

2023 was second warmest year on record for Hong Kong

Globally, 2023 is likely to be the warmest year on record according to the World Meteorological Organization's preliminary assessment. The global mean sea level continued to rise, reaching a new record high in 2023. Over the Arctic, sea-ice extent remained well below average in the year and the minimum sea-ice extent in September was the sixth lowest in the satellite record. In 2023, different parts of the world were ravaged by various extreme weather events, including heatwaves in many parts of the world, including Europe, North Africa, southern China, Japan and much of Southeast Asia; severe drought in northwestern Africa, the Greater Horn of Africa region, parts of the Iberian Peninsula, parts of central and southwest Asia, many parts of Central America, northern South America, parts of Canada and the United States; extreme rainfall that triggered severe flooding in China, India, Pakistan, Nepal, Greece, southern Bulgaria, parts of Türkiye, northeastern Libya, Spain, and the North Island of New Zealand; and severe damage and heavy casualties brought by tropical cyclones in Mozambique, Malawi, Madagascar, Zimbabwe, Sri Lanka, Myanmar, India, Bangladesh, the Philippines and China. Rampant wildfires also wreaked great havoc in Greece, Hawaii and Canada.

The La Niña event of 2022 lasted till January 2023. Sea surface temperatures of the central and eastern equatorial Pacific continued to increase in the following months. An El Niño event was established in August 2023 and persisted through to the end of the year.

In Hong Kong, with all 12 months warmer than usual, 2023 was one of the second warmest years on record with the annual mean temperature reaching 24.5 degrees, 1.0 degree above the 1991-2020 normal (Note 1). The annual mean minimum temperature of 22.6 degrees and annual mean maximum temperature of 27.2 degrees were respectively one of the highest and one of the second highest since records began in 1884. In particular, the mean temperature for summer (June to August) reached 29.7 degrees, the highest on record. The highest temperature recorded at the Hong Kong Observatory in the year was 36.1 degrees on July 27, one of the third highest on record. There were 54 very hot days (Note 2), 56 hot nights (Note 3) and four extremely hot days (Note 4) in Hong Kong in 2023, respectively ranking as one of the highest, the second highest and one of the fifth highest on record.

The lowest temperature recorded at the Observatory in the year was 8.1 degrees on December 23. The number of cold days (Note 5) in the year was 14 days, 1.2 days less than the 1991-2020 normal.

2023 was characterised by a dry spring and summer, and very wet autumn. Mainly owing to the record-breaking rainfall in autumn, the annual total rainfall in 2023 was 2 774.5 millimetres, about 14 per cent above the 1991-2020 normal of 2 431.2 millimetres. Eight red rainstorm warnings and two

black rainstorm warnings were issued by the Observatory in the year. The number of days with thunderstorms reported in Hong Kong was 40 days in 2023, about two days fewer than the 1991-2020 normal.

A total of 19 tropical cyclones occurred over the western North Pacific and the South China Sea in 2023, fewer than the long-term (1961-2020) average of about 30. There were 11 tropical cyclones reaching typhoon intensity (Note 6) or above during the year, fewer than the long-term average of about 15, and five of them reached super typhoon intensity (with maximum 10-minute wind speeds of 185 km/h or above near the centre). In Hong Kong, five tropical cyclones necessitated the issuance of tropical cyclone warning signals, slightly fewer than the long-term average of about six in a year. The Hurricane Signal No. 10 was issued during the passage of Saola in September, the Increasing Gale or Storm Signal No. 9 was issued during the passage of Koinu in October and the Gale or Storm Signal No. 8 was issued during the passage of Talim in July.

Detailed descriptions of the weather for individual months are available on the Monthly Weather Summary webpage:

www.weather.gov.hk/en/wxinfo/pastwx/mws/mws.htm.

A detailed version of the Year's Weather for 2023 with some significant weather events in Hong Kong is available at:

www.weather.gov.hk/en/wxinfo/pastwx/ywx.htm.

Note 1: Climatological normals for the reference period of 1961-1990, 1971-2000, 1981-2010 and 1991-2020 are available at:

www.weather.gov.hk/en/cis/normal.htm. Climatological normals of 1991-2020 are referenced in the text unless otherwise stated.

Note 2: "Very hot day" refers to the condition with the daily maximum temperature equal to or higher than 33.0 degrees.

Note 3: "Hot night" refers to the condition with the daily minimum temperature equal to or higher than 28.0 degrees.

Note 4: "Extremely hot day" refers to the condition with the daily maximum temperature equal to or higher than 35.0 degrees.

Note 5: "Cold day" refers to the condition with the daily minimum temperature equal to or lower than 12.0 degrees.

Note 6: Information on the classification of Tropical Cyclones is available at: www.weather.gov.hk/en/informtc/class.htm.