

BULETIN METEOROLOGI PERTANIAN 10 HARI

DEKAD KEDUA DISEMBER 2020

(11hb – 20hb Disember 2020)

10 DAYS AGROMETEOROLOGICAL BULLETIN

SECOND DECADE OF DECEMBER 2020

(11th – 20th December 2020)

PENDAHULUAN / INTRODUCTION

Pada dekad kedua Disember (11hb – 20hb Disember 2020), Negara berada dalam fasa Monsun Timur Laut (MTL) yang telah bermula pada 11 November dan berterusan sehingga Mac 2021. MTL ini bercirikan aliran angin dari arah timur laut secara berterusan dan dalam tempoh ini negara biasa menerima empat hingga enam episod hujan lebat. Semasa fasa awal MTL iaitu sehingga awal Januari 2021, episod hujan lebat berlaku di Kelantan, Terengganu, Pahang dan Johor. Hujan lebat berterusan untuk tempoh beberapa hari boleh mengakibatkan kejadian banjir di kawasan-kawasan berkedudukan rendah dan mempunyai sistem saliran yang kurang baik .

In the second decade of December (11th – 20th December 2020), the country is in the Northeast Monsoon (MTL) phase which has started on November 11 and is expected to continue until March 2021. This MTL is characterized by continuous northeast wind flow and during this period the country normally receives four to six episodes of heavy rainfall. During the initial phase of MTL, which is until the beginning of January 2021, episodes of heavy rain occurred in Kelantan, Terengganu, Pahang and Johor. Heavy rains that continue for several days can result in floods in low-lying areas with poor drainage systems.

HUJAN / RAINFALL

Merujuk Rajah 1, di Semenanjung merekodkan peratusan anomali 20 – 60 % di atas paras purata yang lebih tertumpu di bahagian utara Semenanjung, pantai timur Semenanjung, Selangor serta Tampin (Negeri Sembilan). Manakala Rompin dan Bera (Pahang), Jelebu (Negeri Sembilan) serta Batu Pahat (Johor) merekodkan peratusan anomali hujan 20 – 60 % di bawah paras purata. Kawasan lain menunjukkan peratusan anomali hujan berada

pada paras purata. Di Sarawak, secara amnya merekodkan peratusan anomali hujan 20 – 60 % di bawah paras purata kecuali di Miri dan Limbang merekodkan peratusan anomali hujan 20 – 60 % di atas paras purata. Manakala Kuching merekodkan peratusan anomali hujan pada paras purata. Di Sabah pula, secara amnya merekodkan peratusan anomali hujan 20 - 60 % di atas paras purata kecuali Sandakan merekodkan peratusan anomali hujan 40 – 60 % di bawah paras purata.

Berdasarkan Rajah 2, terdapat tujuh (7) kawasan yang merekodkan bacaan jumlah hujan melebihi 200mm iaitu Kota Bharu (269mm), Kuala Krai (506mm) dan Stesen Haiwan Machang (234mm), Kuantan (322mm) di Pahang serta Kuala Terengganu (226mm), Stesen MARDI Jerangau (492mm) dan Stesen MARDI Kemaman (713mm) di Terengganu yang merekodkan jumlah hujan tertinggi dengan 10 hari pencerapan hujan. Stesen MARDI Kemaman juga merekodkan jumlah hujan harian tertinggi pada dekad ini dengan bacaan sebanyak 231.5 mm yang dicerap pada 18 haribulan. Bagaimanapun, terdapat juga kawasan yang merekodkan jumlah hujan yang kurang seperti di Stesen MARDI Sungai Baging (9mm) di Pahang serta Pulau Langkawi (4mm) dan Stesen Pertanian Teluk Chengai (6mm) di Kedah.

Di Sabah, terdapat tiga (3) kawasan yang merekodkan bacaan jumlah hujan melebihi 100mm iaitu di Labuan (103mm), Tawau (104mm) dan Kudat (107mm) yang merekodkan jumlah hujan paling tinggi dengan 6 hari pencerapan hujan. Tawau merekodkan hujan harian tertinggi dengan bacaan sebanyak 75.4 mm yang dicerap pada 19 haribulan.

Di Sarawak pula, terdapat dua (2) kawasan yang merekodkan jumlah hujan melebihi 100 mm iaitu di Kuching (128mm) dan Miri (248mm) merekodkan jumlah hujan paling tinggi dengan 9 hari pencerapan hujan. Miri juga merekodkan hujan harian tertinggi dengan bacaan sebanyak 110.2 mm yang dicerap pada 11 haribulan.

Referring to Figure 1, the Peninsula recorded an anomaly percentage of 20 - 60 % above average which is more concentrated in northern part of the Peninsula, east coast of the Peninsula, Selangor and Tampin (Negeri Sembilan). Meanwhile, Rompin and Bera (Pahang), Jelebu (Negeri Sembilan) and Batu Pahat (Johor) recorded a rainfall anomaly percentage of 20 - 60 % below average. Other areas show the percentage of rainfall anomalies is at an average. In Sarawak, generally recorded a percentage of rainfall

anomalies 20 - 60 % below average except in Miri and Limbang which recorded a percentage of rainfall anomalies 20 - 60 % above average. Meanwhile, Kuching recorded an average percentage of rainfall anomalies. In Sabah, generally recorded a percentage of rainfall anomalies 20 - 60 % above average except Sandakan recorded a percentage of rainfall anomalies 40 - 60 % below average.

Based on Figure 2, there are seven (7) areas that recorded rainfall readings exceeding 200mm, namely Kota Bharu (269mm), Kuala Krai (506mm) and Haiwan Machang Station (234mm), Kuantan (322mm) in Pahang and Kuala Terengganu (226mm), MARDI Jerangau Station (492mm) and MARDI Kemaman Station (713mm) in Terengganu which recorded the highest rainfall with 10 days of rainfall observations. MARDI Kemaman Station also recorded the highest daily rainfall this decade with a reading of 231.5 mm observed on the 18th of the month. However, there are also areas that record less rainfall such as MARDI Sungai Baging Station (9mm) in Pahang as well as Pulau Langkawi (4mm) and Pertanian Teluk Chengai Station (6mm) in Kedah.

In Sabah, there are three (3) areas that recorded rainfall readings exceeding 100mm, namely in Labuan (103mm), Tawau (104mm) and Kudat (107mm) which recorded the highest rainfall with 6 days of rainfall observations. Tawau recorded the highest daily rainfall with a reading of 75.4 mm observed on the 19th of the month.

In Sarawak, there are two (2) areas that recorded rainfall over 100 mm, namely Kuching (128mm) and Miri (248mm) recorded the highest rainfall with 9 days of rainfall observations. Miri also recorded the highest daily rainfall with a reading of 110.2 mm observed on the 11th of the month.

SUHU / TEMPERATURE

Merujuk Rajah 3 dan Rajah 4, kebanyakan kawasan tanah rendah menerima purata suhu harian antara 25.3 °C hingga 28.4 °C. Pada dekad ini, bacaan suhu tertinggi direkodkan di Stesen Pertanian Charok Padang (Kedah) dengan bacaan 35.3 °C manakala bacaan suhu terendah direkodkan di Stesen MARDI Jerangau (Terengganu) dengan bacaan 19.0 °C. Bagi kawasan tanah tinggi pula, julat suhu purata telah direkodkan di antara 14.9 °C hingga 22.8 °C di Cameron Highlands.

Referring to Figure 3 and Figure 4, most lowland areas received average daily temperatures ranging from 25.3 °C to 28.4 °C. In this decade, the highest temperature readings were recorded at Pertanian Charok Padang Station (Kedah) with a reading of 35.3 °C while the lowest temperature readings were at MARDI Jerangau (Terengganu) with a reading of 19.0 °C. For the highlands, the average temperature range has been recorded between 14.9 °C to 22.8 °C in Cameron Highlands.

SEJATAN / EVAPORATION

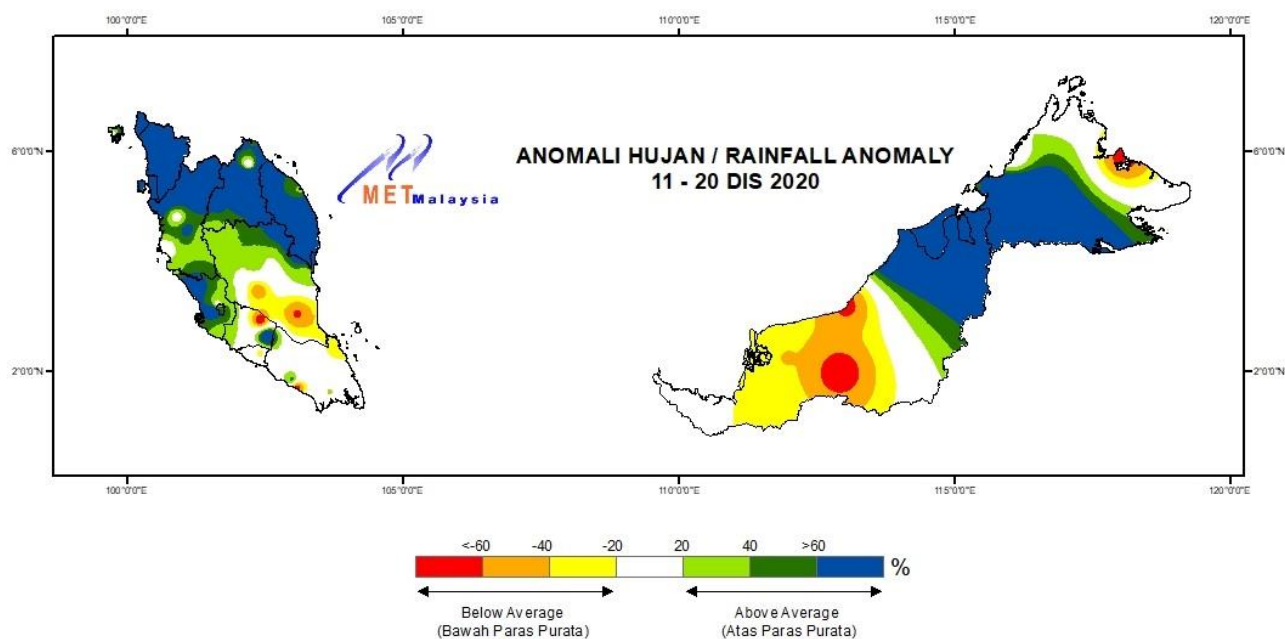
Kebanyakan kawasan di Semenanjung secara umumnya merekodkan kadar purata sejatan harian antara 2.5 mm hingga 4.0 mm di mana Chuping (Perlis) dan Kuala Terengganu (Terengganu) mencatatkan bacaan tertinggi dengan bacaan sebanyak iaitu 4.6 mm manakala Cameron Highlands (Pahang) mencatatkan bacaan terendah iaitu 1.3 mm. Di Sabah dan Sarawak pula, kebanyakan stesen merekodkan bacaan dari 3.0 mm hingga 4.0 mm di mana Labuan (Sabah) mencatatkan bacaan tertinggi dengan bacaan sebanyak iaitu 4.1 mm manakala Sri Aman (Sarawak) mencatatkan bacaan terendah iaitu 2.4 mm. Pada dekad ini, Chuping merekodkan kadar purata sejatan harian dengan nilai sisihan purata tertinggi iaitu +1.1mm manakala Alor Setar (Kedah) mencatatkan bacaan nilai sisihan purata harian terendah iaitu -2.2mm (Rujuk Rajah 5).

Most areas in the Peninsula generally recorded an average daily evaporation rates ranging from 2.5 mm to 4.0 mm where Chuping (Perlis) and Kuala Terengganu (Terengganu) recorded the highest reading with a reading of 4.6 mm while Cameron Highlands (Pahang) recorded the lowest reading with a reading of 1.3 mm. In Sabah and Sarawak, most stations recorded readings from 3.0 mm to 4.0 mm where Labuan (Sabah) recorded the highest reading with a reading of 4.1 mm while Sri Aman (Sarawak) recorded the lowest reading with a reading of 2.4 mm. In this decade, Chuping recorded an average daily evaporation rate with the highest average deviation value of +1.1mm while Alor Setar (Kedah) recorded the lowest daily average deviation value reading of -2.2mm (Refer to Figure 5).

SINARAN SOLAR / SOLAR RADIATION

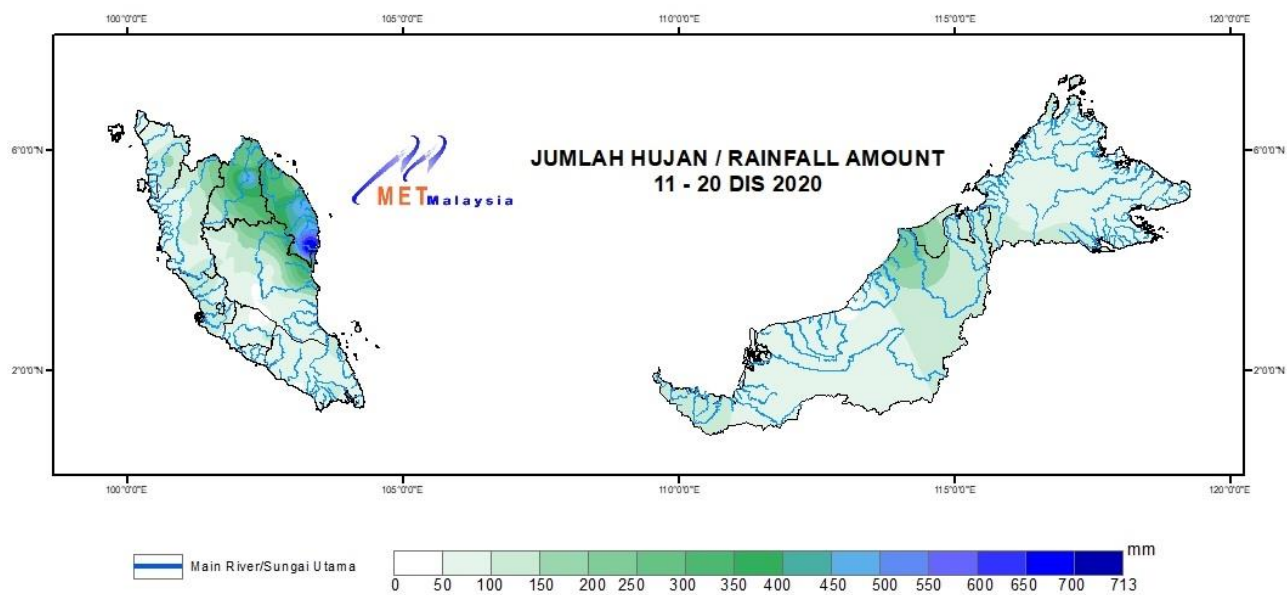
Pada dekad ini, kebanyakan kawasan di Semenanjung merekodkan purata sinaran solar harian antara 10.0 MJm^{-2} sehingga 12.0 MJm^{-2} di mana Pulau Langkawi (Kedah) mencatatkan bacaan tertinggi dengan bacaan sebanyak 14.9 MJm^{-2} manakala Kuala Krai (Kelantan) mencatatkan bacaan terendah iaitu 7.9 MJm^{-2} . Bagi Sabah dan Sarawak pula, purata bacaan harian direkodkan antara 15.5 MJm^{-2} hingga 18.0 MJm^{-2} di mana Miri (Sarawak) mencatatkan bacaan tertinggi sebanyak 19.1 MJm^{-2} manakala Kuching (Sarawak) mencatatkan bacaan terendah sebanyak 14.3 MJm^{-2} . Bagi kawasan tanah tinggi, Cameron Highlands mencatatkan bacaan sebanyak 10.6 MJm^{-2} (Rujuk Rajah 6).

In this decade, most places in the Peninsula recorded an average daily solar radiation between 10.0 MJm^{-2} to 12.0 MJm^{-2} where Pulau Langkawi (Kedah) recorded the highest reading with a reading of 14.9 MJm^{-2} while Kuala Krai (Kelantan) recorded the lowest reading with a reading of 7.9 MJm^{-2} . For Sabah and Sarawak, an average daily reading was recorded between 15.5 MJm^{-2} to 18.0 MJm^{-2} where Miri (Sarawak) recorded the highest reading of 19.1 MJm^{-2} while Kuching (Sarawak) recorded the lowest reading of 14.3 MJm^{-2} . For highlands, Cameron Highlands recorded a reading of 10.6 MJm^{-2} (Refer to Figure 6).



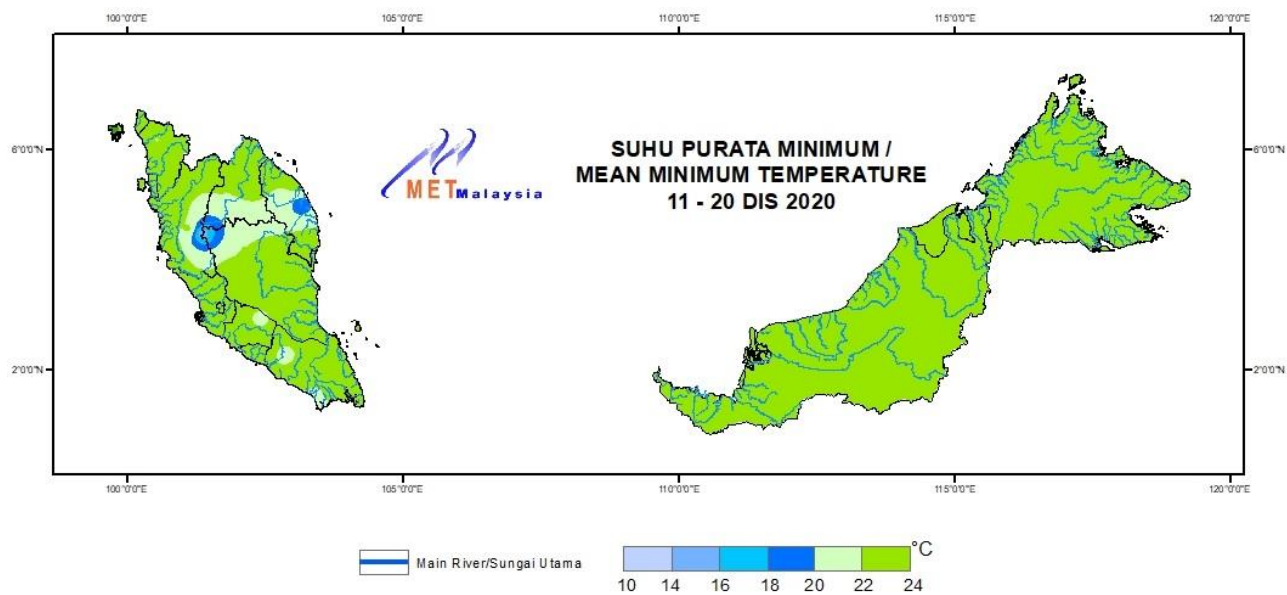
Rajah 1: Anomali Hujan

Figure 1: Rainfall Anomaly



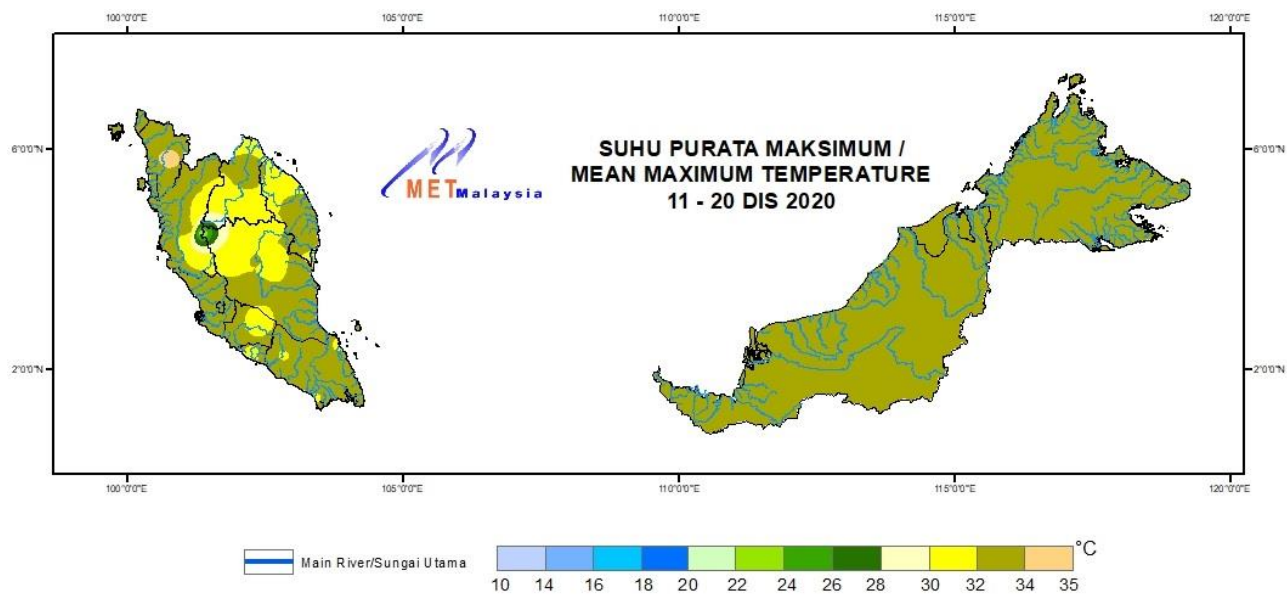
Rajah 2: Jumlah Hujan

Figure 2: Rainfall Amount



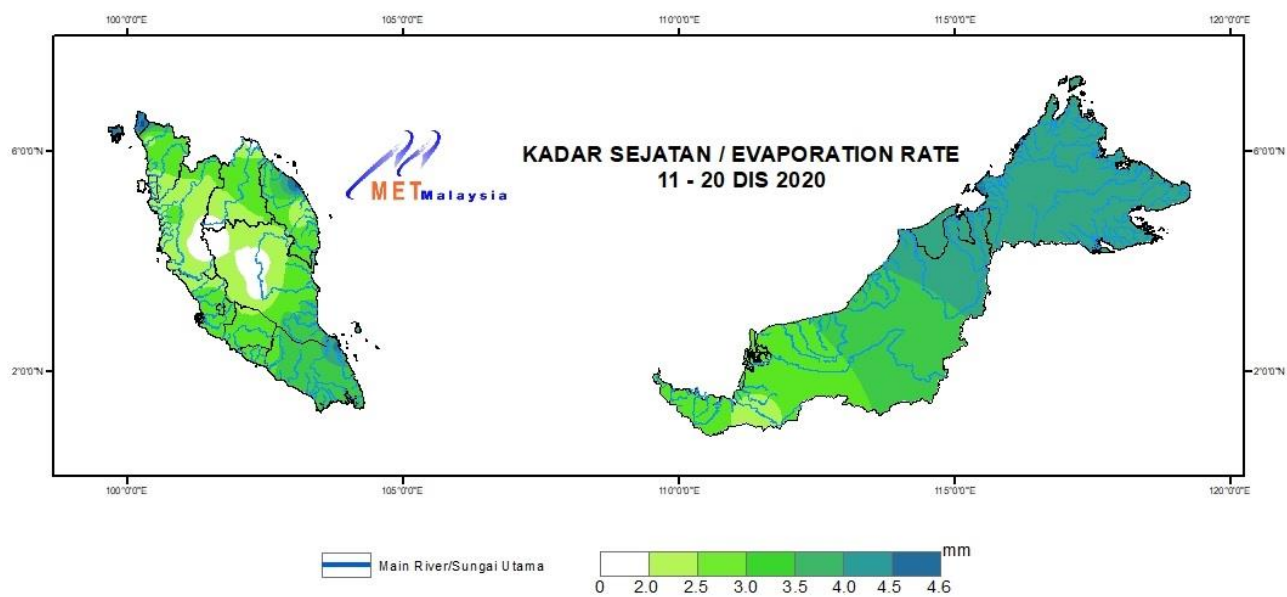
Rajah 3: Suhu Purata Minimum

Figure 3: Mean Minimum Temperature



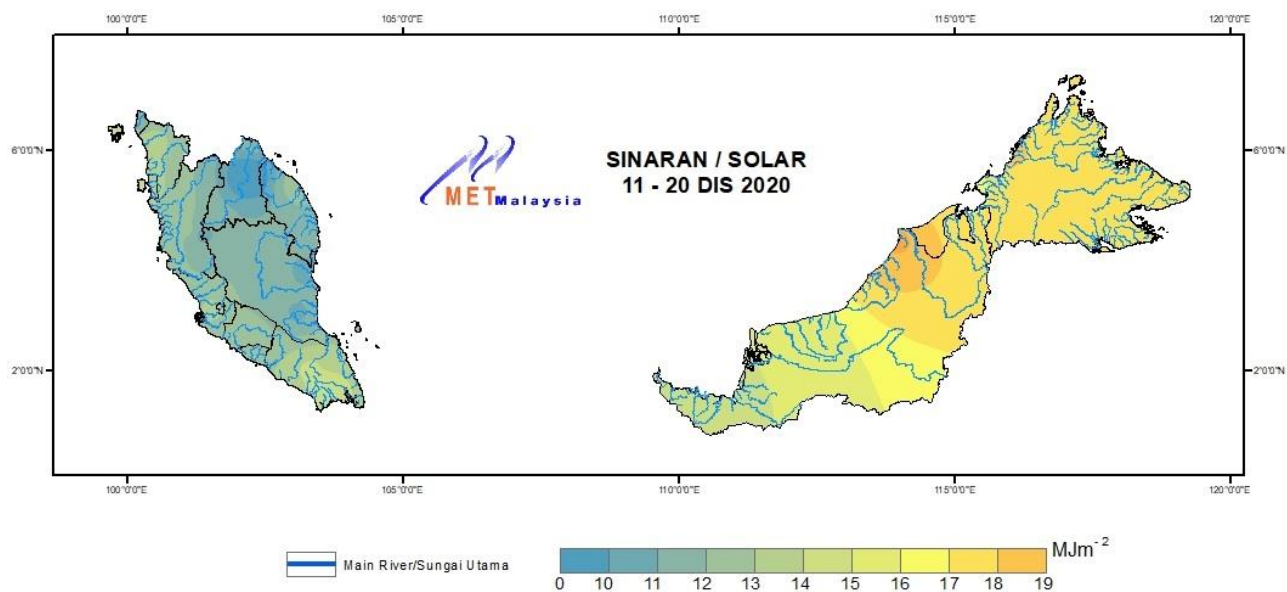
Rajah 4: Suhu Purata Maksimum

Figure 4: Mean Maximum Temperature



Rajah 5: Kadar Sejatan

Figure 5: Evaporation Rate



Rajah 6: Sinaran

Figure 6: Solar

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Apr-2021