

Head 168 — HONG KONG OBSERVATORY

Controlling officer: the Director of the Hong Kong Observatory will account for expenditure under this Head.

Estimate 2026–27 **\$469.1m**

Establishment ceiling 2026–27 (notional annual mid-point salary value) representing an estimated 361 non-directorate posts as at 31 March 2026 reducing by nine posts to 352 posts as at 31 March 2027..... **\$258.1m**

In addition, there will be an estimated five directorate posts as at 31 March 2026 and 31 March 2027.

Controlling Officer's Report

Programmes

Programme (1) Weather Services	This programme contributes to Policy Area 7: Public Safety (Secretary for Environment and Ecology).
Programme (2) Radiation Monitoring and Assessment	This programme contributes to Policy Area 9: Internal Security (Secretary for Security).
Programme (3) Time Standard and Geophysical Services	This programme contributes to Policy Area 7: Public Safety (Secretary for Environment and Ecology).

Detail

Programme (1): Weather Services

	2024–25 (Actual)	2025–26 (Original)	2025–26 (Revised)	2026–27 (Estimate)
Financial provision (\$m)	406.4	413.4	413.4 (—)	413.4 (—)
				(or same as 2025–26 Original)

Aim

2 The aim is to provide weather forecasts and issue warnings to the public, special users, the shipping community and aviation groups in order to reduce loss of life and damage to property, and minimise disruption to economic and social activities during hazardous weather.

Brief Description

3 The Central Forecasting Office and Airport Meteorological Office of the Hong Kong Observatory (HKO) are responsible for the preparation and issuance of weather information, forecasts and various warnings on hazardous weather to the public, special users, the shipping community and aviation groups. HKO also promotes public awareness of, and community preparedness for, natural disasters. The work involves:

- operating a network of mostly automated weather stations;
- carrying out real-time exchange of data with meteorological centres in the world;
- receiving meteorological satellite imageries, and operating weather radar systems and other meteorological instruments;
- analysing meteorological data and computing the future weather by numerical modelling, and application of artificial intelligence (AI) and big data;
- disseminating weather information by different means;
- issuing warnings and advisory messages on hazardous weather such as tropical cyclones, storm surges, rainstorms, landslips, flooding, thunderstorms, windshear, fire danger and extreme hot and cold conditions; and
- conducting public talks, interviews and training courses as well as producing TV weather programmes and educational materials on hazardous weather phenomena.

4 In 2025, HKO fulfilled its performance pledge of issuing at least one bulletin every hour of the day, disseminating 100 per cent of the bulletins within ten minutes after each hour, and attained a forecast accuracy (as verified by objective means) of 90 per cent. The mobile weather application “MyObservatory” and HKO website remained as popular channels for disseminating weather information to the public, recording about 154 billion total page views in the year.

5 To meet the needs of the public, HKO enhanced the provision of weather services in 2025–26 through:

- enhancing its services on the HKO website and the “MyObservatory” by increasing the frequency of updating the radar and satellite images, and adding new product layers to enrich information on lower atmospheric rainfall and visibility;
- enhancing dissemination of extreme weather alerts by (i) notifying the public of the weather changes through “Special Weather Tips” when the Tropical Cyclone Warning Signal No. 9 might be issued, providing more vivid and eye-catching notifications when Tropical Cyclone Warning Signals No. 9 and 10 were issued via the “MyObservatory”, and conducting hourly briefings to the public to provide latest weather information when Black Rainstorm Warning Signals were in force; (ii) adding graphical presentation of rainfall categories on the “Regional Information of Heavy Rain and Thunderstorm” webpage and in the “MyObservatory”; and (iii) providing information about the potential occurrence of weather phenomena such as tornadoes or waterspouts through “Special Weather Tips”;
- enriching the “MyObservatory” with additional widget to display latest radar imageries, and enhancing the “Dr. Tin” chatbot service to answer questions about searching popular weather imageries such as weather photos, radar imageries, etc., lunar and solar eclipses, the dates of the 24 solar terms, and Gregorian-lunar calendar conversion; and
- enriching the “Earth Weather” on the HKO website and the “MyObservatory” by adding more weather prediction models including AI models and forecast products such as areas of potential thunderstorm.

6 HKO maintains a close surveillance of the weather at and around the Hong Kong International Airport (HKIA) and provides the aviation community with the weather information needed for its operations. In 2025–26, HKO strengthened weather service support for the Integrated Airport Centre of the HKIA by extending the shift hours of its Aeronautical Meteorological Advisers as and when necessary during tropical cyclone passages. As the Backup Centre of the Asian Aviation Meteorological Centre, HKO took over the role of the Main Centre from Beijing for one week every quarter to issue hazardous weather forecasts and advisories to aviation users in the Asian region.

7 Other noteworthy activities for 2025–26 include:

- implementing more weather prediction models and forecast products on high performance computer (HPC) system, and procuring additional computing power for the HPC to meet the increasing demand for weather services against extreme weather;
- providing weather services in support of various Mega Events including the National Games;
- continuously providing support to government users in strengthening overall capacity to cope with extreme weather, and to Labour Department in operating the Heat Stress at Work Warning;
- revamping the regional weather webpage on the HKO website to integrate observations from automatic weather stations and the corresponding forecasts;
- further enhancing the electronic flight bag weather mobile application “MyFlightWx” to provide inflight weather information to flight crews electronically and promoting its use to airlines operating from the HKIA;
- installing a new cloud radar at the HKIA to enhance cloud reporting and fog monitoring at the airport;
- replacing one aging Light Detection and Ranging (LIDAR) System to support the low-level windshear and turbulence warning service for the HKIA;
- implementing a solid-state weather radar for enhancing the operational backup of HKO’s long-range weather radars, and for monitoring of rainstorms and tropical cyclones through measurements of low-level winds and precipitation;
- organising educational events and outreach activities to engage the public, in particular young people and students, through the “Science in the Public Service” Campaign, the “Public Course on Weather Observation”, and the “Community Weather Information Network”, which included workshops, scientific talks, practicals, day camp, quiz competition and guided tours to HKO facilities;
- organising an online polling campaign for significant weather and climate events during 2021–2025 to raise public awareness of climate change;
- extending the quality management system on automatic meteorological measurements to include visibility measurements;
- installing equipment at the King’s Park Meteorological Station to measure ionospheric scintillations and launching the “Real-time Ionospheric Scintillation Monitoring” webpage on the HKO website to facilitate satellite-based operations, including low-altitude economy activities using drones;

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- organising training for meteorological personnel from the Belt and Road regions through the Meteorological Training Centre for Belt and Road Countries, including a workshop on “Artificial Intelligence Application in Weather Forecasting” in collaboration with the China Meteorological Administration (CMA), and an aviation meteorology attachment for personnel from the Malaysian Meteorological Department and Oman’s Directorate General of Meteorology;
- updating the Cooperation Plan between HKO and the Shanghai Meteorological Service to promote the development of modern meteorological services and operations in mega city;
- signing a Memorandum of Understanding with the Ministry of Water Resources and Meteorology of Cambodia to enhance collaboration and exchanges in meteorological science and technologies;
- continuously operating the website of Severe Weather Information Centre 3.0 on behalf of the World Meteorological Organization (WMO) to aggregate, share and disseminate warnings on hazardous weather, water, climate, and related environmental events globally on a one-stop-shop platform;
- exchanging tropical cyclone track forecasts of AI weather prediction models with members of the Typhoon Committee under the United Nations (UN) Economic and Social Commission for Asia and the Pacific / World Meteorological Organization;
- continuously serving as the Regional Specialized Meteorological Centre (RSMC) for Nowcasting designated by the WMO, providing severe weather nowcasting products, sharing nowcast software or developing technique in AI nowcasting applications, and participating in capacity building activities;
- introducing probabilistic forecasting for the onset and retreat of sea breezes at the HKIA to enhance runway operations;
- engaging with stakeholders and studying user requirements for essential weather support to facilitate the development of the low-altitude economy; and
- jointly setting up the Guangdong-Hong Kong-Macao Greater Bay Area Sea Level Centre and signing a co-operation agreement with the National Marine Data and Information Service of the Ministry of Natural Resources of China and the Macao Meteorological and Geophysical Bureau in April 2025.

8 The key performance measures in respect of weather services are:

Targets

	Target	2024 (Actual)	2025 (Actual)	2026 (Plan)
forecasts perceived as accurate by the public (%)#	78	77	77	78
accurate public forecasts as verified by objective means (%)	88	91	90	90
accurate forecasts as assessed by ship captains (%)	96	98	98	97
accurate forecasts as assessed by airline operators (%)	96	98	99	98
hourly local weather reports disseminated within the first ten minutes of each hour (%)	99	100	100	99

Indicators

	2024 (Actual)	2025 (Actual)	2026 (Estimate)
calls answered by the Dial-a-Weather system (million)#	3.8	3.7	3.8
telephone enquiries answered manually#	13 915	12 129	13 000
visits to the HKO websites (billion)^	169	154	160
companies and organisations subscribing to special weather and warning services	75	70	68
total revenue from the above subscribers (\$m)	0.7	0.8	0.7
media interviews and public lectures/talks on weather#	754	956	750
meteorological documents for flights departing Hong Kongφ	183 000	203 000	214 000
visits to the aviation weather information system (million)	319	336	348

The actual figures may vary from year to year depending on whether there are more weather changes of concern to the public in that particular year.

^ Figures measured in page views refer to the number of access to the HKO websites which include thematic websites, the Weather Wizard and the mobile application “MyObservatory”. The actual figures may vary

from year to year depending on whether there are more weather changes of concern to the public in that particular year.

φ The rise in number in 2025 is due to the increase in flight movements during the year.

Matters Requiring Special Attention in 2026–27

9 During 2026–27 HKO will:

- continue to provide early warning and forecasting services, regional weather services, and extended weather outlook;
- continue to develop and enhance nowcasting and forecasting services on high-impact weather for the public and special users;
- continue to apply the next-generation of AI and big data technologies to develop prediction systems for high impact weather;
- continue to conduct meteorological measurements at more sites using small unmanned aircraft;
- replace another aging LIDAR System to support the low-level windshear and turbulence warning service for the HKIA;
- launch an upgraded version of the electronic flight bag weather mobile application “MyFlightWx”, featuring enriched weather information and an enhanced user interface;
- continue to enhance capability in monitoring space weather, including installation of additional ionospheric scintillation monitoring stations in support of the development of low-altitude economy;
- continue to install more microclimate stations to expand the urban weather monitoring network;
- put on trial a weather service platform to support the implementation of low-altitude economy regulatory sandbox pilot projects;
- continue to enrich the content of the mobile weather application “MyObservatory” and HKO website;
- continue to enrich the “Earth Weather” with more forecast products from weather prediction models, including AI models;
- continue to enhance marine meteorological observations through the deployment of buoys, both drifting and moored over the South China Sea, and installation of meteorological equipment onboard more merchant and fishing vessels;
- acquire three sets of Phased Array Weather Radar System (PAWRS) to establish a PAWRS network in Hong Kong, enhancing HKO’s ability to conduct territory-wide monitoring and forecasting of high-impact weather events;
- continue to implement the numerical weather prediction models on the HPC system in support of weather forecast operation;
- continue to operate the RSMC for Nowcasting by providing AI-based regional nowcast products, supporting nowcasting technique development and capacity building activities, as well as upgrading community version of the nowcasting software;
- organise additional outreach activities in celebration of the 20th anniversary of the “Science in the Public Service” Campaign; and
- continue to organise training for meteorological personnel from the Belt and Road Regions through the Meteorological Training Centre for Belt and Road Countries, in collaboration with the CMA and other international organisations.

Programme (2): Radiation Monitoring and Assessment

	2024–25 (Actual)	2025–26 (Original)	2025–26 (Revised)	2026–27 (Estimate)
Financial provision (\$m)	36.2	35.0	35.0 (—)	33.7 (–3.7%)
				(or –3.7% on 2025–26 Original)

Aim

10 The aim is to provide information on environmental radiation levels in Hong Kong and advise government departments on the protective action that may be necessary during nuclear emergencies.

Brief Description

11 HKO monitors ambient radiation levels in Hong Kong and conducts radiological measurements on air, soil, water and food samples. In the event of a nuclear emergency, HKO will notify and advise government departments on the possible consequences in Hong Kong and recommend protective action. HKO organises training and exercises on radiation monitoring, assessment and protection for other government departments involved in the Hong Kong contingency plan for nuclear emergencies. The work involves:

- operating a network of radiation monitoring stations, an aerial radiation monitoring system, two radiological survey vehicles, a radiation laboratory and an emergency radiation data management system;
- keeping abreast of the latest development on the methodology for nuclear accident consequence assessment; and
- planning and participating in exercises and drills in response to nuclear emergencies.

12 In 2025–26, all radiation monitoring and assessment work in this programme was carried out satisfactorily. All equipment was maintained in a state of readiness. Exercises, drills and training on radiation monitoring, assessment and protection were conducted. The inter-comparison exercise between Hong Kong and Guangdong on gamma radionuclides measurement of soil, water, food and aerosol samples was carried out. Radiation monitoring of sea water samples in local waters in response to the discharge of nuclear-contaminated water from Fukushima of Japan continued. Outreach activities such as public and school talks were conducted to enhance public education. The school community ambient radiation measurement programme named “Gamma-Go” continued to promote students’ understanding of radiation through STEM activities.

13 The key performance measures in respect of radiation monitoring and assessment are:

Target

	Target	2024 (Actual)	2025 (Actual)	2026 (Plan)
data availability of radiation monitoring network (%).....	99.0	99.9	99.9	99.7

Indicators

	2024 (Actual)	2025 (Actual)	2026 (Estimate)
exercises and drills	22	22	22
visits to HKO’s webpage on radiationφ.....	5 681 946	4 339 273	5 000 000

φ The actual figures may vary from year to year depending on whether there are particular issues of concern to the public.

Matters Requiring Special Attention in 2026–27

14 During 2026–27, HKO will continue to:

- implement the agreed arrangements between Hong Kong and Guangdong on radiation monitoring and assessment;
- conduct drills, exercises and communication tests on emergency response in conjunction with other government departments as well as the relevant Guangdong counterparts;
- organise training on radiation monitoring and assessment;
- take forward the enhancement of radiation monitoring and assessment facilities, including the Accident Consequence Assessment System; and
- further promote outreach activities and the Gamma-Go programme to enhance public education on radiation.

Programme (3): Time Standard and Geophysical Services

	2024–25 (Actual)	2025–26 (Original)	2025–26 (Revised)	2026–27 (Estimate)
Financial provision (\$m)	19.5	22.0	22.0 (—)	22.0 (—)

(or same as
2025–26 Original)

Aim

15 The aim is to maintain the Hong Kong time standard and provide geophysical, oceanographic, astronomical and climatological information to the public.

Brief Description

16 HKO maintains the Hong Kong time standard, provides time signals for the public and contributes to the International Bureau of Weights and Measures for the determination of the universal standard time. It provides geophysical, oceanographic, astronomical, climatological information, climate projection, sub-seasonal to seasonal and annual forecast to meet the requirements for planning, engineering design and environmental impact assessments. It monitors earthquakes and the sea level and releases related information to the public, including the operation of the tsunami warning system. It also keeps abreast of research and development on international issues such as global climate change and advises the public and government bureaux/departments on the likely implications. The work involves:

- signing the Co-operation Agreement with the National Time Service Center of the Chinese Academy of Sciences to enhance collaboration in time measurement, time-keeping and time services, as well as the exchange of related experiences and technologies;
- maintaining a network of caesium beam atomic clocks as the Hong Kong time standard and providing time signals for radio broadcasts, automatic telephone answering service and synchronisation of clocks via the Internet;
- operating seismological, tide and sea level monitoring networks and conducting related analyses;
- carrying out real-time exchange of seismic data with overseas centres and disseminating earthquake information by various means;
- compiling climatological and other related data;
- conducting studies on climate change in Hong Kong and promoting public understanding; and
- providing updates on the effects of El Niño, La Niña and other longer-term atmospheric phenomena on Hong Kong.

17 In 2025–26, the objectives and targets of this programme were generally met through the following:

- implementing a new network of earthquake intensity meters over the territory to enhance capability in earthquake intensity analysis;
- providing scientific support to studies by relevant government bureaux/departments on the mitigation, adaptation and resilience-building measures required in combatting climate change and its impacts including extreme weather events;
- monitoring climate change-related scientific studies, and providing the latest assessment of climate change and its impacts to support policy making and action planning of relevant government bureaux/departments;
- enhancing the dissemination of historical extremes by launching the extreme total rainfall of automatic weather stations webpage; and
- promoting public understanding and awareness of climate change and its impacts through conducting school talks, participating in public fora, producing educational videos, and publishing articles and latest international research findings on global climate change on the HKO website.

18 The key performance measures in respect of time standard and geophysical services are:

Targets

	Target	2024 (Actual)	2025 (Actual)	2026 (Plan)
time standard accuracy (microseconds per day).....	0.01	0.01	0.01	0.01
geophysical, meteorological and oceanographic data capture rate (%)	99	100	100	99
climatological information (% of written requests responded to within ten working days).....	99	100	100	99

Indicators

	2024 (Actual)	2025 (Actual)	2026 (Estimate)
visits to HKO’s Internet time service (million) ^β	152 000	217 000	230 000
requests for geophysical, climatological and oceanographic information and advice ^Δ	489	488	500

^β Replacement of network time servers with upgraded hardware and software technologies in April 2024 has significantly boosted the capacity for processing public requests for time service in 2025.

^Δ The actual figures may vary from year to year depending on whether there are relevant events of concern to the public in that particular year.

Matters Requiring Special Attention in 2026–27

19 During 2026–27, HKO will continue to:

- undertake and support monitoring and assessment of earthquake, tsunami risk and sea level in the region;
- enhance its earthquake monitoring and intensity analysis as well as tsunami warning capability;
- enhance tide gauge data network to facilitate the monitoring of and research on sea level;
- enhance the reliability and resilience of time service provision;
- monitor and study climate change issues, enhance climate projections, as well as provide relevant government bureaux/departments with latest information and assessment of climate change and its impacts to support their studies;
- engage various stakeholders to promote the effective use of climate data in support of the emerging needs of different sectors and government bureaux/departments; and
- conduct outreach activities to promote public understanding of measures required in combatting climate change.

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ANALYSIS OF FINANCIAL PROVISION

	2024–25 (Actual) (\$m)	2025–26 (Original) (\$m)	2025–26 (Revised) (\$m)	2026–27 (Estimate) (\$m)
Programme				
(1) Weather Services.....	406.4	413.4	413.4	413.4
(2) Radiation Monitoring and Assessment ..	36.2	35.0	35.0	33.7
(3) Time Standard and Geophysical Services	19.5	22.0	22.0	22.0
	462.1	470.4	470.4 (—)	469.1 (–0.3%)
				(or –0.3% on 2025–26 Original)

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2026–27 is the same as the revised estimate for 2025–26. In addition, there will be a net decrease of nine posts in 2026-27.

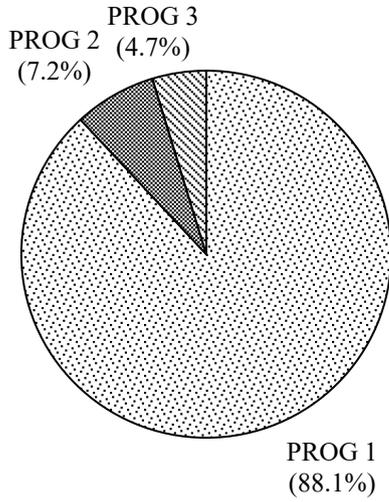
Programme (2)

Provision for 2026–27 is \$1.3 million (3.7%) lower than the revised estimate for 2025–26. This is mainly due to the decreased requirement for capital expenditure.

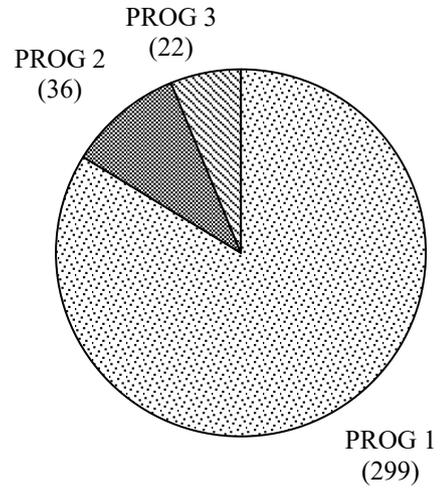
Programme (3)

Provision for 2026–27 is the same as the revised estimate for 2025–26.

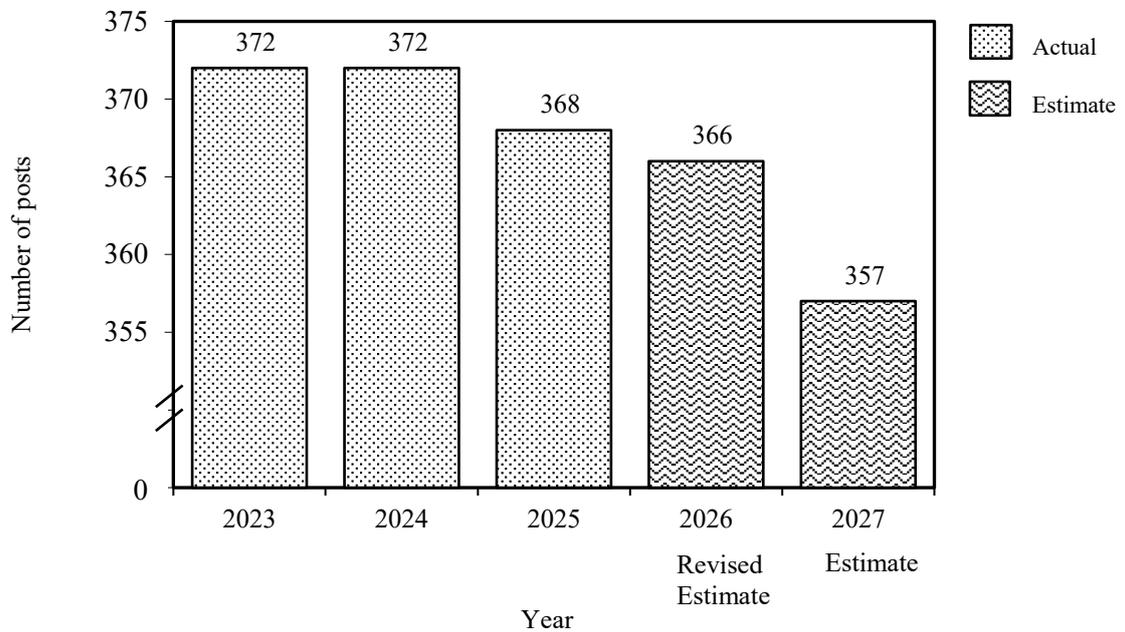
Allocation of provision to programmes (2026-27)



Staff by programme (as at 31 March 2027)



Changes in the size of the establishment (as at 31 March)



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Sub-head (Code)	Actual expenditure 2024–25	Approved estimate 2025–26	Revised estimate 2025–26	Estimate 2026–27	
	\$'000	\$'000	\$'000	\$'000	
Operating Account					
Recurrent					
000	Operational expenses	443,010	445,732	445,732	445,022
	Total, Recurrent.....	443,010	445,732	445,732	445,022
	Total, Operating Account	443,010	445,732	445,732	445,022
Capital Account					
Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote).....	19,074	24,690	24,690	24,094
	Total, Plant, Equipment and Works.....	19,074	24,690	24,690	24,094
	Total, Capital Account.....	19,074	24,690	24,690	24,094
	Total Expenditure	462,084	470,422	470,422	469,116

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Details of Expenditure by Subhead

The estimate of the amount required in 2026–27 for the salaries and expenses of the Hong Kong Observatory is \$469,116,000. This represents a decrease of \$1,306,000 against the revised estimate for 2025–26 and an increase of \$7,032,000 over the actual expenditure in 2024–25.

Operating Account

Recurrent

2 Provision of \$445,022,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Hong Kong Observatory.

3 The establishment as at 31 March 2026 will be 366 posts. It is expected that there will be a net decrease of nine posts in 2026–27. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2026–27, but the notional annual mid-point salary value of all such posts must not exceed \$258,071,000.

4 An analysis of the financial provision under *Subhead 000 Operational expenses* is as follows:

	2024–25 (Actual) (\$'000)	2025–26 (Original) (\$'000)	2025–26 (Revised) (\$'000)	2026–27 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	261,801	276,544	263,047	271,607
- Allowances.....	4,108	4,920	4,975	4,975
- Job-related allowances.....	834	1,700	1,580	1,620
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	1,003	864	789	960
- Civil Service Provident Fund contribution.....	19,740	22,704	21,688	24,966
Departmental Expenses				
- General departmental expenses	155,395	138,871	153,514	140,765
Other Charges				
- World Meteorological Organization.....	129	129	139	129
	443,010	445,732	445,732	445,022