香港天文台
HONG KONG OBSERVATORY

INNOVATE WITH SCIENCE

SERVE WITH HEART

本報告目前僅備有英文版本。不便之處，敬請原諒。

# Sustainability Report

## For Fiscal Year 2023/ 24

Hong Kong Observatory
The Government of the Hong Kong
Special Administrative Region

www.hko.gov.hk

# Director's Message


*Dr. Chan Pak Wai, JP*

> We shall stay vigilant, enhance public awareness and resilience to natural disasters to cope with the potential extreme weather arising from climate change.

The fiscal year 2023/24 has been both challenging and rewarding, I would like to sincerely thank all our current and former colleagues for their professionalism and dedication throughout the period. Their contributions have been instrumental in shaping a sustainable future for the Hong Kong Observatory (the Observatory).

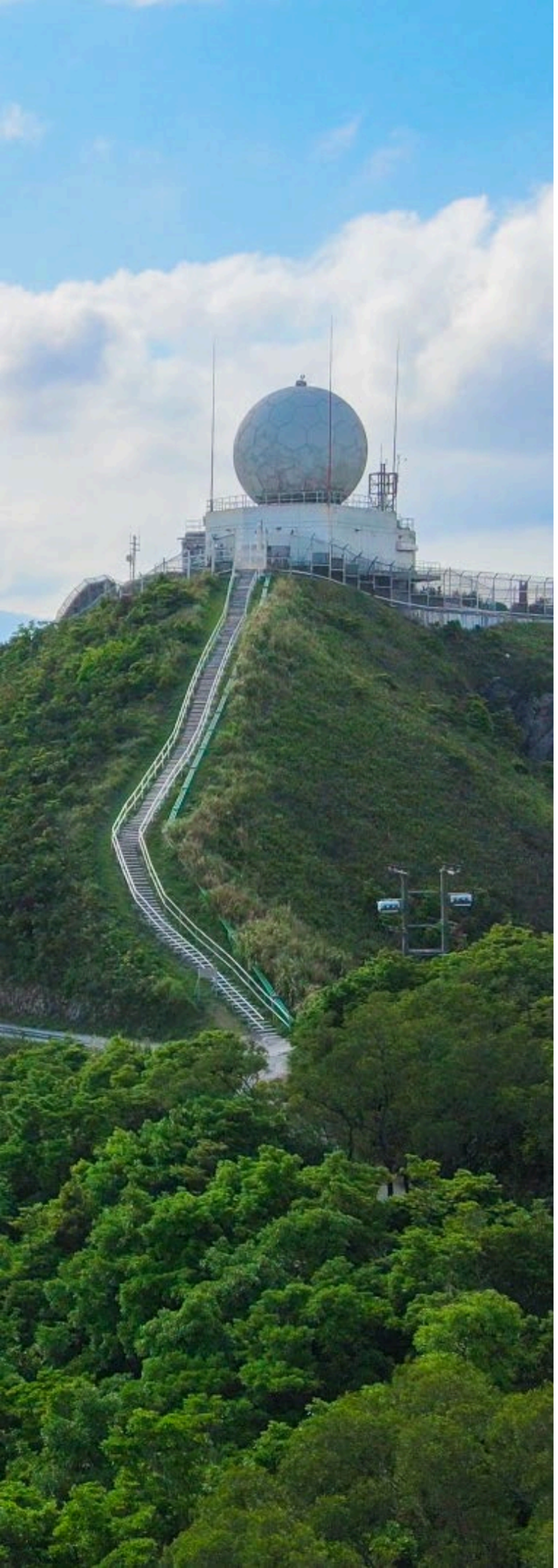
In 2023, extreme high temperatures driven by climate change continued to impact every corner of the world. The World Meteorological Organization (WMO) reported that 2023 was the warmest year on record globally, and the past nine years (2015-2023) have also been the warmest nine years on record. As a global citizen, every effort we made in combating global warming is crucial. We must all work together immediately to save energy in our daily lives, reduce the consumption of fossil fuels in order to achieve carbon neutrality as soon as possible.

Seizing the opportunity of the advancement artificial intelligence (AI), the Observatory began trialling an AI weather prediction model in 2023 to provide reference for making weather forecasts and tropical cyclone track predictions. In order to facilitate early preparation of the public on future weather changes, the Observatory launched the "Pangu" AI weather forecast model product on the "Earth Weather" website in October 2023, and extended the validity of the forecasts on the website to 15 days. In addition, the Observatory plans to enhance the service of the "My Observatory" mobile application and add weather information for the Guangdong-Hong Kong-Macao Greater Bay Area in the second half of 2024 to assist users traveling in the area to grasp the latest local weather conditions.

Regarding international cooperation, the Observatory will establish a virtual Meteorological Training Centre for Belt and Road (B&R) Countries by 2024 to provide online and in-person training for meteorological professionals from the "Belt and Road" regions, enhancing their capabilities in responding to adverse weather and resisting natural disasters and promoting future meteorological co-operation and development.

The Observatory values the opinions and suggestions from the public, and we are thankful for your ongoing support, which gives us great motivation to enhance our services to an even higher caliber. The Observatory will remain committed to be a model of excellence in protecting lives and building together a better society through science.

*Dr. Chan Pak Wai*
*Director of*
*the Hong Kong Observatory*



# CONTENTS


01 Director's Message

04 Key Figures

05 About the Department

13 About the Report

14 Sustainability

25 Staff Development and Engagement

31 Highlights of the Year


# 2023 Performance at a glance

## Department Overview

**4** | *Manned Offices*

**195** | *Weather Stations*

**372** | *Approved Establishment as at 31 March 2023*

## Weather Service

**100%** *Hourly local weather report dissemination with first 10 minutes of each hours*

*Forecasts perceived as accurate by the public* **78%**

**>91%** *Forecast perceived as accurate by objective means, ship captains, airline operators*

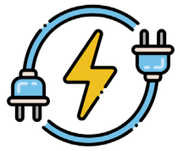
## International and Regional Cooperation

**> 20** | *Partners, including the World Meteorological Organization, International Civil Aviation Organization*

## Radiation Monitoring and Assessment

*Data availability of environmental radiation monitoring network* **99.9%**

## Green Achievement



**- 6.0%**

*Electricity Consumption compared to FY18/19*

**- 34.5%**

*Paper Consumption per capita compared to FY19/20*

## Time Standard

**0.01**

Microseconds per day

*Time standard accuracy*

## Media

**> 163**

**billions**

*View of website and application*


# About the Department

The Hong Kong Observatory, established in 1883, is one of the departments under Environment and Ecology Bureau of the government of Hong Kong Special Administrative Region. The Observatory is responsible for monitoring and forecasting weather, as well as issuing warnings on weather-related hazards.

The Observatory also monitors and assesses radiation levels in Hong Kong, and provides other climate and geophysical services to meet the needs of the public and shipping, aviation, industrial and engineering sectors. With governance at international standard, the Observatory stands as one of the leading meteorological organisations in the world.

The Observatory operates four manned offices, namely the Hong Kong Observatory Headquarters, Miramar Tower Office, King's Park Meteorological Station, and Airport Meteorological Office, to meet the service requirements.

The Observatory consists of four branches, including Forecasting and Warning Services, Aviation Weather Services, Radiation Monitoring and Assessment and Development, Research and Administration. Under these branches, there are 23 divisions. As at 31 March 2024, we have an approved establishment of 372.

## Forecasting and Warning Services

1 Forecast Operation

2 Service Delivery

3 Forecast Development

4 Forecast Systems

## Development, Research and Administration

1 Climate Information Services and Tropical Cyclone Studies

2 Geophysics, Time and Marine Meteorological Services

3 Climate Forecast Services and Climate Change Studies

4 Corporate Communication, Publicity and Media Services

5 Annex Block Project

6 Quality Management and International Cooperation

7 Administration Services

## Aviation Weather Services

1 Aviation Meteorological Innovative Solutions

2 Aviation Meteorological Data Analytics

3 Aviation Weather Forecast and Warning Services

4 Radar and Satellite Meteorology

5 Three Runway System Project

6 International Aviation Meteorological Collaboration

7 Aviation Meteorological Impact Assessment

## Radiation Monitoring and Assessment

1 Environmental Radiation Monitoring and Meteorological Measurements

2 Training and Exercises

3 Weather and Radiation Observation Networks

4 Emergency Preparedness and Assessment

5 Information Technology Management

# Outstations

In addition to the four manned offices, there are five radar stations operated at Tai Mo Shan, Tate's Cairn, Brothers Point, Tai Lam Chung, and Siu Ho Wan. The Observatory operates a total of 195 weather stations, including automatic weather stations, rain gauges, anemometers, and tide stations.

Each radar station and weather station is strategically positioned across the territory, ensuring comprehensive coverage across different regions.

*The Waglan Island automatic weather station is one of the Observatory's major outposts in weather monitoring.*

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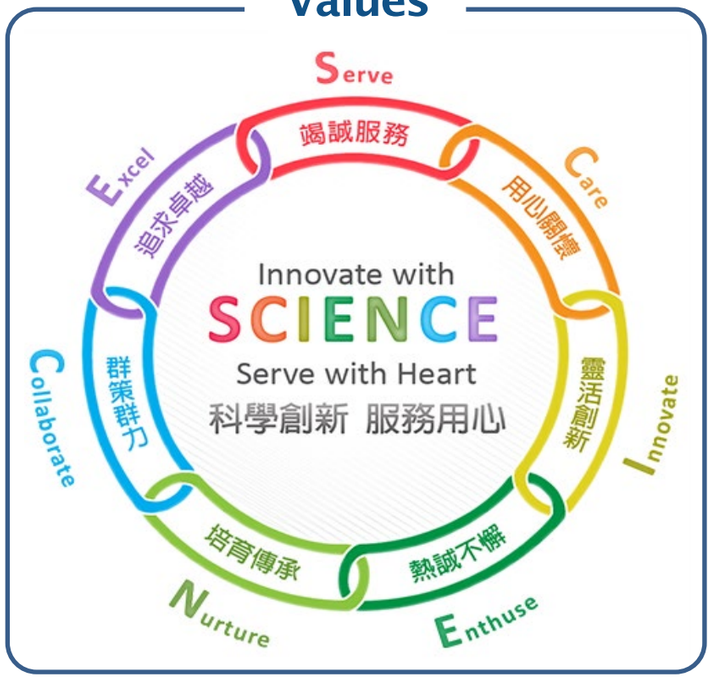
Management Approach

## Values




## Vision

Be a model of excellence in protecting lives and building together a better society through science.

## Mission

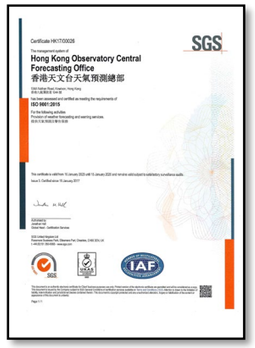
To provide people-oriented quality services in meteorology and related fields, and to enhance the society's capability in natural disaster prevention and response, through science, innovation and partnership.

## Departmental Video



## Quality Management

In pursuit of quality management as advocated by the World Meteorological Organization (WMO), the Observatory has been certified to the International Organization for Standardization ISO 9001 Quality Management Systems indicating international recognition of quality management of these services.




*Public Weather Services*


*Aviation Weather Services*


*Radiation and Meteorological Measurement Services*


*Ambient Gamma Radiation Monitoring Service*


*Automatic Regional Meteorological Measurement Services*


*Tate's Cairn Weather Radar System Radar Imagery Services*

Furthermore, the Observatory's information technology service management system passed the ISO/IEC 20000-1:2018 supervision audit by the certification body after expanding the scope of certification in March 2024, affirming the Observatory's work in high-quality information technology service management.


*Information Technology Service Management System*

# Sustainability

The Observatory recognises that sustainability extends beyond the realm of "green" practices and encompasses the broader goal of fostering enduring and balanced progress.

## About this Report

The Sustainability Report for fiscal year 2023-24 of Hong Kong Observatory summarises our efforts and achievement in sustainable development over the past year. The report was compiled with reference to the Global Reporting Initiative (GRI) Standards, covering information on material sustainability aspects of the Observatory. The period covered is from 1 April 2023 to 31 March 2024, unless otherwise specified.

GRI Empowering Sustainable Decisions

**This report is prepared annually to meet the needs of:**

- the general public receiving the Observatory information via the media, telephone, mobile devices or by browsing the website of the Observatory ;
- all Government Bureaux and Departments;
- visitors to the Observatory; and
- other users of the Observatory services including those from the aviation, shipping, business, industry, education, engineering, public utility and tourism sectors.

**This report is divided into three main parts as follows:**

- the sustainability policies adopted by the Observatory and its achievement in support of sustainable development during the fiscal year;
- the staff development related matters and its achievement during the fiscal year; and
- the activities and initiatives of the Department during the fiscal year.

# Environmental Management

## Environmental Policy

HKO has put in place a departmental environmental policy that meets the guidelines issued by Environmental Protection Department and other government departments, such as the Electrical and Mechanical Services Department and the Architectural Services Department. Our Sustainability Policy covers environmental, workplace well-being, health and safety, and community engagement issues. We strive to improve the environment by:

- conserving bio-diversity and preserving natural habitat within HKO Headquarters and its outstations;
- developing a culture of environmental conservation among staff;
- adopting the best practices in green housekeeping;
- complying with requirements of relevant environmental protection ordinances; and
- promoting public awareness of environmental issues.



## Environmental Management System

HKO has set up the following committees / working groups to formulate, monitor and implement environmental policy at HKO:

### Working Group on Energy and Environment

The Working Group on Energy and Environment, established in 2006, aims to collect and implement green ideas from staff and promote green awareness among all levels in HKO. It is chaired by Assistant Director (Development, Research and Administration), with staff from different grades/ranks as members.

### Buildings, Grounds and Accommodation Committee

The Buildings, Grounds and Accommodation Committee, chaired by Assistant Director (Development, Research and Administration), evaluates the utilisation of space and all major civil and building services works carried out at HKO premises and grounds to minimise the impact on the environment.

# Energy Conservation

In accordance with the 2019 Policy Address, the Observatory has set a target of 6% saving in the total electricity consumption by 2024/25 when compared to the 2018/19 baseline.

To achieve the target, the Observatory has implemented various energy-saving measures, including but not limited to:

Clean energy, such as solar power, wind power and self-produced Direct Methanol Fuel Cell, has been adopted in automatic weather stations and radiation monitoring stations to support their operations

25.5°C

Setting the ambient office temperature to 25.5°C in summer months and switching off air-conditioning system in winter, wherever and whenever appropriate, by using electronic control panel

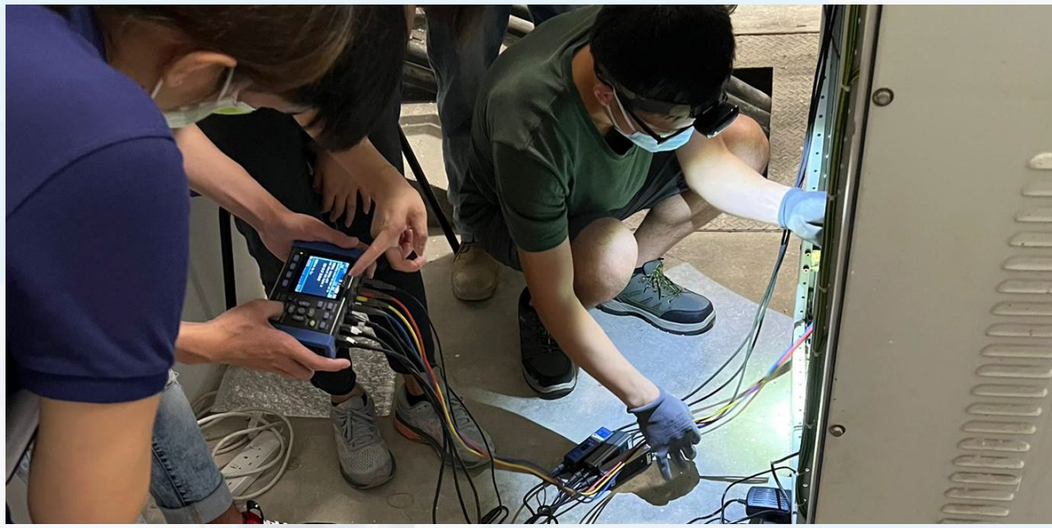
Using automatic circuit-break timers to switch off unnecessary electrical appliances after office hours, optimizing operating hours of lifts, and encouraging staff to use staircases instead of lifts for inter-floor movement

Segregating hot and cold air flow by arranging plastic screens in high-performance computer room to enhance cooling efficiency of air-conditioning system

Using energy-saving T5 fluorescent tubes in all the Observatory premises to reduce energy consumption and installing motion sensors to reduce energy wastage

OFF

Conducting regular inspection to ensure that lights, computers and other electrical appliances in offices are switched off during lunch breaks and after office hours



*Data logger installed in headquarter of the Observatory (HQ) for analysing the energy usage pattern*

The Observatory participated in Retro-commissioning (RCx) programme for energy use diagnosis and operational improvements. By analysing the energy usage pattern of the HQ of the Observatory, six energy saving opportunities (ESOs) related to chiller plants and ventilation systems were identified. The implementation of ESO modifications were completed in early 2024 to improve energy utilisation efficiency and was expected to reduce 4% of energy consumption when compared to FY2018/19.

*Solar panels in Cheung Chau Meteorological Station*

In 2023/24, the annual cumulative electricity consumption after normalisation against activity changes in the intervening years, was 4,998,840 units, a decrease of 5.9% as compared with the base year 2018/19 (5,331,128 units). Together with the renewable energy initiatives, the observatory has achieved an overall 6.0% saving and has exceeded the energy saving target. The Observatory will keep up its effort on energy conservation.

# Waste Management

To enhance waste reduction at source and promote recycling practices, the Observatory has implemented several waste management measures. These measures include:


*Newly added recycling bins on each floors*

- Adding recycling bins to every floor of the building to promote recycling;
- Adopting reusable tablewares at departmental functions, and refillable stationeries at daily operation;
- Banning the sales of beverage drinks packed in plastic bottles and tetra paks;
- Reducing paper usage through electronic means;
- Setting up shared printers to reduce the purchases of printers and toner cartridges;
- Collecting empty toners and inkjet cartridges of computer printers for recycling.

## Waste Management Performance

Annual quantity of waste generated (Kilogram)

**≈ 133 859**

Annual quantity of recycled waste (Kilogram)

**≈ 900**



# Air-Quality

## Indoor Air Quality Certification

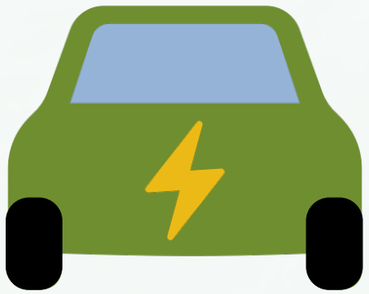
To ensure a healthy work environment with high air quality standards, the Observatory has actively participated in the IAQ Certification Scheme.

Notably, the Brothers Point Terminal Doppler Weather Radar Station has achieved an “Excellent” class certification, while the Observatory‘s Headquarters buildings have consistently obtained “Good” class certifications over the years. Additionally, newly included sites such as the Miramar office and King’s Park office have also received "Good" class certifications.

These achievements affirm the Observatory's commitment to maintaining excellent indoor air quality across its facilities.



## Environmental Friendly Vehicles



The Observatory is also planning to replace its departmental vehicles with electric vehicles (EVs) as part of its efforts to reduce its carbon footprint.

# Green Synergy

As part of our core values, the Observatory places significant importance on the active participation of its colleagues in various topics, including green initiatives.

The Observatory has established various committees, including the “Working Group on Energy and Environment” and “Buildings, Grounds and Accommodation Committee”, with the aim of fostering colleague participation in green issues. These committees collect views from staff members across different grades and ranks, contributing to the enhancement of the development, monitoring, and implementation of environmental policies.

The Observatory has also been supporting and participating actively in various green events organised by NGOs and other parties, including –


*Dr. Chan Pak Wai, JP, DHKO was invited to be one of the officiate guests for Earth Hour 2023*


*No Air Con Night 2023*


*Green Low Carbon Day 2023*

# Carbon Audit

In 2024, we conducted a carbon audit for the fiscal year 2022/23 of the Observatory's premises. The total greenhouse gas (GHG) emissions amounted to 1 990 tonnes of carbon dioxide equivalents, reflecting a decrease of 2.7% compared to the previous year.

## Paper

Through the implementation of various measures and diligent monitoring of the daily paper usage, the Observatory in fiscal year 2022/23 has achieved its reduction rate at 12.3%, saving 1 387 reams of paper compared to the baseline figure set in 2019/20. This achievement marks the successful fulfillment of the 5% reduction target for paper consumption.

## Water

In 2023, the Observatory has successfully reduced water consumption by 2.5% compared with the previous year, bringing the total usage down to 11 395$m^3$. This achievement reflects the Observatory’s commitment to sustainability and responsible water management. The Observatory will continue to seek further improvements in its water saving strategy.

## Others

The Observatory has consistently adhered to government regulations and guidelines regarding green procurement. For instance, the e-Procurement system has been fully implemented to minimize paper usage in supply and procurement activities. Additionally, green procurement specifications have been included in tender documents whenever appropriate.

# Bio-diversity

The Observatory is dedicated in protecting the site's bio-diversity and devotes effort in preserving the natural habitat of trees and vegetation at the headquarters.

The woodland at the Observatory headquarters is one of the few remaining semi-natural woodlands in Kowloon. It provides a habitat for local wildlife, especially birds, in the urban area. The most common ones are the Spotted Dove, Chinese Bulbul, Crested Bulbul, Magpie Robin, Black-necked Starling, and White-eye. In spring and autumn, the observatory's woodland provides temporary shelter for many migratory birds such as flycatchers and thrushes. In fact, some migratory birds such as Brown Flycatcher, Blackbirds and Grey-backed Thrush often stay in the observatory's woodlands throughout the winter.



# Tree conservation

To help with the annual tree management activities at the Observatory Headquarters, we have engaged certified arborists to conduct inspections and assessments to identify trees that are in poor conditions. Regular tree pruning is performed to enhance tree health and improve structural integrity by removing dead, diseased, and excessive branches. Additionally, advice and recommendations are also sought on the appropriate species, especially native species, for planting and selective thinning in order to foster a thriving green environment.

Among the trees in the Observatory headquarters, a *Ficus microcarpa* (細葉榕) was infected by Brown Root Rot Disease, an incurable plant disease causing by the aggressive fungal pathogen that can lead to swift deterioration in tree health and may result in tree collapse. To ensure its well-being, we engaged certified arborists to conduct inspections every three months. Additionally, we have implemented measures such as the diversion of aerial roots and monthly treatments with Trichoderma and fungicide to surpass pathogenic fungi. Furthermore, the placement of biochar enhances water retention in the soil, thereby facilitating the development of adventitious roots. These proactive steps demonstrate our commitment to maintaining the health and vitality of our trees at the Observatory.

*Regular tree pruning conducted at the Observatory Headquarters*


*Tree inspection done a Ficus microcarpa*

# Staff Development and Engagement

*Examples of the certification.*

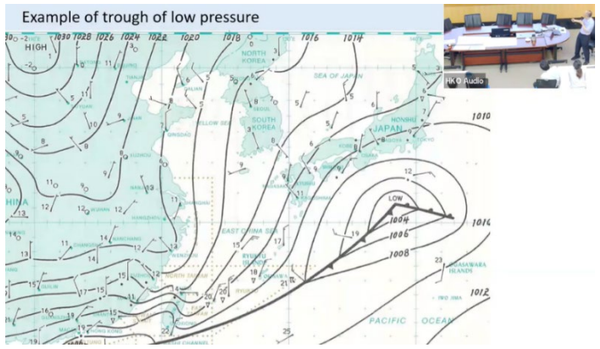
## Staff Development

### Training

Training and development are crucial to the assurance of professional, technical and core competencies in support of the long-term sustainable development of the Observatory towards the vision of being a model of excellence in protecting lives and building a better society through science.

The annual Departmental Training and Development Plan developed by the observatory announces the goals, guidelines, opportunities, and plans for the upcoming years to all employees across all grade levels.






*Example of training programme*

The training programmes provided to our staff are designed to enhance essential competencies, including leadership and the delivery of public services, they also support colleagues in keeping pace with the global trends such as international relations, machine learning, Internet of Things (IoT) technologies, and intelligent crowdsourcing for big data analytics.

The Observatory has also introduced various initiatives to promote knowledge management and foster a culture of ongoing learning, including:

1. Voluntary Mentorship Programme;
2. a Sharing Databank;
3. a Cyber Learning Centre; and
4. regular Technical Forum, Weather Review Forum and Management Forum.

**3578**

Total Training Hours

**9.9** Man-days

Average training time

## 8th Consecutive year recognised as a Manpower Developer

The Employees Retraining Board (ERB) once again commended the Observatory as a "Manpower Developer" for the eighth year in a row, with validity of two years, to recognise Observatory's achievements and dedication to the nurturing and development of talent.


*Leadership Development Programme*

In January 2024, the Observatory organised a three-day leadership training programme designed to empower our supervisory staff with essential leadership skills and insights. This programme featured a lineup of diverse experts, each bringing their specialised knowledge and experiences to enhance participants' understanding of effective leadership.



# Occupational Safety and Health

*Equipment installation in outstation*

Ensuring the Occupational Safety and Health (OSH) of our staff is a fundamental code for the Observatory's Business. To maintain a safe working environment, we regularly encourage our staff members to participate in OSH courses organised by relevant Government Bureaux and Departments. The "General Training Course on OSH" offered by the Civil Service Bureau is an example of this initiative. Circulation of online materials on OSH was also regularly made to raise staff awareness.

The Observatory also acknowledges the significance of a healthy workplace in enhancing staff morale and engagement, which can ultimately lead to improved operational efficiency and service quality.

The Observatory is a signatory to the Mental Health Workplace Charter of the Department of Health, demonstrating our commitment to promoting mental health and fostering a supportive work environment for our employees.

精神健康職場約章
Mental Health Workplace Charter

精神健康友善卓越機構
Mental Health Friendly Supreme Organisation

*The "Caring Organization" logo*

*Manage Work Stress Workshop*

In addition to the stress management workshops that CSB organised, internal staff workshops were conducted during the year for staff participation. We also received the "Caring Organization" logo, which further embodies the spirit of giving back to the community.

# Staff Engagement

The morale and well-being of staff are essential components of effective governance and service delivery. The Observatory remains committed to fostering and enhancing mutual understanding and support between management and employees.

To gather feedback and perspectives from staff, initiatives such as a Staff Suggestion Scheme and Staff Opinion Survey have been implemented. Additionally, a face-to-face meeting between the director of the Observatory and all staff members was organised to encourage open communication and strengthen mutual understanding.


*The face-to-face discussion session of the staff opinion survey*


*Commendation Letter Presentation Ceremony*

The Observatory also undertakes a multitude of initiatives aimed at enhancing staff well-being and promoting unity. These initiatives encompass Departmental Consultative Committee Meetings, which serve as a forum for deliberation on matters pertaining to staff, as well as a commendation scheme which honor staff members who exhibit exceptional continuous performance or noteworthy contributions, serving as a testament to the department's appreciation for their diligent efforts.



The Observatory launched the “Happy Business” programme in 2004. Through sowing the nine seeds of happiness, viz, teamwork, communication, appreciation, love, wisdom, health, family, environment and recreation, the Programme aims to help colleagues in the department to derive happiness from their careers and to serve the public in a happy mood.

One of the activities was to visit the Airport Meteorological Office in Air Traffic Control Tower, providing staff and their family members an opportunity to experience the process of making weather observation and preparing weather report by the Observatory's personnel.


*Poster of “Happy Business”*

*The AMO is the designated meteorological authority in Hong Kong to provide weather facilities and services for international air navigation.*

*Team-building activities organsied by the staff association*

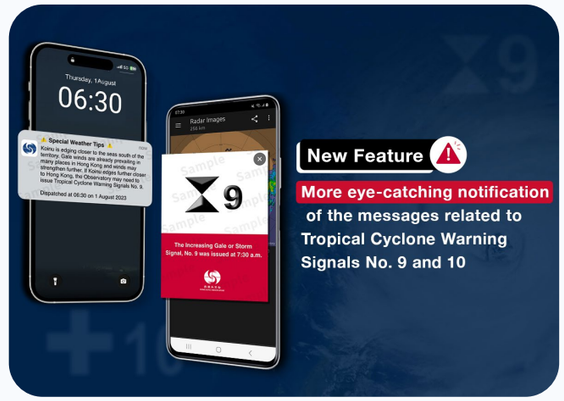
The Hong Kong Observatory Staff Association fosters staff relations, promotes wellbeing, and enhances morale through social and team-building activities organized by a dedicated volunteer team. All staff members are encouraged to participate actively.

# Highlights of the Year 2023/24

## Service Enhancement

**Strengthening Information Dissemination Service**

In May 2024, the Observatory launched a new version of the "MyObservatory" to strengthen information dissemination. When Tropical Cyclone Warning Signal No. 8 is in force, and the Observatory issues the "Special Weather Tips" (SWT) about the possible issuance of Tropical Cyclone Warning Signal No. 9, the SWT will be delivered through the push notification of the "MyObservatory".



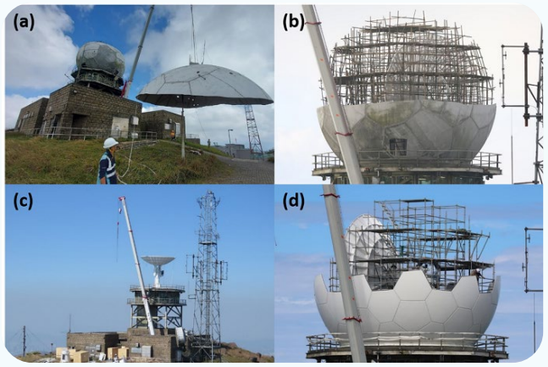


In addition, when Tropical Cyclone Warning Signals No. 9 or 10 is issued, the notification shown on the "MyObservatory" will also include visual elements to make the messages more eye-catching and ensure a clear view of the related information.

The new function has been supported on the latest version of the app on the platforms of iOS, Android and Huawei.

**New weather radar at Tai Mo Shan**

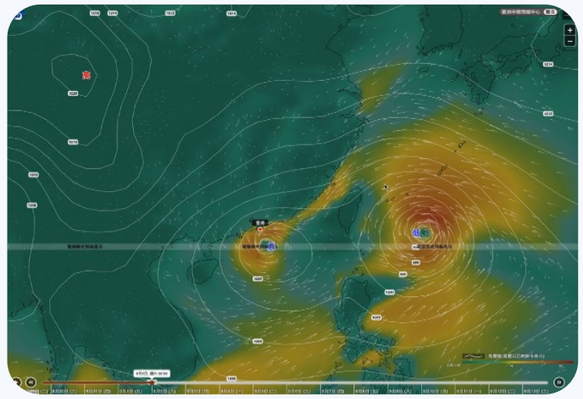
The new Tai Mo Shan weather radar of the Hong Kong Observatory was installed in March 2024 and has come into operation to provide essential observation data for monitoring various inclement weather conditions including thunderstorms, rainstorms and tropical cyclones.



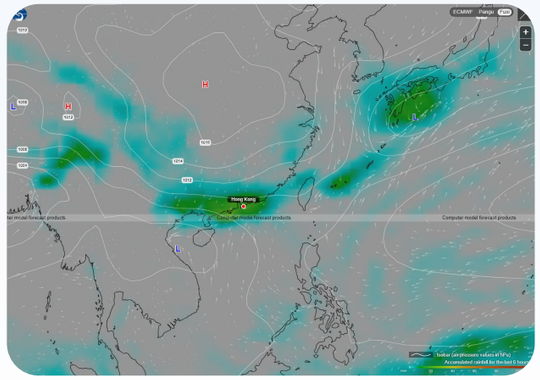

*New weather radar at Tai Mo Shan*

**Enhancing "Earth Weather" website service**

The Observatory enhanced the contents of the "Earth Weather" website by extending the forecast period of computer model weather forecasts from ten to fifteen days to enable users to anticipate potential changes in weather in advance. Taking the opportunity of AI development, the Observatory introduced "Pangu" AI model in October last year and started running the model for weather forecasting.



*Forecast by the "Pangu model"*



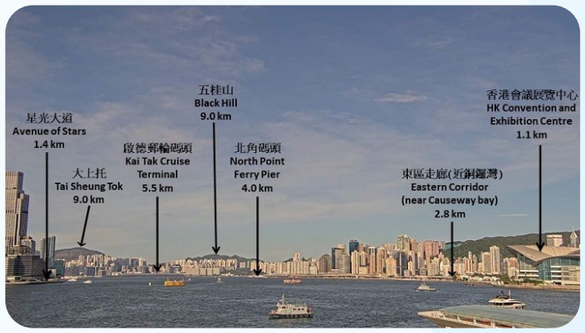
*Forecast by the "Fuxi model"*

**Addition of "Pangu" & "Fuxi" AI Model**

In addition, another AI model, "Fuxi", has also been added to the website in May 2024. The forecasts of "Fuxi model" include wind direction, wind speed, air temperature, relative humidity, mean sea-level pressure and rainfall for the coming fifteen days.

**Addition of real-time weather photos at Central and enhancement of urban-scale meteorological observation and forecast**

The Observatory has added real-time weather photos at the Hong Kong Maritime Museum (HKMM) at Central Pier, as well as the observation and forecast of temperature and relative humidity from the urban meteorological monitoring station at HKMM to the Observatory's website in December 2023. This enhances public's understanding of the latest weather conditions over Central and the Victoria Harbour.




*Distance between each location and the camera is shown in unit of kilometer*



# A New Look of MyObservatory


In March 2024, the Observatory launched a new version of the "MyObservatory" with a facelifted menu design supporting bookmark and search functions within the menu, enabling quick access to frequently used pages by users.


# A New Friend of Dr. Tin

In addition to asking HKO's chatbot "Dr. Tin" on the "MyObservatory" and the HKO website about weather-related information, "Bonny", the chatbot on the GovHK website, can ask "Dr. Tin" on behalf for local weather information when users visit the GovHK website.

# Collaboration

The Observatory actively seeks opportunities for cooperation to broaden our vision and assume greater social responsibility.


*Commissioning Launch Ceremony*

**Guangdong-Hong Kong-Macao Greater Bay Area Meteorological and Warning Center (Hong Kong)**

The Guangdong-Hong Kong-Macao Greater Bay Area Meteorological Monitoring and Warning Center (Hong Kong) officially commenced preparation work with a view to fostering the high-quality development of meteorological services in the Guangdong-Hong Kong-Macao Greater Bay Area.

**Update of "Arrangement in Long-term Co-operation in Meteorological Science and Technology"**

The Observatory and China Meteorological Administration further expanded the scope of "Arrangement in Long-term Co-operation in Meteorological Science and Technology".


*Dr Chan Pak-wai, Director of the HKO (right) and Dr Chen Zhenlin, Administrator of the CMA (left)*


*Dr Chan Pak-wai, Director of the HKO (right) and Mr Jimmy Gomoga, Director of the Papua New Guinea National Weather Service (left)*

**Memorandum of Understanding on meteorological cooperation with Papua New Guinea National Weather Service**

The Observatory and Papua New Guinea National Weather Service signed a memorandum of understanding via videoconferencing to enhance collaboration and exchange in aeronautical meteorological science and technologies.



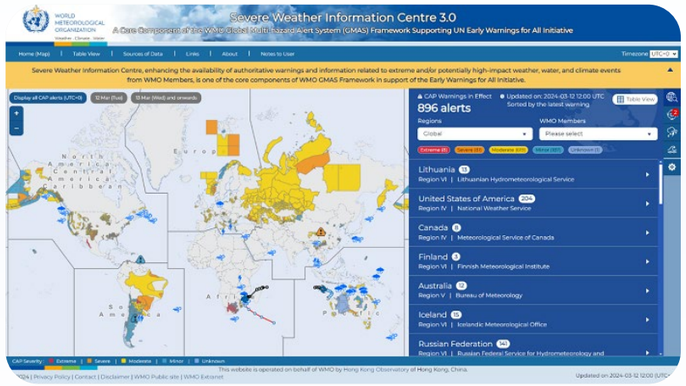

*Professor Celeste Saulo, Secretary-General of the World Meteorological Organization (right) and Dr Chan Pak-wai, Director of the HKO (left)*

**HKO and WMO update Memorandum of Understanding (MOU) to further strengthen meteorological co-operation**

The updated MOU was signed by Dr Chan Pak-wai, the Director of the HKO, Permanent Representative of Hong Kong, China and Professor Celeste Saulo, the Secretary-General of the WMO.

**Launching of the SWIC 3.0 website**

After signing the renewed MOU, Dr Chan and Professor Saulo officiated at the launching ceremony of the SWIC 3.0 website. In contributing to the United Nations' Early Warnings for All initiative, the SWIC 3.0 website was enhanced to make available official warnings in standard protocol from more than 130 WMO Members.




*Severe Weather Information Centre (SWIC 3.0) website*

**Director of the HKO elected co-Vice-President of WMO Technical Commission**

The Director of the HKO, Dr Chan Pak-wai, was elected with a high vote as a co-Vice-President of the Commission for Observation, Infrastructure and Information Systems (INFCOM) of the World Meteorological Organization. He is the first Asian to take up a leadership position in the INFCOM.

*Group photo taken with Dr Chan Pak-wai, Professor Celeste Saulo, and other elected President and co-Vice-Presidents of INFCOM*

# Public Engagement

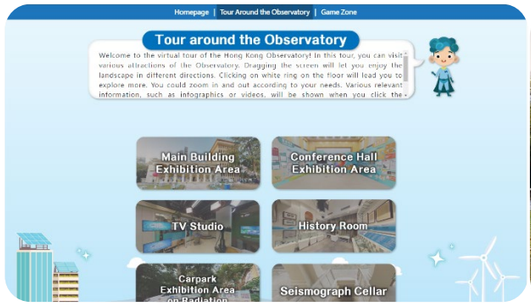

**Hong Kong Observatory Open Day 2024**

Hong Kong Observatory Open Day 2024 was successfully held on March 23rd and 24th. The public response was overwhelming, with about ten thousand visitors attending the event.


The Open Day adopted the theme of the World Meteorological Day this year, “At the frontline of climate action”. It featured various games and exhibition, introducing the impact of climate change. Visitors actively participated in the Open Day and learnt about energy saving and emission reduction while gaining a deeper understanding of the observatory’s services

The Observatory also invited various community groups, including participants of the “Strive and Rise Programme” and uniformed youth groups, to join the Open Day. Talks on careers with the Observatory and the impacts of climate change were specially organised for participants of the “Strive and Rise Programme”, with an aim of enhancing their awareness of climate change and providing them with a better understanding of the Observatory’s work.






## Hong Kong Observatory Online Open Day 2024

The Observatory has also launched an “Open Day” website. Members of the public can simply visit the “Observatory Online Open Day 2024” homepage to enjoy virtual tours of the Observatory’s headquarters from the comfort of home, and learn about the Observatory’s work and services.


**Tropical Cyclone Name Collection Activity**

The Observatory organised the “Tropical Cyclone Name Collection Activity” in 2023, with an aim to raise public awareness and knowledge of hazards caused by tropical cyclones. The activity received impressive response from the public and attracted over twenty thousand votes.

**Guided Tour of the Hong Kong Observatory**

The Observatory organised guided tour to take visitors backward in time to trace the development of the Observatory in the past 140 years. Attendees can see how weather forecasts are made and how technology is put to use. The tour also includes stops at sophisticated historical structures, allowing attendees to delve into the Observatory's extensive history.

# Education

The Observatory continues to produce various educational contents, including new episodes of “Cool Met Stuff” and online video courses on tropical cyclone, to enhance awareness and knowledge of meteorology among the public.


*“Cool Met Stuff” 10th Anniversary special episode*

**“Cool Met Stuff” Series**

“Cool Met Stuff” produced by the Observatory was first broadcast on 3 January 2014, and over 400 episodes have since been aired.

**Featured programme “Time Travel Climate Mission”**

To commemorate the Observatory's 140th anniversary, The Observatory and Radio Television Hong Kong jointly produced “Time Travel Climate Mission”, combining drama and documentary content to explore the possible impacts of climate change on human life in future, and ways the Observatory helps to protect public safety through science.

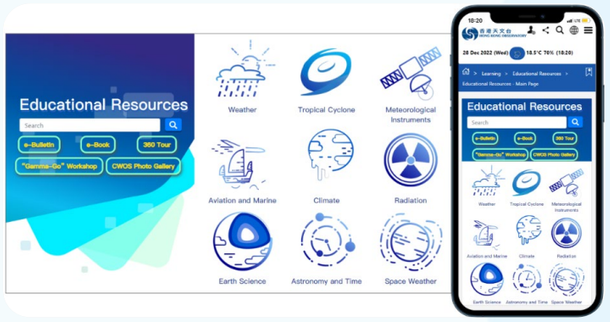

*Poster of "Time Travel Climate Mission"*


**Online Video Course on Tropical Cyclone**

In addition, all tropical cyclones episodes of the “Online Video Course on Tropical Cyclone” are now available in both Chinese and English, to increase accessibility for people from different language background.

**Educational Resources**

All the educational resources have been uploaded to the Educational Resources website. The website attracts over ten million page views every year.







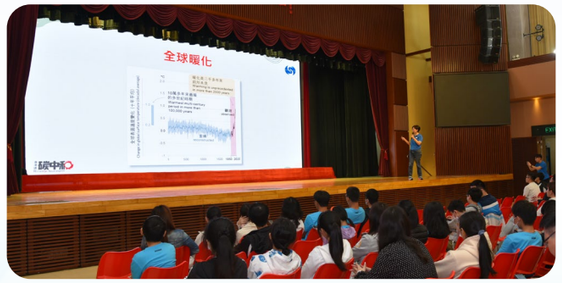
*"Science in the Public Service“*

**Science in the Public Service**

The Observatory has fully engaged in the Science in the Public Service, a joint campaign organised by the Government bureaux or departments and other organisations to promote their scientific work and application of technology to the provision of services for the general public.

**Courses and Activities for the Public**

The Observatory organised several workshops and courses to promote various meteorological and radiation knowledges.


**Climate change talks**

To promote students' awareness and understanding of climate change issues, the Observatory has delivered 43 climate change talks to over 5500 participants in year 2023.

**"Gamma-Go" Teacher Workshops**

In partnership with the Education Bureau, the Observatory organised the "Gamma-Go" Teacher Workshops, which were attended by more than 30 secondary school teachers.

# Awards and Recognition


*Hong Kong Awards for Environmental Excellence 2023*

The Observatory was awarded the Certificate of Merit under the 2022 Hong Kong Awards for Environmental Excellence in recognition of its continual and dedicated devotion in protecting the environment.

The Cool Met Stuff episode "Carbon Multiverse" and "Flooding can occur even during Amber rainstorms (Parts 1 and 2)" produced by the Hong Kong Observatory won the third prize in the short video category and the professional category of the 2023 China Science Film and Video "Kelei Cup" respectively. The "Kelei Cup" is known as the highest award for science film and video in China. This award recognizes the Observatory's efforts in promoting science education.


*Kelei Cup 2023*


*Hong Kong ICT Awards 2023*


*13th Guangdong-Hong Kong IoT Competition*

The Hong Kong Observatory won the Smart Mobility Award (Smart Transport) Bronze Award of the Hong Kong ICT Awards 2023 and Best IoT Innovation Award in the 13th Guangdong-Hong Kong Internet of Things (IoT) Competition with its application "Estimation of Standing Water Conditions on Airport Runways".



# Verification Statement

I have verified the information and data of the Sustainability Report for Fiscal Year 2023/24. I confirm that the data presented in the Sustainability Report for Fiscal Year 2023/ 24 are authentic and the methodology for the collection and analysis of data is appropriate. The report represents an accurate account of the Observatory's sustainability actions and performance in the fiscal year of 2023/24.

*Liza Siu*
*Green Manager*
*Hong Kong Observatory*

# CONTACT

This report is available on our homepage at the following link or QR code:

https://www.hko.gov.hk/en/publica/publica.htm

If you wish to obtain further information or raise any suggestions about this report, please contact :

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| **Green Manager** | (852) 2926 8227 | dsec@hko.gov.hk |
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- End -

Hong Kong Observatory
December 2024