

# A cloudy May with localised heavy rain

May 2024 was characterised by cloudier-than-usual weather with localised heavy rain over parts of the New Territories. The mean amount of cloud in the month was 83 per cent, 7 per cent above the normal of 76 per cent. As for monthly rainfall, while over 700 millimetres of rainfall were recorded over parts of Sai Kung, the monthly rainfall recorded at the Observatory was only 292.6 millimetres, near the normal figure of 290.6 millimetres. The accumulated rainfall recorded in the first five months of the year was 582.1 millimetres, slightly below the normal figure of 590.9 millimetres for the same period. The monthly mean temperature of 26.0 degrees was slightly below the normal figure of 26.3 degrees. Attributable to the well-above-normal temperatures in March and April, spring this year from March to May was much warmer than usual. The mean temperature of 24.5 degrees, mean minimum temperature of 22.7 degrees and mean maximum temperature of 27.0 degrees were respectively the second, one of the second and the fourth highest on record for the same period.

Under the influence of a trough of low pressure, the weather of Hong Kong was unsettled with heavy showers and severe squally thunderstorms on the morning of May 1. More than 30 millimetres of rainfall were generally recorded over Hong Kong and rainfall even exceeded 50 millimetres over the eastern part of the territory. Violent gusts exceeding 100 kilometres per hour were also recorded at Cheung Chau. Under the rain, temperatures at the Observatory dropped to a minimum of 22.4 degrees the morning of May 1, the lowest of the month. Affected by a fresh to strong easterly airstream, it was mainly cloudy with a few showers on May 2 and 3.

The upper-air disturbances associated with the southern branch of a westerly trough affected southern China on May 4. Coupled with a significant low-level convergence and upper-level divergence, persistent thundery showers affected the vicinity of the Pearl River Estuary areas on that day. Locally, it was mainly cloudy with heavy showers and severe squally thunderstorms on May 4. More than 100 millimetres of rainfall were recorded over many places and rainfall even exceeded 400 millimetres over parts of Tseung Kwan O on that day. There were exceptionally severe rainstorms over some areas in the eastern part of the territory in the morning, with an hourly rainfall of 145.5 millimetres recorded at Tseung Kwan O. The heavy rain also necessitated the issuance of the first Red Rainstorm Warning Signal of the year. Moreover, violent gusts of about 110 kilometres per hour were recorded at Cheung Chau Beach that afternoon. According to preliminary reports, there were 16 reports of flooding including 12 cases in Sai Kung and Tseung Kwan O, and 15 reports of landslides in Sai Kung area. In the midst of the downpour, the temperature at the Observatory dropped to the month's lowest of 22.4 degrees again on that day.

With the departure of the upper-air disturbance, apart from thundery showers in the morning, the weather improved with sunny intervals during the day on May 5. Under the influence of an anticyclone aloft, it was mainly fine

and hot during the day on May 6. While there were sunny periods on the morning of May 7, the weather became cloudier with a few showers and thunderstorms in the afternoon with the setting in of an easterly airstream. The easterly airstream strengthened gradually and continued to affect the coast of Guangdong, the local weather was mainly cloudy with sunny intervals from May 8 to 11. While the local weather was hot with sunny intervals during the day on May 12, a trough of low pressure edged closer to the coast of southern China and brought heavy showers and thunderstorms to some areas of Hong Kong in the afternoon. More than 30 millimetres of rainfall were recorded over Sha Tin and Sai Kung. With the weakening of the trough of low pressure, the weather became less showery with sunny intervals during the day on May 13.

With the setting in of a fresh to strong easterly airstream on the night of May 13, apart from a few showers on that night and at first the next day, the weather was mainly fine from May 14 to 16. It was very dry during the day on May 16 and the relative humidity over most parts of the territory once fell below 40 per cent. The weather turned cloudier on May 17 and 18. Affected by a trough of low pressure lingering over the coastal areas of Guangdong and the subsequent upper-air disturbance, the local weather became mainly cloudy with occasional showers and a few thunderstorms from May 19 to 25. The showers were particularly heavy on May 21. More than 50 millimetres of rainfall were recorded over most parts of the territory and rainfall even exceeded 200 millimetres over parts of Lantau Island. With the departure of the upper-air disturbance, the showers abated with bright periods on the afternoon of May 26.

Under the influence of an active southerly airstream, it was mainly cloudy with showers and a few thunderstorms on May 27. Another trough of low pressure moved across the coast of Guangdong on the early morning of May 28 and brought heavy showers and thunderstorms to Hong Kong. Around 30 millimetres of rainfall were recorded over many places of the territory, and rainfall even exceeded 50 millimetres over Tai Po and Sai Kung. With the trough of low pressure moving to the northern part of the South China Sea, the local weather was hot with sunny intervals during the day on May 28 with temperatures at the Observatory rising to a maximum of 32.0 degrees, the highest of the month. Affected by a strong easterly airstream, it was dry with sunny intervals on May 29. The weather was mainly cloudy with a few showers on May 30. Meanwhile, a broad area of low pressure over the central to northern part of the South China Sea strengthened into a tropical depression on the afternoon of May 30 and the Observatory issued the first tropical cyclone warning signal of this year. The tropical depression intensified into a tropical storm and was named Maliksi on May 31. With Maliksi edging towards the coast of western Guangdong, the local weather deteriorated gradually with occasional showers later that day. More than 10 millimetres of rainfall were recorded over most parts of the territory and rainfall even exceeded 50 millimetres over parts of the New Territories on that day.

Two tropical cyclones occurred over the South China Sea and the western North Pacific in May 2024.

Details of issuance and cancellation of various warnings/signals in the month are summarised in Table 1. Monthly meteorological figures and departures from normal for May are tabulated in Table 2.