BULETIN CUACA BULANAN

Ogos 2024

Monthly Weather Bulletin

August 2024

Pendahuluan / *Introduction*

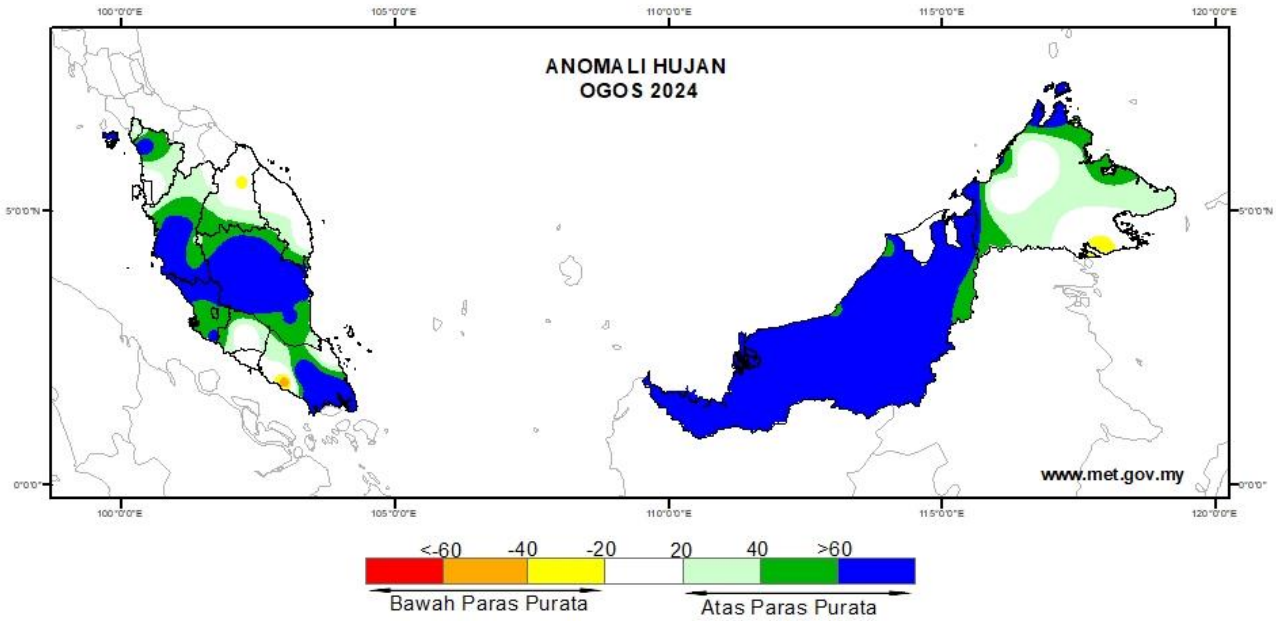
Negara masih berada dalam musim Monsun Barat Daya yang telah bermula pada 17 Mei 2024 dan dijangkakan berakhir pada pertengahan September 2024. Semasa Monsun Barat Daya, lazimnya angin bertiup secara konsisten dari arah barat daya dengan kelembapan udara yang lebih rendah dan keadaan atmosfera yang lebih stabil. Ini menyebabkan kurangnya pembentukan awan hujan sepanjang tempoh ini. Sehubungan itu, kebanyakan tempat di seluruh negara akan mengalami taburan hujan yang lebih rendah dengan bilangan hari tanpa hujan yang lebih banyak berbanding bilangan hari hujan. Walau bagaimanapun, hujan lebat berserta angin kencang dan ribut petir berikutan fenomena garis badai (squall line) masih boleh berlaku di pantai barat Semenanjung dan barat Sabah.

The country is in the Southwest Monsoon phase which has started on 17 May 2024 and is expected to continue until September 2024. During Southwest Monsoon, *the country's region will receive consistent winds from the southwest with lower percentage of humidity and the atmosphere more stable. This situation makes reduces the formation of rain clouds throughout this period. Therefore, most places throughout the country will experience lower rainfall with more days without rain than the number of rainy days. However, heavy rain with strong winds and thunderstorms can still occur on the west coast of the Peninsula and west of Sabah due to the squall line.*

Hujan / *Rainfall*

Berdasarkan anomali hujan sepanjang bulan Ogos 2024 **(Rajah 1)**, kebanyakan stesen di Semenanjung Malaysia secara amnya mencatatkan peratusan anomali hujan dari purata hingga 60% di atas paras purata kecuali di Batu Pahat yang mencatatkan peratusan anomali hujan 40% di bawah paras purata. Manakala di negeri Sabah dan Sarawak, kebanyakan bahagian telah merekodkan bacaan hujan dari paras purata sehingga 60% atas purata kecuali di Tawau yang mencatatkan peratusan anomali hujan 20% di bawah paras purata.

Based on the rainfall anomalies during August 2024 ***(Figure 1)****, most stations in Peninsular Malaysia generally recorded a percentage of rainfall anomalies ranging from an average to 60% above average except in Batu Pahat which recorded the percentage of rainfall anomalies at 40% below average. Meanwhile in Sabah and Sarawak, most parts have received a percentage within the average value to 60% above average except in Tawau which recorded the percentage of rainfall anomalies at 20% below average.*



Rajah 1: Anomali Hujan (Ogos 2024)

Figure 1: Rainfall Anomaly (August 2024)

Secara umumnya, pada bulan Ogos 2024, Semenanjung Malaysia merekodkan jumlah hujan bulanan di antara 80 mm hingga 650 mm, Sarawak di antara 350 mm hingga 630 mm dan Sabah di antara 150 mm hingga 750 mm.

Jumlah hujan bulanan tertinggi di Semenanjung Malaysia telah direkodkan di Pulau Langkawi, Kedah (645.8 mm) dan jumlah hujan bulanan terendah telah direkodkan di Batu Pahat, Johor (79.8 mm). Di Sarawak pula, Sri Aman merekodkan bacaan jumlah hujan bulanan tertinggi iaitu 632.8 mm manakala jumlah hujan bulanan terendah direkodkan di Miri (342.2 mm). Manakala di Sabah, hujan tertinggi dan terendah masing-masing direkodkan di Labuan (744.4 mm) dan Tawau (142.4 mm).

Di Semenanjung Malaysia, jumlah hujan harian tertinggi telah direkodkan di Pulau Langkawi, Kedah pada 27 Ogos 2024 dengan bacaan sebanyak 146.0 mm. Di Sarawak pula, jumlah hujan harian tertinggi direkodkan di Mulu pada 22 Ogos 2024 dengan bacaan sebanyak 174.2 mm. Manakala di Sabah, jumlah hujan harian tertinggi telah direkodkan sebanyak 124.2 mm di Labuan pada 11 Ogos 2024.

Bilangan hari hujan tertinggi di Semenanjung Malaysia direkodkan di Butterworth, Pulau Pinang dengan cerapan 25 hari hujan dan bilangan hari hujan terendah adalah di Kuala Terengganu, Terengganu sebanyak 8 hari. Di Sabah dan Sarawak, Labuan dan Mulu merekodkan bilangan hari hujan tertinggi iaitu masing-masing sebanyak 28 dan 26 hari. Manakala Tawau dan Miri merekodkan bilangan hari hujan terendah dengan hanya 15 dan 22 hari cerapan hujan.

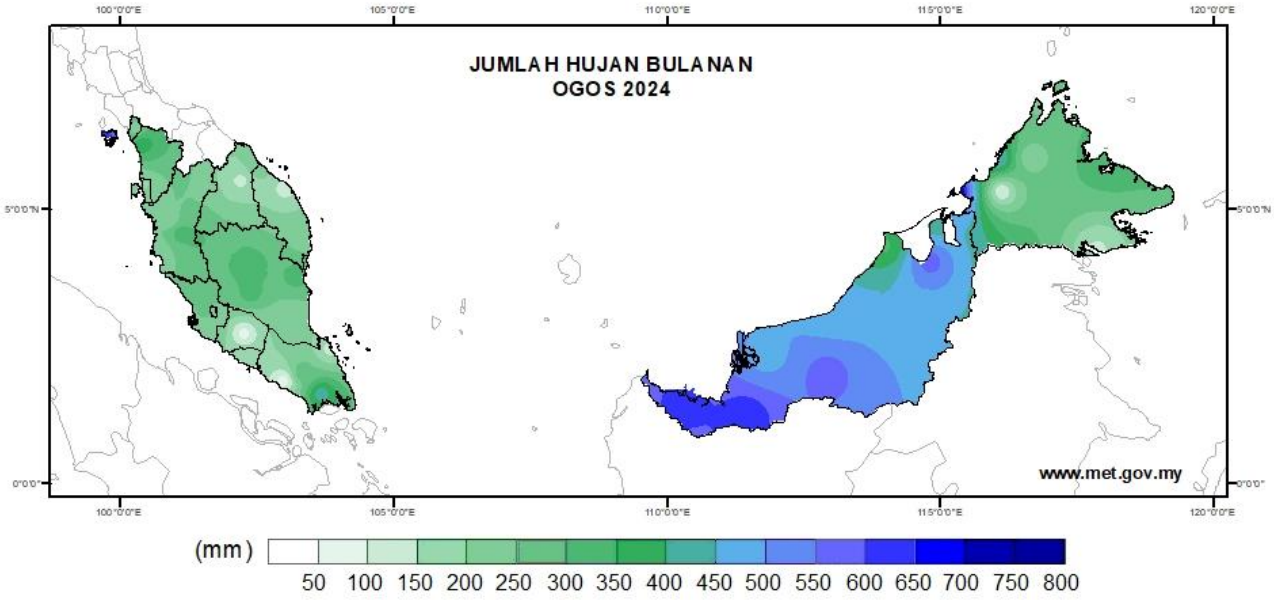
In general, monthly rainfall amount in Peninsular Malaysia for August 2024 is between 80 mm and 650 mm, Sarawak between 350 mm to 600 mm and Sabah between 150 mm and 700 mm.

The highest monthly rainfall in Peninsular Malaysia was recorded in Pulau Langkawi, Kedah (645.8 mm) and the lowest monthly rainfall was recorded in Batu Pahat, Johor (79.8 mm). In Sarawak, Sri Aman recorded the highest monthly rainfall reading of 632.8 mm while the lowest

monthly rainfall was recorded in Miri (342.2 mm). While in Sabah, the highest and lowest rainfall was recorded respectively in Labuan (744.4 mm) and Tawau (142.4 mm) respectively.

In Peninsular Malaysia, the highest daily rainfall was recorded in Pulau Langkawi, Kedah on 27 August 2024 with a reading of 146.0 mm. In Sarawak, the highest daily rainfall was recorded in Mulu *on 22 August 2024 with a reading of 174.2 mm. While in Sabah, the highest daily rainfall was recorded at 124.2 mm in Labuan on 11 August 2024.*

The highest number of rainy days in Peninsular Malaysia was recorded in Butterworth, Pulau Pinang with 25 rainy days and the lowest number of rainy days was in Kuala Terengganu, Terengganu with 8 days. In Sabah and Sarawak, Labuan and Mulu were recorded the highest number of rainy days reaching 28 and 26 rainy days respectively. Meanwhile, Tawau and Miri recorded the lowest number of rainy days with only 15 and 22 days of rain.



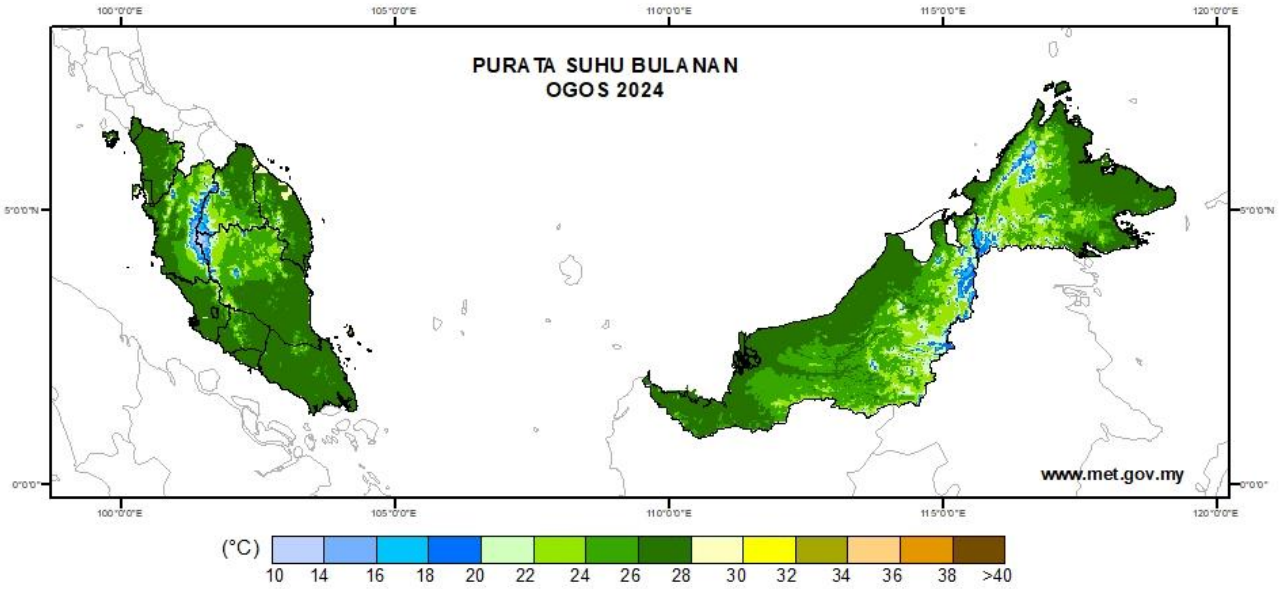
Rajah 2: Jumlah Hujan Bulanan (Ogos2024)

Figure 2: Monthly Amount of Rainfall (August 2024)

Suhu / *Temperature*

Purata suhu bulanan di kawasan tanah rendah adalah berjulat di antara 26.7°C hingga 28.9°C. Di Semenanjung, Muadzam Shah dan Temerloh, Pahang mencatatkan bacaan suhu maksimum tertinggi iaitu 36.0°C manakala di Sabah dan Sarawak pula, Sandakan dan Miri merekodkan suhu maksimum tertinggi sebanyak 34.8°C dan 35.9°C. Suhu minimum terendah untuk kawasan tanah rendah di Semenanjung direkodkan di Kota Bharu, Kelantan pada 21.8°C manakala di Sabah dan Sarawak, Keningau dan SIbu telah merekodkan suhu minimum terendah pada 21.8°C. Stesen di kawasan tanah tinggi Cameron Highlands dan Ranau mencatatkan purata suhu masing-masing pada 18.6°C dan 25.0°C.

The average monthly temperature in the lowland areas ranges between 26.7°C to 28.9°C. In the Peninsula, Muadzam Shah and Temerloh, Pahang *recorded the highest maximum temperature reading of 36.0°C while in Sabah and Sarawak,* Sandakan and Miri *recorded the highest maximum temperature of 34.8°C and 35.9°C. The lowest minimum temperature for lowland areas in the Peninsula was recorded in Kota Bharu, Kelantan at 21.8°C while in Sabah and Sarawak, Keningau recorded the lowest minimum temperature at 21.2°C. Stations in the highland areas such as Cameron Highlands and Ranau recorded average temperatures of 18.6°C and 25.0°C respectively.*



Rajah 3: Purata Suhu Bulanan (Ogos 2024)

Figure 3: Mean Monthly Temperature (August 2024)

Sinaran Suria / *Solar Radiation*

Purata sinaran suria harian bagi kawasan tanah rendah ialah berjulat antara 13.9 MJm^{-2} (Senai, Johor) hingga 21.5 MJm^{-2} (Kuala Terengganu, Terengganu). Purata sinaran suria yang telah direkodkan di kawasan tanah tinggi ialah 14.6 MJm^{-2} (Cameron Highlands) dan 19.5 MJm^{-2} (Ranau). Sisihan positif terbesar dari normal ialah +3.3 MJm^{-2} yang direkodkan di Kuala Terengganu, Terengganu manakala Tawau, Sabah mencatatkan sisihan negatif terbesar dari normal iaitu -1.9 MJm^{-2}.

Average daily solar radiation for lowland areas ranges from 13.9 MJm^{-2} (Senai, Johor) to 21.5 MJm^{-2} (Kuala Terengganu, Terengganu). The average solar radiation that has been recorded in the highland areas is 14.6 MJm^{-2} (Cameron Highlands) and 19.5 MJm^{-2} (Ranau). The largest positive deviation from normal was +3.3 MJm^{-2} recorded in Kuala Terengganu, Terengganu while Tawau, Sabah recorded the largest negative deviation from normal which was -1.9 MJm^{-2}.

Sejatan / *Evaporation*

Bagi kawasan tanah rendah, Kota Bharu, Kelantan mencatatkan purata kadar sejatan harian tertinggi dengan bacaan 5.4 mm/hari manakala Kluang, Johor pula mencatatkan purata kadar sejatan harian terendah dengan bacaan 2.7 mm/hari. Sisihan positif terbesar dari normal telah direkodkan di Kota Bharu, Kelantan iaitu sebanyak +1.0 mm/hari manakala sisihan negatif terbesar dari normal sebanyak -0.9 mm/hari direkodkan di KLIA Sepang, Selangor. Bagi kawasan tanah tinggi, purata kadar sejatan harian direkodkan di Cameron Highlands ialah 1.0 mm/hari.

For lowland areas, Kota Bharu, Kelantan recorded the highest average daily evaporation rate with a reading of 5.4 mm/day while Kluang, Johor recorded the lowest average daily evaporation rate with a reading of 2.7 mm/day. The largest positive deviation from normal was recorded in Kota Bharu, Kelantan which was +1.0 mm/day while the largest negative deviation from normal was -0.9 mm/day recorded in KLIA Sepang, Selangor. For highland areas, the average daily evaporation rate recorded in Cameron Highlands is 1.0 mm/day.

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