

Appendix E

Summary of Meteorological Condition Extracted from Hong Kong Observatory

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November 2015

November 2015 emerged as the warmest November in Hong Kong since records began in 1884 with a record-breaking mean temperature of 24.0 degrees, 2.2 degrees above the November normal of 21.8 degrees. The anomalously warm weather was mainly attributed to the relatively high sea surface temperatures over the northern part of the South China Sea and the rather weak advection of cold air from the north despite the prevailing northeast monsoon. The month was also drier than usual with only 22.8 millimetres of rainfall, a deficit of about 39 percent as compared to the normal figure of 37.6 millimetres. The accumulated rainfall of 1810.2 millimetres since 1 January was about 24 percent below the normal figure of 2371.7 millimetres for the same period.

Under the influence of the northeast monsoon, the weather in Hong Kong was mainly fine but appreciably cooler on the first two days of the month. With the setting in of an easterly airstream over the coast of Guangdong, the weather was a mixture of cloudy days, sunny periods and some light rain patches for the next five days. With the clouds thinning out gradually, there was more sunshine on 8 and 9 November, and the weather became warmer with temperatures at the Hong Kong Observatory rising to a maximum of 30.3 degrees, the highest of the month, on 9 November.

Meanwhile, a cold front over inland Guangdong moved southwards and crossed the coastal areas on the night of 9 November. A strong northeast monsoon associated with the cold front brought windy and slightly cooler weather with rain patches to the territory over the next four days. After a brighter day on 14 November, the setting in of a fresh to strong easterly airstream over the coast of Guangdong brought windy conditions again with more rain patches on 15 and 16 November.

The weather turned generally fine apart from some coastal mist patches on 17-18 November. Windy and mainly cloudy conditions returned with an easterly airstream for the ensuing three days, before clouds thinning out gradually and fine weather setting in on 22-24 November.

An intense northeast monsoon reached the coast of Guangdong on the morning of 25 November and winds strengthened gradually from the north that day. While the weather remained mostly fine under the dominance of a dry continental air mass, it became appreciably cooler as temperatures at the Hong Kong Observatory fell to a minimum of 15.3 degrees, the lowest of the month, on the morning of 27 November. With the moderation of the northeast monsoon, temperatures recovered gradually towards the end of the month.

December 2015

With a relatively humid air mass affecting the territory for most part of the month, the weather of December 2015 was gloomier and wetter than usual. The total duration of sunshine recorded in the month was 75.9 hours, only about 44 percent of the normal figure of 172.2 hours. Two rainy episodes on 5 and 9 December mostly contributed to the monthly rainfall of 64.3 millimetres, more than double the normal figure of 26.8 millimetres. However, the annual rainfall of 1874.5 millimetres was still about 22 percent below the normal of 2398.5

millimetres. December 2015 was also warmer than usual with a monthly mean temperature of 18.6 degrees, 0.7 degrees above the normal figure of 17.9 degrees.

December 2015 began with mainly fine and warm weather for the first two days of the month. A cold front formed over the northern part of Guangdong and moved across the coast of Guangdong on the night of 2 December. Affected by the northeast monsoon behind the cold front, local weather turned cloudy with light rain patches over the next couple of days. The northeast monsoon strengthened further and brought windy, rainy and even cooler weather on 5 December. Under the prevailing northeast monsoon, the weather remained cool with a few rain patches over the next three days.

Under the influence of an upper-air disturbance, it was overcast and rainy in Hong Kong on 9 December with more than 40 millimetres of rainfall generally recorded over the territory. As the upper-air disturbance moved eastwards away from Guangdong, local weather improved gradually with sunny periods over the next couple of days. Affected by a fresh easterly airstream, the clouds returned with light rain patches on 12 December and persisted for the next two days.

The strengthening of the winter monsoon over the south China coastal areas brought significantly cooler weather to Hong Kong on 15 December. Under the influence of a continental air mass brought by a strengthening northerly airstream, temperatures plunged further and local weather turned fine on 16 December with cold mornings over the next two days. Temperatures at the Observatory fell to a minimum of 11.3 degrees on the morning of 18 December, the lowest of the month.

With the moderation of the winter monsoon, local temperature recovered gradually and the weather turned increasingly mild and humid with light rain patches during the period leading up to an unseasonably warm Christmas Eve. Mist and fog patches were reported in Hong Kong on 22 – 24 December, with visibility at Waglan Island once dropping below 500 metres on the morning of 24 December.

Meanwhile, a cold front formed over the northern part of southern China and moved across the coastal areas of Guangdong in the early hours of Christmas Day. Local weather became appreciably cooler with a few rain patches that day. The prevailing northeast monsoon then maintained generally cloudy and cool weather with light rain patches over the next three days, with more sunny periods appearing towards the end of the month.

January 2016

January 2016 was characterized by an intense cold surge in the latter part of the month and exceptionally high monthly rainfall. The unseasonably warm weather in the first three weeks of the month was totally offset by the freezing temperatures during the 3-day period of 23 - 25 January. The mean sea level pressure of 1037.7 hectopascals on 24 January was the highest ever recorded at the Observatory. Yet the monthly averaged temperature of 16.0 degrees turned out to be deceptively unremarkable, only 0.3 degree below normal. With upper-air disturbances repeatedly affecting the south China coastal areas and bringing outbreaks of heavy rain, the Observatory recorded an all-time high monthly rainfall of 266.9 millimetres, more than ten times the January normal of 24.7 millimetres and easily breaking the previous record of 214.3 millimetres set way back in January 1887. The heavy rain on 5 January also broke the hourly

rainfall record for January.

Under the influence of a dry northeast monsoon, the weather in Hong Kong was mainly fine and dry on the first day of the month. A broad band of clouds over the northern part of the South China Sea brought a few rain patches on 2 January and the weather remained cloudy with mist and fog patches in the next two days as a humid maritime airstream set in over the territory. The visibility at Waglan Island once fell below 500 metres on the morning of 3 January.

An area of heavy rain and thunderstorms associated with an upper-air disturbance affected Hong Kong on the afternoon of 5 January and brought more than 30 millimetres of rainfall to the urban areas, the eastern part of Lantau Island, and the eastern part of the New Territories. The rain was particularly heavy between 1 p.m. and 2 p.m. with 37.0 millimetres of rainfall reported at the Observatory, the highest hourly rainfall for January on record. It also necessitated the issuance of the Amber Rainstorm Warning, the earliest since the rainstorm warning system commenced operation in 1992.

Despite some rain and mist patches on the morning of 6 January, the weather turned mainly fine during the day as a drier air mass reached the south China coastal areas, and remained so over the next couple of days. Meanwhile, easterly winds freshened on 9 January and the weather turned cloudier and cooler with rain on 10 - 11 January. A replenishment of the northeast monsoon reached the coast of Guangdong and temperatures dropped further in Hong Kong with relatively cool mornings on 12 and 13 January.

After a sunny day on 13 January, a prolonged spell of cloudy weather set in over the next 11 days. Rainbands associated with an upper-air disturbance and a cold front affected Hong Kong on 15 - 17 January with more than 75 millimetres of rainfall recorded at the Observatory during the period. After a rather cold morning and some sunny periods on 18 January, easterly winds strengthened over the next couple of days and brought more clouds and rain to Hong Kong.

Meanwhile, an intense surge of cold air poured southwards across mainland China and reached the coast of Guangdong on 22 January, bringing appreciably colder weather with occasional rain. Temperatures in the urban areas fell to about 10 degrees that night and plunged further in the next couple of days as strong to gale force northerly winds raged across the coastal areas. Under bitterly cold and rainy conditions, the mean sea level pressure at the Observatory climbed to an all-time record high of 1037.7 hectopascals on 24 January and temperatures dropped further during the day to the month's lowest of 3.1 degrees that afternoon, the coldest day since 1957 and the sixth lowest on record. Sub-zero temperatures were recorded on high ground with temperatures at Tai Mo Shan falling to a minimum of -6.0 degrees that day. There were widespread frost, rime, icing, freezing rain and ice pellets on high ground and in some parts of the New Territories. More than 120 people, mostly hikers and runners of a cross-country race stranded on Tai Mo Shan and nearby peaks due to icy roads and wintry weather, had to be rescued or led to safety, and over 60 were taken to hospitals for treatment with a number of them suffering from hypothermia.

Following a very cold morning on 25 January, sunny skies emerged that day as the northerly winds eventually brought a dry continental air mass to Hong Kong with relative humidity falling below 40 percent during the day. However, clouds and rain patches soon returned the next day as the dry air mass retreated, and the weather remained cold in the morning on 26 and

27 January despite a gradual rise in temperatures. Conditions became even more humid and unsettled on 28 - 29 January as another upper-air disturbance brought heavier rain and thunderstorms to the south China coastal areas. Under the influence of the northeast monsoon, generally cloudy and cool weather prevailed till the end of the month.

February 2016

With frequent replenishments of the winter monsoon, February 2016 was cooler than usual. The monthly mean temperature was 15.5 degrees, 1.3 degrees below the normal figure of 16.8 degrees. The month was also drier than usual with 24.8 millimetres of rainfall, only about 46 percent of the normal figure of 54.4 millimetres. However, due to an extremely rainy January, the accumulated rainfall of 291.7 millimetres in the first two months of the year was more than three times the normal figure of 79.1 millimetres for the same period.

Under the influence of an intense winter monsoon, the weather in Hong Kong was cold and cloudy with rain patches for the first three days of the month. Temperature at the Hong Kong Observatory on the morning of 2 February fell to a minimum of 9.4 degrees, the lowest of the month. With the arrival of a dry continental air mass, local weather turned fine on 4 February. With even drier air from the north spreading towards the south China coastal areas, it remained sunny with cold mornings in the next four days as daytime relative humidity dropped below 30 percent. Frost was also reported in Ta Kwu Ling and Hok Tau on the morning of 8 February 2016 on Chinese New Year Day.

With the winter monsoon moderating gradually and replaced by a moist easterly airstream, local temperatures climbed up during the Chinese New Year holiday period. The weather became cloudy with a few rain patches on 10 February. It was warm, humid and foggy with the visibility at Waglan Island occasionally falling to around 100 metres in the next three days. With sunny periods during the day, temperature at the Hong Kong Observatory on 13 February rose to a maximum of 25.9 degrees, the highest of the month.

After a warm and humid morning on 14 February, a cold front crossed the coast of Guangdong on the afternoon that day, bringing appreciably cooler weather to the territory. The weather remained cloudy and cold with rain patches on 15-18 February. A replenishment of the winter monsoon reached Hong Kong on the night of 19 February and the arrival of dry continental air brought some sunny periods the next day.

With another replenishment of the winter monsoon on 23 February, the weather in Hong Kong stayed mainly cloudy and cool with some rain patches up to 26 February. Affected by a continental airstream, it then turned fine and dry towards the end of the month.

March 2016

With the northeast monsoon and a humid maritime airstream competing for dominance over the south China coast, March 2016 in Hong Kong was characterized by gloomy, rainy and humid weather with fluctuating temperatures. Overall, the month was cooler than usual with rainfall above normal. The monthly mean temperature was 17.5 degrees, 1.6 degrees lower than the normal figure of 19.1 degrees. The monthly total rainfall was 148.7 millimetres, about 81 percent more than the normal figure of 82.2 millimetres. The accumulated rainfall of 440.4 millimetres in the first three months of the year was about 1.7 times above the normal figure of

161.3 millimetres for the same period.

Under the influence of a relatively dry northeast monsoon, the weather in Hong Kong was generally fine with cool mornings on the first three days of the month. A humid maritime airstream brought cloudy weather to Hong Kong on 4 and 5 March. As the clouds thinned out, sunny periods emerged on 6 March with some mist patches in the morning and temperatures rising to 25.9 degrees in the afternoon, the highest of the month.

The clouds returned on 7 March, and a long spell of gloomy skies and rainy weather then persisted for the next 18 days. Foggy conditions affected the coastal waters of Guangdong and visibility at Waglan Island once fell to around 100 metres on 8 and 9 March. An intense northeast monsoon following the passage of a cold front on the night of 9 March brought cold weather to Hong Kong over the next couple of days. Temperatures at the Observatory fell to a minimum of 10.0 degrees, the lowest of the month, shortly before midnight on 10 March and during the small hours on 11 March. Affected by replenishments of the northeast monsoon and freshening easterly winds, the weather remained generally cool with mist and rain patches till 17 March.

With the return of a humid maritime airstream, foggy weather affected the south China coast on 18-19 March. Visibility at Waglan Island dropped to around 100 metres and a high-speed passenger vessel crashed into a pile of steel pipes near the Hong Kong-Zhuhai-Macao Bridge on the morning of 19 March. The weather became warmer as temperatures climbed, before the approach of a trough of low pressure and a strengthening easterly airstream brought more unsettled conditions and squally thunderstorms on 21 March. More than 40 millimetres of rainfall were generally recorded over the territory that day. Rainy weather and overcast skies with fog patches and thunderstorms continued to affect Hong Kong over the next couple of days.

The passage of a cold front brought rainy and appreciably cooler conditions to Hong Kong on 24 March. After a cold morning on 25 March, the arrival a dry continental air mass finally cleared away the lingering clouds. Fine and sunny weather prevailed in the next couple of days with the relative humidity falling below 30 percent on 27 March. With the setting in of a mild easterly airstream, generally cloudy weather prevailed over the territory towards the end of the month, and the return of a humid maritime air mass brought mist patches and low visibility to some places on 30-31 March.

April 2016

With a maritime airstream trying to exert control over the coastal areas of Guangdong in a change of seasons, the weather of April 2016 was exceptionally humid and gloomy. The monthly mean relative humidity was 89 percent, six percent higher than normal and also the most humid for April since 1961. Under long spells of clouds, fog or mist, the sunshine duration of 6.9 hours on 6 April already made it the sunniest day in the month. The total duration of bright sunshine recorded in the month was only 55.4 hours, around 54 percent of normal and the sixth lowest for April on record. The month was also warmer and rainier than usual. The monthly mean temperature was 23.6 degrees, 1.0 degrees above the normal figure of 22.6 degrees. The monthly total rainfall was 211.4 millimetres, about 21 percent more than the normal figure of 174.7 millimetres. The accumulated rainfall of 651.8 millimetres in the first four months of the year was nearly double the normal figure of 336.1 millimetres for the same period.

Apart from a relatively sunny day on 6 April, the weather in Hong Kong was warm, humid and foggy on the first nine days of the month, with the visibility in the harbour and over the coastal waters occasionally falling to around 100 metres under the influence of a humid maritime airstream. There were also some heavy showers and squally thunderstorms on 4 April, particularly over Lantau Island and the northern part of the New Territories.

With a trough of low pressure edging southwards and crossing the south China coastal areas, local weather became unsettled with outbreak of heavy rain and squally thunderstorms from 10 till 15 April. Again, rain was heaviest over Lantau Island and the northern part of the New Territories on 10 April. Easterly winds then freshened on 11 and 12 April and more widespread heavy rain occurred on the morning of 13 April as an area of intense thunderstorms swept across the coast of Guangdong. More than 50 millimetres of rainfall were generally recorded over Hong Kong that day and severe gusts reaching 113 kilometres per hour were reported at Lau Fau Shan.

As the trough weakened and the rain eased off, some sunny intervals appeared on 16 April. Meanwhile, the setting in of a maritime airstream also brought humid and foggy weather to the territory. With another trough of low pressure crossing the coast of Guangdong on 18 April, the weather turned unsettled again with rain and squally thunderstorms. This was followed by a fresh to strong easterly airstream that brought cooler weather with rain patches to Hong Kong on 19 - 20 April.

After some sunny intervals and fog patches on 21 April, an upper-air disturbance brought thundery showers to Hong Kong on 22 April, with the heaviest rain falling over the northern part of the New Territories. Affected by a trough of low pressure, local weather deteriorated further with scattered heavy showers and squally thunderstorms in the next three days. While the showery conditions persisted in the presence of a lingering trough, the increasing influence of a warm maritime airstream caused temperatures at the Hong Kong Observatory to climb to a maximum of 29.1 degrees on the afternoon of 27 April, the highest of the month. The arrival of an easterly airstream brought slightly cooler weather and a mixture of sunshine and showers towards the end of the month.

May 2016

The weather for May 2016 was warmer and drier than usual. The monthly mean temperature was 26.7 degrees, 0.8 degree above the normal figure of 25.9 degrees. Despite several rainstorms in the month, the monthly total rainfall was only 233.6 millimetres, about 23 percent below the normal figure of 304.7 millimetres. However, the accumulated rainfall of 885.4 millimetres in the first five months of the year was still about 38 percent more than the normal figure of 640.8 millimetres for the same period.

Under the influence of an easterly airstream, the weather in Hong Kong was slightly cooler with a few showers on 1 May. The minimum temperature of 20.4 degrees recorded at the Hong Kong Observatory that morning was the lowest of the month. With the easterly airstream gradually replaced by a warm and humid maritime airstream, local weather became warm and foggy with a few showers on 2 May. Affected by a trough of low pressure over the coastal areas of Guangdong, there were showers and thunderstorms in the next couple of days. The showers were particularly heavy on the evening of 3 May with more than 30 millimetres of rainfall recorded over many places of the territory.

Dominated by a southerly airstream, it was hot with sunny periods in Hong Kong from 5 to 9 May. An area of intense rain and thunderstorms associated with a trough of low pressure swept across the Pearl River estuary on 10 May. More than 70 millimetres of rainfall were generally recorded in Hong Kong, and rainfall over Sha Tin and Sai Kung even exceeded 150 millimetres. Red Rainstorm Warning Signal was twice issued that morning.

After a mainly fine and relatively dry day on 11 May, the weather became generally cloudy with isolated showers over the next three days as a fresh easterly airstream prevailed over the coast of Guangdong. With the moderation of the easterly airstream, the weather turned mostly fine on 15 May. Despite some light rain during the passage of a cold front that night, the weather remained fine the next day with slightly cooler temperatures as a relatively dry northerly airstream reached the coast of Guangdong. The freshening of easterly winds once again brought cloudy weather and some rain patches to Hong Kong on 17 – 19 May.

Affected by a trough of low pressure over the coast of Guangdong, local weather deteriorated with heavy showers and squally thunderstorms on 20 and 21 May. The rainstorm episode in the early morning on 21 May brought more than 70 millimetres of rainfall to many places, with rainfall exceeding 200 millimetres in Sai Kung where a few landslides were reported. With the weakening of the trough, local weather improved and it was generally fine and hot on 22 – 25 May.

The weather became windy and showery in Hong Kong as a monsoon depression over the northern part of the South China Sea developed into a tropical depression on the night of 26 May and Tropical Cyclone Warning Signal was issued for the first time this year. The tropical depression made landfall near Yangjiang over the coast of western Guangdong the next day as strong winds affected the territory. Under the influence of an active southwest monsoon in the wake of the tropical depression, local weather became even more unsettled with heavy showers and thunderstorms on 28 May. More than 40 millimetres of rainfall were generally recorded over the territory, and rainfall even exceeded 100 millimetres in Kwai Tsing and Tsuen Wan. During the heavy downpour, 16 hikers were stranded in Fanling due to flash flood and had to be led to safety by rescue workers.

With the moderation of the southwest monsoon, the weather became hot with sunny periods and a few showers towards the end of the month. Daytime temperature at the Hong Kong Observatory soared to 32.1 degrees on 30 May, the highest of the month.

June 2016

June 2016 was characterized by rainy weather during the first part of the month and persistent very hot weather in the latter part. Overall, the month was exceptionally hot. The monthly mean temperature was 29.4 degrees, 1.5 degrees higher than the normal figure of 27.9 degrees and the second hottest June on record. The monthly mean maximum temperature of 32.4 degrees and minimum temperature of 27.5 degrees were respectively the highest and the second highest for June. Despite there were several heavy rain episodes in the first half of the month, the monthly total rainfall was only 347.4 millimetres, about 24 percent below the normal figure of 456.1 millimetres. The accumulated rainfall for the first half year of 1232.8 millimetres was about 12 percent above the normal figure of 1096.9 millimetres for the same period.

After a mainly fine and very hot start on the first four days of the month, the weather turned cloudy with thundery showers later on 4 June as a trough of low pressure over southern China edged towards the coast of Guangdong. The trough continued to linger over the coastal areas and maintained a fortnight-long spell of unsettled weather in Hong Kong. During the period, outbreaks of heavy rain on 6 and 11 June brought daily rainfall of more than 70 millimetres to most parts of the territory. The lowest temperature of the month, 24.1 degrees, occurred early in the morning on 8 June during another episode of heavy rain that dumped more than 50 millimetres of rainfall over Hong Kong Island. The strengthening of the southwest monsoon on 12 June brought windier conditions in the next three days and showery weather with thunderstorms continued to affect Hong Kong till 18 June.

With the weakening of the trough and the establishment of the subtropical ridge over southern China, the weather turned sunny and very hot on 19 June as the territory came under the grip of a heat wave that lasted nine days. Under light wind conditions and prolonged sunshine, daily maximum temperatures at the Hong Kong Observatory soared above 35.0 degrees for four consecutive days from 24 to 27 June, breaking the previous record of three consecutive days from 30 May to 1 June in 1963. The highest temperature of the month of 35.5 degrees on 25 June was also the second highest temperature in June since records began in 1884.

Affected by showers and thunderstorms associated with an area of low pressure moving across the coast of Guangdong, the very hot spell in Hong Kong was finally broken on 28 June. Under the influence of a southerly airstream, local weather remained hot and showery towards the end of the month.

July 2016

With long spells of sunny skies under the dominance of the subtropical ridge, the weather was unusually hot in July 2016. The monthly mean temperature of 29.8 degrees was 1.0 degree higher than the normal figure of 28.8 degrees, equalling the previous highest record set in 2014. The month was much drier than usual with only 175.9 millimetres of rainfall, less than half of the July normal of 376.5 millimetres. The accumulated rainfall of 1408.7 millimetres for the first seven months was about 4 percent below the normal figure of 1473.3 millimetres for the same period.

Under the influence of an active southerly airstream, the weather in Hong Kong was hot with a mixture of sunshine, showers and thunderstorms on the first five days of the month. The

setting in of an easterly airstream along the coastal areas of Guangdong gave rise to a relatively cool day on 6 July as rainbands from the northern part of the South China Sea brought heavy showers and squally thunderstorms to Hong Kong. More than 30 millimetres of rainfall fell over the territory and the lowest temperature of the month, 24.7 degrees, was recorded at the Hong Kong Observatory in rain that morning.

Over the western North Pacific, Super Typhoon Nepartak headed towards Taiwan on 7 July and made landfall at Fujian two days later. Affected by the subsiding air outside the circulation of Nepartak, local weather was sunny and very hot on 7 - 9 July. The oppressive heat was most keenly felt on 9 July with temperature at the Hong Kong Observatory soaring to a maximum of 35.6 degrees, the highest of the month and the second highest for July on record. Intense convection developed over inland Guangdong on the afternoon of 9 July and moved towards Hong Kong in the evening, bringing squally thunderstorms with incessant lightning and thunder that lasted throughout the night. Local weather remained mostly cloudy and unsettled with occasional heavy showers and thunderstorms over the next five days.

With an upper-air anticyclone becoming established over southeastern China and the northern part of the South China Sea, a spell of generally fine weather with rather hot conditions set in on 15 July and persisted for more than two weeks. Despite a showery interlude on 19 - 20 July, there were still long hours of sunshine and temperature at the Hong Kong Observatory once again reached 35 degrees on 25 July as a tropical depression brewed over the central part of the South China Sea. It intensified into a tropical storm named Mirinae the next morning and its outer rainbands brought squally showers and thunderstorms to Hong Kong during the day. With Mirinae moving away towards Hainan Island and northern Vietnam, fine and very hot weather prevailed in Hong Kong towards the end of the month. The high temperature on the afternoon of 30 July also triggered intense thunderstorm development over the New Territories. Hail was reported at Tai Po during the passage of the thunderstorms.

August 2016

The weather of August 2016 was generally rainy with less sunshine than usual. The total duration of sunshine recorded in the month was 148.5 hours, about 21 percent below the normal figure of 188.9 hours. The monthly total rainfall was 532.7 millimetres, about 23 percent above the normal figure of 432.2 millimetres. The accumulated rainfall of 1941.4 millimetres for the first eight months was about 2 percent above the normal figure of 1905.5 millimetres for the same period.

After skirting past the north coast of Luzon, Nida intensified from a severe tropical storm to a typhoon and headed straight for the coast of Guangdong on the first day of the month. Under the influence of the outer rainbands of Nida, local weather was showery on 1 August with strengthening winds that night. Southerly gales swept in over the territory as Nida made landfall near Dapang Peninsula and moved across Shenzhen just north of Hong Kong on the morning of 2 August. With Nida weakening and moving away, local winds moderated gradually during the day. However, the weather remained overcast with heavy squally showers. More than 100 millimetres of rainfall fell over the territory that day, with rainfall amount even exceeding 200 millimetres in some parts of Lantau Island. The rainy conditions continued over the next couple of days with some heavy showers affecting Lantau Island and Tai Po.

With an area of high pressure developing over the southeastern part of China, the sun broke through on 5 August, and the weather remained generally fine and very hot over the next three

days. As a broad area of low pressure extended from the western North Pacific all the way into the northern part of the South China Sea, the weather over the coastal areas of Guangdong turned more unsettled. Heat showers and intense thunderstorms around noon time on 9 August brought more than 4000 cloud-to-ground lightning strokes to Hong Kong. Cloudy and showery conditions persisted over the next seven days, and even for a rather sunny day on 13 August, there were still some heavy showers affecting the western part of the territory that day. Meanwhile, weak depressions hovered over the south China coastal waters during the period, and from one such depression, Dianmu developed into a tropical storm off the coast of western Guangdong, bringing windy conditions and squally showers to Hong Kong on 17 and 18 August.

With Dianmu moving away towards northern Vietnam, local weather was a mixture of sunny periods, showers and isolated thunderstorms on 19 - 21 August. The lowest temperature of the month at the Hong Kong Observatory, 24.5 degrees, was recorded in the early hours of 21 August as intense thundery showers swept across the territory. Meanwhile, three tropical cyclones developed in quick succession over the western North Pacific. One of them, Severe Typhoon Lionrock, lingered for days over the sea areas east of the Ryukyu Islands. With southern China under sunny skies and light wind conditions, a spell of fine and very hot weather lasted for six days in Hong Kong from 22 to 27 August. Temperature at the Observatory rose to 34.4 degrees on 25 August, the highest of the month.

The weather turned cloudier as showery activities affected Hong Kong early on 28 August, and even though the showers eased off, the skies remained cloudy the next day as an intensifying anticyclone over China brought drier continental air to the coastal areas of Guangdong. Despite some sunny periods, mainly cloudy conditions with some showers persisted towards the end of the month.

September 2016

With rainy weather dominating the first part of the month, September 2016 was gloomier than usual. The total duration of sunshine recorded in the month was 135.7 hours, 36.6 hours below the normal figure of 172.3 hours and the seventh lowest on record for September. However, the month was slightly warmer than usual with a monthly mean temperature of 27.9 degrees, 0.2 degree higher than the normal figure of 27.7 degrees. The monthly total rainfall was 323.1 millimetres, slightly below the normal figure of 327.6 millimetres. The accumulated rainfall of 2264.5 millimetres for the first nine months was about 1 percent above the normal figure of 2233.1 millimetres for the same period.

With a trough of low pressure lingering over the South China coast, the weather in Hong Kong was unstable with showers and thunderstorms on the first ten days of the month. The showers were particularly heavy on 1, 5 and 10 September with over 30 millimetres of rainfall generally over the territory. With the trough of low pressure weakening gradually, there were sunny periods and a few showers on 11 September.

Under the dominance of the anticyclone over southern China, local weather became generally fine apart from a few isolated showers on 12-13 September. Meanwhile, Super Typhoon Meranti moved across the Luzon Strait on the night of 13 September and swept across the coastal waters of southwestern Taiwan the next day. Affected by the outer subsiding air associated with Meranti, the weather in Hong Kong was very hot and dry on 14 September with temperatures rising to about 33 degrees over most parts of the territory. With Meranti making

landfall near Xiamen and weakening over inland, the cloud band associated with Meranti covered eastern Guangdong and there were a few isolated showers in Hong Kong on 15 September.

Under the influence of a relatively dry continental airstream, it was mainly fine, hot and dry in Hong Kong on 16-18 September. While it remained generally fine during the day on 19 September, with the northeast monsoon setting in, local weather turned cloudy with some rain that night. Affected by the northeast monsoon, the weather became cooler and rainy on 20 September. With the gradual thinning of cloud covering the south China coastal areas, the weather became mainly fine on 21-26 September.

Over the western North Pacific, Severe Typhoon Megi moved across Taiwan on the afternoon of 27 September and made landfall at Fujian the next morning. Megi moved westward across Fujian and weakened gradually on 28 September. It degenerated into an area of low pressure over Jiangxi on the morning of 29 September. Under the subsidence effect ahead of Megi, local weather was very hot and hazy on 27 September with temperatures at the Observatory reaching a maximum of 34.9 degrees, the highest of the month and the second highest on record for September. With Megi taking a more westerly track and edging closer to Guangdong, local winds strengthened from the northwest and cleared the haze on 28 September. Under the influence of the northeast monsoon, it was mainly cloudy and cooler for the rest of the month.

Seven tropical cyclones occurred over the South China Sea and the western North Pacific in the month.

October 2016

October 2016 was marked by record-breaking high mean temperatures, despite a succession of cyclonic systems passing by in the vicinity of Hong Kong and the duration of sunshine falling under 80 percent of the October normal. The monthly mean maximum temperature of 29.1 degrees, monthly mean temperature of 26.8 degrees and monthly mean minimum temperature of 25.0 degrees were all 1.3 degrees above their respective normals and were the highest ever on record for October. After the passage of the remnant circulation of Severe Typhoon Megi over southern China in late September, Tropical Storm Aere hovered for days over the coastal waters of Guangdong at the doorstep of Hong Kong in early October. Then came Super Typhoon Sarika and Super Typhoon Haima in less than a week between 16 and 21 October. The former brought torrential rain that broke the October hourly rainfall record and triggered the Black Rainstorm Warning on 19 October, while the latter led to the issuance of the No. 8 Gale or Storm Signal on 21 October. The monthly rainfall recorded at the Hong Kong Observatory was 624.4 millimetres, more than six times the October normal of 100.9 millimetres and the second highest on record for October. The accumulated rainfall of 2888.9 millimetres up to the end of October was about 24 percent above the normal figure of 2334.0 millimetres for the same period.

In the wake of Megi, unsettled weather prevailed over the coastal waters of Guangdong, with heavy showers and thunderstorms affecting Hong Kong early in the morning on 1 October. The Red Rainstorm Warning was issued as more than 70 millimetres of rainfall generally fell over the urban areas and the eastern part of the New Territories. Local weather was a combination of increasing sunshine and decreasing showers over the following four days as a weak low pressure system drifted southwestward off the coast of Guangdong and passed by to the south

of Hong Kong. Meanwhile, Aere followed the weak low into the northeastern part of the South China Sea on 6 October and lingered for days to the southeast of Hong Kong before weakening into an area of low pressure on the night of 10 October. Locally, it was generally fine and hot during the day on 6 October and temperature at the Hong Kong Observatory rose to a maximum of 32.4 degrees, the highest of the month. After some showers that night, the weather gradually turned sunnier over the next four days.

As Aere weakened and drifted away towards Xisha, cooler air associated with the northeast monsoon gradually spread south towards the coastal areas of Guangdong. Temperature at the Hong Kong Observatory fell to a minimum of 22.0 degrees on 11 October, the lowest of the month. Local weather turned windier under a strong easterly airstream, and after some rain patches on 11 and 12 October, it became mainly fine over the next four days as the winds gradually subsided.

Meanwhile, Severe Typhoon Sarika moved across Luzon and entered the South China Sea on the morning of 16 October. Tracking west-northwestwards, Sarika made landfall over Hainan Island on the morning of 18 October and moved across Beibu Wan on 19 October. Under the combined effect of Sarika and the northeast monsoon over southern China, local weather became windy with squally showers on 17-19 October. The convergence between the northeast monsoon and the southerly airstream associated with Sarika triggered prolonged periods of heavy rain and thunderstorms on 18 and 19 October. The rain was most intense on the afternoon of 19 October, with more than 100 millimetres of rainfall falling generally over Hong Kong and rainfall even exceeding 200 millimetres over the urban areas, Shatin and Tai Po, necessitating the issuance of the first ever Black Rainstorm Warning in October since the Rainstorm Warning System commenced operation in 1992. The hourly rainfall of 78.7 millimetres recorded at the Hong Kong Observatory between 3 and 4 p.m. that day was also the highest in October since records began in 1884.

As Sarika dissipated over inland Guangxi, Super Typhoon Haima moved across Luzon and entered the northern part of the South China Sea on the morning of 20 October. Affected by the subsiding air ahead of Haima, it was mainly fine and hazy in Hong Kong that day. Haima weakened gradually into a typhoon as it edged towards the coast of eastern Guangdong and made landfall near Shanwei around noon on 21 October. With the approach of Haima, local winds strengthened significantly and reached gale force in many places during the day. The rainbands of Haima also brought squalls and heavy rain to Hong Kong. More than 100 millimetres of rainfall fell over Kowloon City, Wong Tai Sin and the eastern part of the New Territories. As Haima moved further inland, local weather improved with sunny periods and a few isolated showers over the next three days.

With the establishment of an upper-air anticyclone over southern China, local weather became fine and hot on 25-28 October. The passage of a cold front on 29 October brought cooler weather and some showers. The weather remained windy with sunny intervals the next day before mainly fine weather returned on the last day of the month as the monsoon winds subsided.