

Director of Hong Kong Observatory highlights HKO's latest developments (with photo)

The Director of the Hong Kong Observatory (HKO), Dr Chan Pak-wai, hosted a press briefing today (March 21) to recap the weather in 2023 and elaborate on the weather outlook for Hong Kong this year as well as the HKO's latest developments.

Dr Chan pointed out that 2023 was the warmest year on record globally according to the assessment of the World Meteorological Organisation. The past nine years (2015 to 2023) were also the nine warmest years on record. In 2023, the global mean sea level reached an all-time high on satellite records, reflecting continued ocean warming as well as the melting of glaciers and ice sheets.

Under climate change, different parts of the world were ravaged by various extreme weather events in 2023. Locally, with all 12 months warmer than usual, 2023 was one of the second warmest years since records began in 1884. The annual mean temperature reached 24.5 degrees, 1.0 degree above the 1991-2020 normal. The annual mean minimum temperature of 22.6 degrees and annual mean maximum temperature of 27.2 degrees were one of the highest and one of the second highest on record respectively. The total number of 54 Very Hot Days (with a daily maximum temperature of 33.0 degrees or above) ranked as one of the highest on record. In addition, the number of Hot Nights (with a daily minimum temperature of 28.0 degrees or above) was 56 days, making it the second highest on record.

Looking ahead in 2024, the tropical cyclone season in Hong Kong is expected to start in June or later and cease in October or later. There will likely be about five to eight tropical cyclones coming within 500 kilometres of Hong Kong during the year, which is normal to above normal. With ongoing climate warming, the annual mean temperature in Hong Kong is expected to be above normal this year, with a high chance of reaching the top 10 on record. The annual rainfall is expected to be near normal, ranging from 2 100 millimetres to 2 700mm. However, Hong Kong may still be affected by heavy rain. Members of the public are reminded to be prepared for the rain and tropical cyclone seasons.

Dr Chan also highlighted the continual enhancement of the HKO's various services. Seizing the opportunity made possible by the developments in artificial intelligence (AI), the HKO started piloting AI-powered weather prediction models in mid-2023 for reference in preparing weather forecasts and predicting tropical cyclone tracks. In order to enable the general public to have knowledge of future weather changes at an early stage, the HKO launched products using the "Pangu" AI weather prediction model on the "Earth Weather" webpage in October 2023, and extended the forecast range to 15 days.

The HKO plans to further enhance the computer model forecast information on the "Earth Weather" webpage with forecast products of more computer models as well as weather forecast charts for the upper air. In addition, the HKO will launch monthly forecasts in the second half of this year to enhance climate forecast services. The forecast elements include monthly average temperature and total rainfall in tercile categories.

With the rainy season approaching, the HKO will further enhance the dissemination of information on severe weather situations. When the Black Rainstorm Signal is in force, the HKO will conduct hourly briefings to provide the public with the latest weather information. In addition, the HKO has just replaced the weather radar at Tai Mo Shan, and the new equipment is about to come into operation to monitor various inclement weather including thunderstorms, rainstorms and tropical cyclones.

As well, the HKO plans to enhance the service on the "MyObservatory" mobile application and add weather information for the Guangdong-Hong Kong-Macao Greater Bay Area in the second half of this year to enable users travelling in the region to receive the latest local weather information. Meanwhile, the "Dr. Tin" chatbot service will be upgraded to support voice functions on the "MyObservatory", making it more convenient for users to enquire about weather information.

Regarding international co-operation, the HKO will set up a virtual Meteorological Training Centre for Belt and Road Countries by the end of this year to provide online and in-person training for meteorological personnel from Belt and Road regions, enhancing their capabilities to respond to hazardous weather and extreme weather events, as well as tackle natural disasters and strengthen resilience. The first planned training will be a workshop on aviation meteorology science and service development to be held at the end of 2024. It is believed that the project can consolidate Hong Kong's position as a regional centre for meteorological advancements, and strengthen exchanges and co-operation among Belt and Road regions.

The HKO's open day will be conducted on March 23 and 24 (Saturday and Sunday) with the World Meteorological Day theme "At the frontline of climate action". It aims to raise public awareness on climate change and extreme weather, as well as encourage concrete action to combat climate change. Apart from participating in person with a valid admission ticket, members of the public can also visit the virtual tour on the Hong Kong Observatory Open Day 2024 webpage, which will be launched on March 23, to learn more about the HKO's work and services.

Dr Chan's speech at the press briefing is available on the HKO's website at www.hko.gov.hk/en/dhkovoice/files/speech20240321e.pdf.

