

1. Review of Regional Weather Conditions for First Fortnight of May 2019

1.1 Under inter-monsoon conditions, the prevailing winds over the equatorial region were mostly light and variable in direction over the past fortnight. Over the northern ASEAN region, there were anomalous westerly winds (Figure 1).

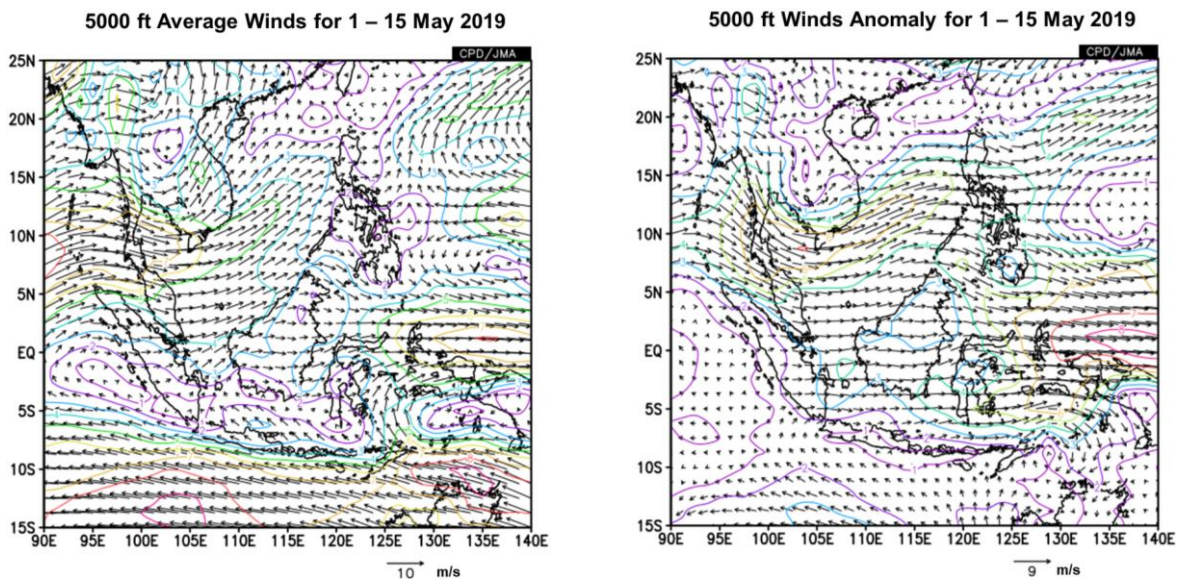


Figure 1 5000 ft average winds (left) and anomalies (right) for 1 – 15 May 2019 (Source: JMA)

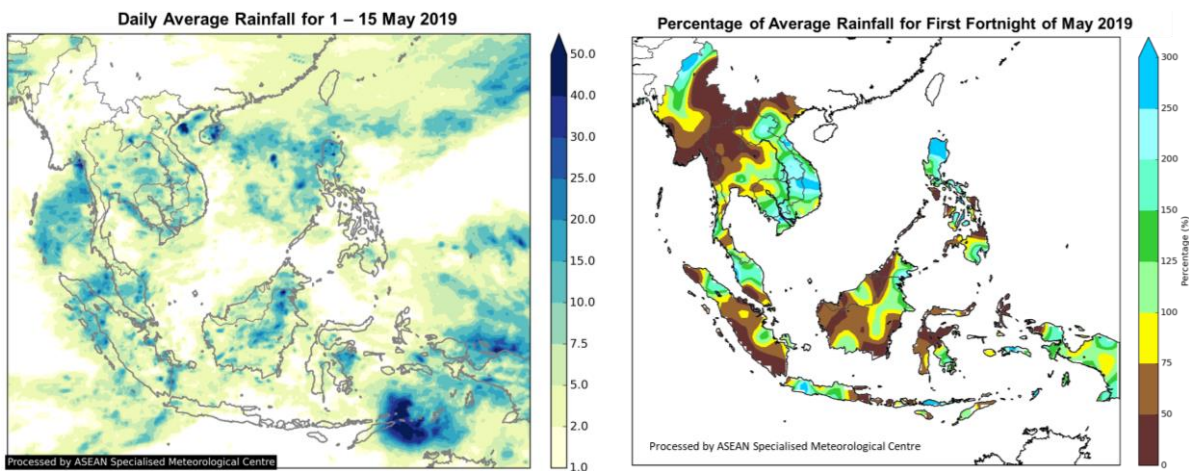


Figure 2 Daily average rainfall for the ASEAN region in the first fortnight of May 2019. (Source: JAXA Global Satellite Mapping of Precipitation)

Figure 3 Percentage of average rainfall for 1 - 15 May 2019. The rainfall data may be less representative for areas with a less dense rainfall network. (Source: IRI NOAA/NCEP CPC Unified Precipitation Analyses)

1.2 There were scattered showers over the region in the first half of May (Figure 2), with the exception of Myanmar where generally dry weather prevailed. Myanmar and the northern parts of Lao PDR and Thailand received below-average rainfall, which could have been due to dry air

from the Bay of Bengal that persisted over these areas early in the month. Many areas along the equatorial region (including southern parts of Peninsular Malaysia, Sumatra, and Borneo) received below-normal rainfall (Figure 3), and this could in part be attributed to the Madden-Julian Oscillation (MJO) activities from Phase 5 to Phase 8 during the fortnight.

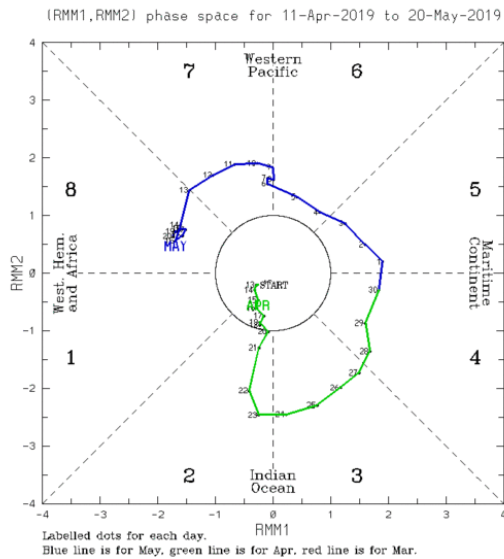


Figure 4 The MJO phase diagram (blue for May 2019). The diagram illustrates the movement of the MJO through different phases, which correspond to different locations along the equator. The distance of the index from the centre of the diagram is correlated with the strength of MJO. When the index falls within the circle, the MJO is considered weak or indiscernible. (Source: Bureau of Meteorology)

1.3 In the first half of May, although there was a slight cooling of the sea surface, the sea surface temperatures of the equatorial Pacific Ocean remained warmer than average. There was no consistent coupling between the sea surface temperatures and the atmosphere, indicating that full-fledged El Niño conditions have not developed.

2. Review of Land/Forest Fires and Smoke Haze Situation

2.1 The first half of May saw a gradual improvement in the fire and smoke haze situation over the Mekong sub-region. Some smoke haze was observed over parts of Myanmar and the northern parts of Thailand and Lao PDR early in the month. With an increase in scattered shower activities over the northern parts of the Mekong sub-region, no significant smoke haze was observed towards the end of the fortnight except for localised haze from isolated hotspots in Myanmar.

2.2 In the southern ASEAN region, hotspot activities remained generally subdued although there were isolated hotspots with localised plumes in West Kalimantan and Sarawak during brief periods of dry weather.

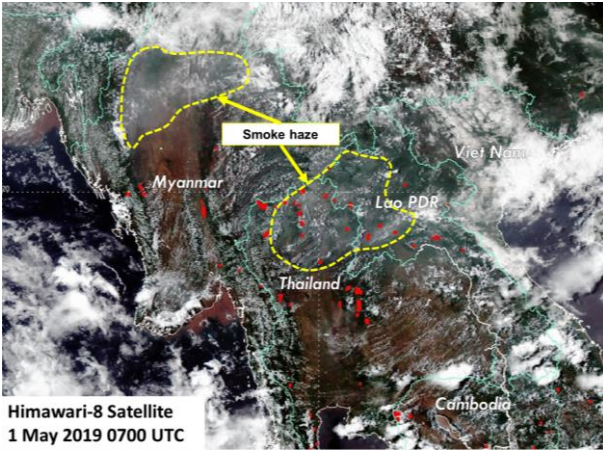


Figure 5 Smoke haze in Myanmar and the northern parts of Thailand and Lao PDR in early May 2019

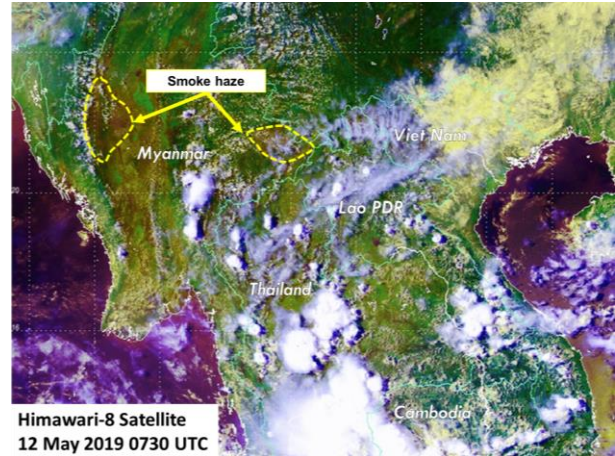


Figure 6 Localised smoke haze confined within Myanmar

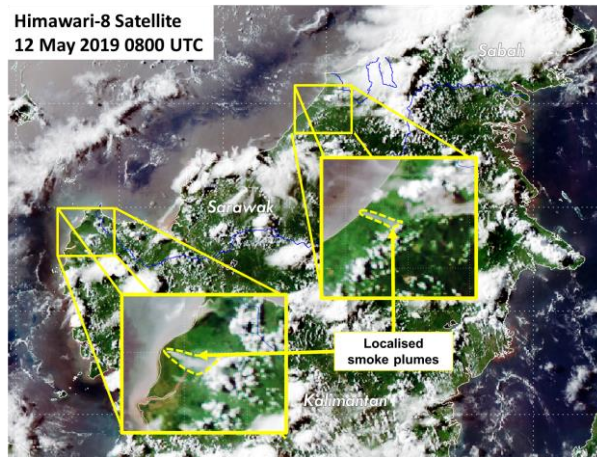


Figure 7 Localised smoke plumes from isolated hotspots in Sarawak and West Kalimantan