2004 – “Weather, Climate and Water in the Information Age”. HKO gave souvenirs, which were provided by Water Service Department, to visitors of the Open Day to raise their consciousness to treasure drinking water.

10. Environmental Performance

(a) Paper Consumption - Target 5% reduction not achieved

The total paper consumption in 2004 only dropped by 35 reams or 1.2% compared with 2003. The target of 5% reduction in paper consumption could not be achieved. Main reason being that the Observatory organized the 13th session of Regional Association II (Asia) of the World Meteorological Organization which had resulted in an increase in paper consumption in 2004. It is expected that the paper consumption in 2005 will drop distinctively.

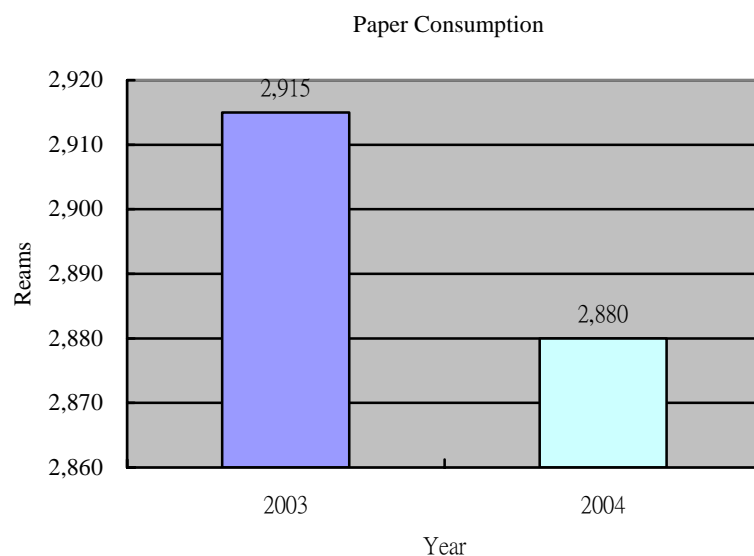


Fig. 7 : Paper consumption for 2003 & 2004

(b) Envelope Consumption - Target 5% reduction achieved

With the increasing use of facsimile and email, the total envelope consumption significantly dropped by 1,911 nos. or 10.4% compared with 2003.

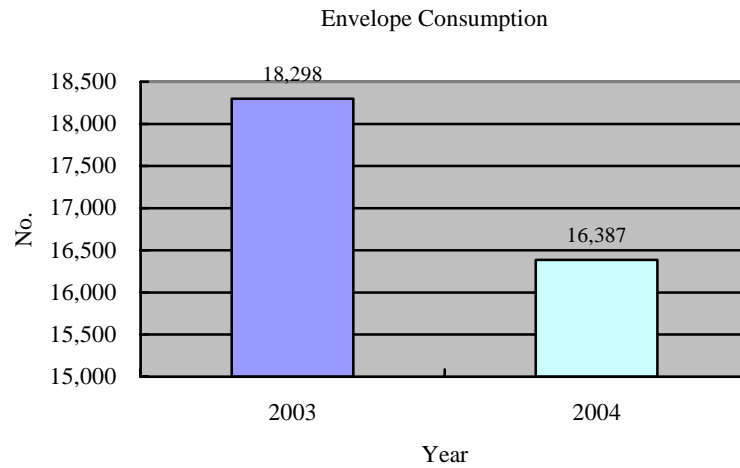


Fig. 8 : Envelope consumption for 2003 & 2004

(c) Electricity Consumption - Target 3% reduction not achieved

The total electricity consumption increased by 63,535kwh or 1.9% compared with 2003. Main reason being that the various civil work projects carried out in 2004 had resulted in an increase in electricity consumption. The target of 3% reduction in electricity consumption could not be achieved.

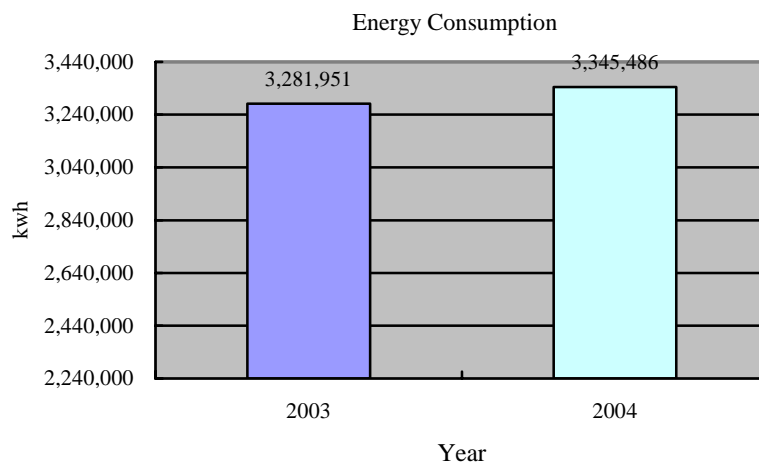


Fig. 9 : Electricity consumption for 2003 & 2004

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

The number of automatic weather station and radiation monitoring station using solar/wind energy increased by 1 or 3.2% compared with 2003.

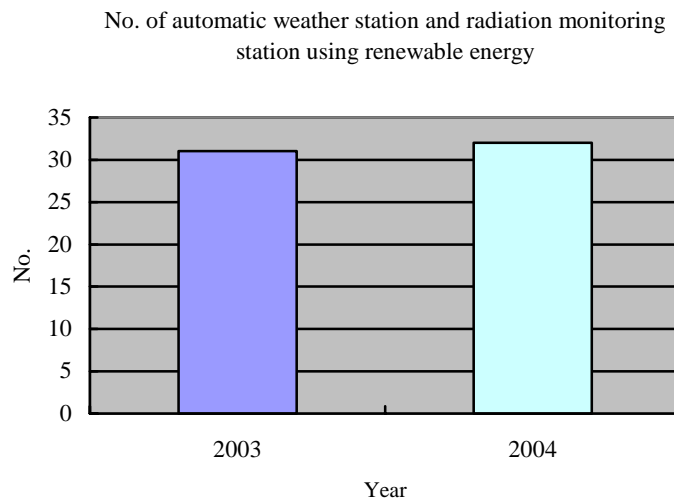


Fig. 10 : No. of automatic weather station and radiation monitoring station using renewable energy for 2003 and 2004

(e) Conservation of biodiversity – Target to plant at least 80 seedlings achieved

We organized the 5th Tree Planting Day in April 2004 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.



Fig. 11 : Tree Planting Day at HKOHQ

11. Targets for 2005

We aim at achieving the following targets in 2005 :

- 7.5% reduction in paper consumption
- 5% reduction in envelope consumption
- 4.5% reduction in electricity consumption
- To plant at least 100 seedlings and to organize weeding activities

12. Verification Statement

I have verified the information and data of the Environmental Report 2004. I confirm that the data presented in the Environmental Report 2004 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 2004.



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: