

2020 second warmest year on record for Hong Kong

With 11 months warmer than usual, 2020 was the second warmest year for Hong Kong since records began in 1884. The annual mean temperature of 24.4 degrees was 1.1 degrees above the 1981-2010 normal (Note 1). The annual mean maximum temperature of 27.2 degrees and the annual mean minimum temperature of 22.5 degrees were the highest and the second highest on record respectively. In particular, the mean temperature, the mean maximum temperature and the mean minimum temperature for summer from June to August reached 29.6 degrees, 32.6 degrees and 27.7 degrees respectively, all the highest on record. The highest temperature recorded at the Hong Kong Observatory in the year was 35.3 degrees on July 23, one of the joint 12th highest on record. There were 50 Hot Nights (Note 2) and 47 Very Hot Days (Note 3) in Hong Kong in 2020, both the highest on record.

The lowest temperature recorded at the Hong Kong Observatory in the year was 8.1 degrees on December 31. The number of Cold Days (Note 4) in the year was 11 days, which is 6.1 days less than the 1981-2010 normal.

The annual total rainfall in 2020 was 2,395.0 millimetres, similar to the 1981-2010 normal of 2,398.5mm. Eleven red rainstorm warnings and two black rainstorm warnings were issued by the Hong Kong Observatory in the year. The number of days with thunderstorms reported in Hong Kong was 42 days in 2020, about three days more than the 1981-2010 normal.

A total of 25 tropical cyclones occurred over the western North Pacific and the South China Sea in 2020, less than the long-term (1961-2010) average of about 30. There were 11 tropical cyclones reaching typhoon intensity (Note 5) or above during the year, less than the long-term average of about 15, and three of them reached super typhoon intensity (with a maximum 10-minute wind speed of 185 kilometres per hour or above near the centre). In Hong Kong, five tropical cyclones necessitated the issuance of tropical cyclone warning signals, slightly less than the long-term average of about six in a year. The Increasing Gale or Storm Signal No. 9 was issued during the passage of Higos in August, while the No. 8 Gale or Storm Signal was issued during the passage of Nangka in October.

Globally, 2020 is on track to be one of the three warmest years on record according to the World Meteorological Organization's preliminary assessment. Over the Arctic, the sea-ice extents for July and October 2020 were the lowest on record for the respective months and the annual minimum in September was also the second lowest. In 2020, various extreme weather events continued to wreak havoc in different parts of the world, including heatwaves in Australia, the Caribbean region, Mexico, South America, western Europe, the eastern Mediterranean, Japan and Siberia; extreme cold events in North America and the southern part of South America; severe drought in the interior of South America, northern part of Central Europe and parts of

southern Africa; extreme rainfall which triggered severe flooding in large parts of Africa, South Asia, China, the Korean Peninsula, Vietnam and parts of western Japan; and severe damage and heavy casualties brought about by tropical cyclones in the United States, the Caribbean region, Central America, India, Bangladesh, Fiji, Vanuatu, the Philippines, the Korean Peninsula, western Japan and Vietnam. Exacerbated by widespread drought and high temperature, destructive wildfires ravaged California and Colorado of the United States, northern Siberia, eastern Australia and western Brazil.

A weak El Niño event was established in April 2020. Sea surface temperatures of the central and eastern equatorial Pacific dropped rapidly afterwards, but they returned to normal in May. The cooling trend continued into the second half of the year. Sea surface temperatures of the central and eastern equatorial Pacific dropped to below normal in September and remained colder than normal till the end of the year, indicating the development of a La Niña event.

Detailed description of the local weather for individual months is 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 2020 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 periods of 1961-1990, 1971-2000 and 1981-2010 are available at www.weather.gov.hk/en/cis/normal.htm. Climatological normals of 1981-2010 are referenced in the text unless otherwise specified.

Note 2: "Hot Night" refers to the condition with the daily minimum temperature equal to or higher than 28.0 degrees.

Note 3: "Very Hot Day" refers to the condition with the daily maximum temperature equal to or higher than 33.0 degrees.

Note 4: "Cold Day" refers to the condition with the daily minimum temperature equal to or lower than 12.0 degrees.

Note 5: Information on the classification of tropical cyclones is available at: www.weather.gov.hk/en/informtc/class.htm.