

UPDATE OF REGIONAL WEATHER AND SMOKE HAZE June 2016

1. Review of Regional Weather Conditions in May 2016

1.1 Inter Monsoon conditions prevailed in May 2016 and shower activities returned to most parts of the ASEAN region as El Niño conditions in the equatorial Pacific Ocean continued to further weaken in May 2016.

1.2 Diurnal shower activities and light wind conditions prevailed on most days in both the southern and northern ASEAN regions. Around the end of May 2016, the Inter Monsoon conditions gradually transitioned to the Southwest Monsoon conditions, and a strengthening of winds over the South China Sea was observed. Shower in the region were gradually becoming less active over the Java Sea as the monsoon rain belt migrated further north.

1.3 For May 2016, most parts of the southern ASEAN region received near-normal rainfall except in parts of Kalimantan and Java Island where above-normal rainfall was received. In the northern ASEAN region, less than 100% of the normal rainfall was received mainly in Thailand, Cambodia and Lao PDR. The regional rainfall distribution for May 2016 is shown in Figure 1A.

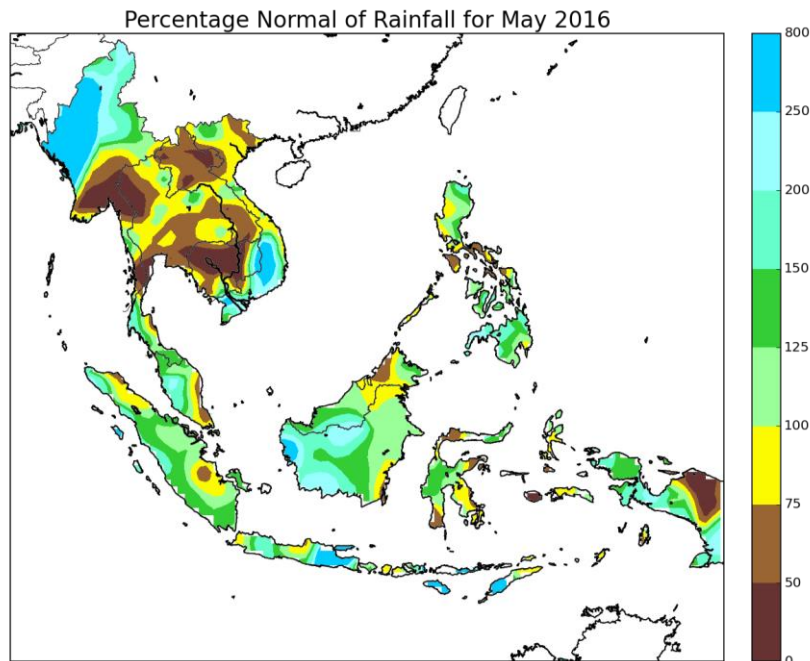


Figure 1A: Percentage of Normal Rainfall for May 2016

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

2.1 Isolated hotspot activities with localised smoke haze were observed in the northern parts of Mekong sub-region and in parts of Peninsular Malaysia, in particular in early-May. An increase in the occurrence of showers in the rest of May 2016 helped to subdue hotspot activities in the ASEAN region. There was no significant transboundary haze situation.

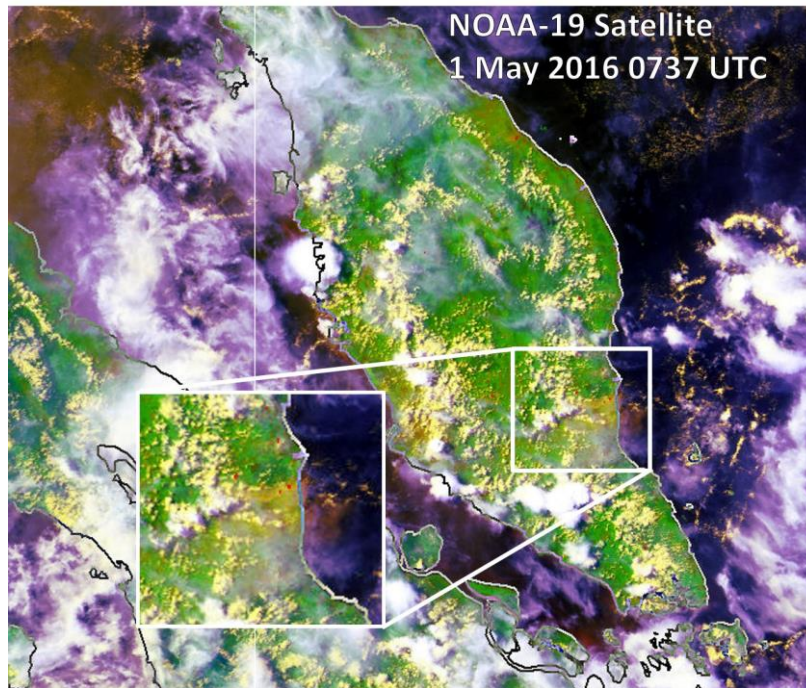


Figure 2A: NOAA-19 satellite image on 1 May 2016 shows isolated hotspots with localised smoke haze in central Pahang, Malaysia.

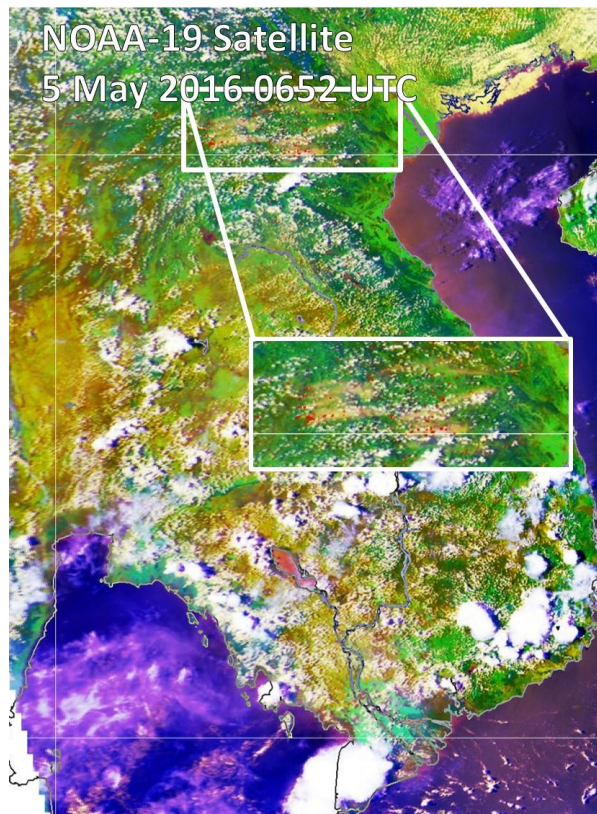


Figure 2B: NOAA-19 satellite image on 5 May 2016 shows localised hotspot activities in the northern parts of Mekong sub-region.

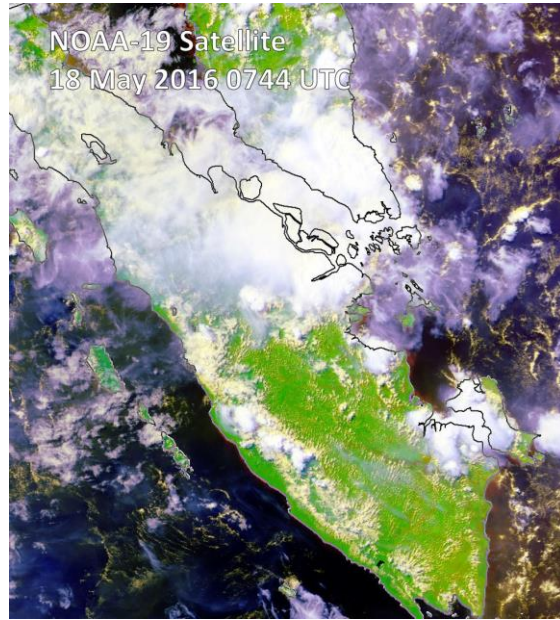


Figure 2C: NOAA-19 satellite image on 18 May 2016 shows widespread shower activities over the Strait of Malacca, the eastern coastal areas of central Sumatra and southern half of Peninsular Malaysia.



Figure 2D: NOAA-19 satellite image on 21 May 2016 shows hotspot activities mostly subdued due to wet weather conditions.



Figure 2E: NOAA-19 satellite image on 29 May 2016 shows shower activities in the northern ASEAN region.

2.2 The hotspot charts for May 2016 for

- a) Cambodia, Myanmar, Thailand, Lao PDR and Vietnam;
- b) Sumatra, Borneo and Peninsular Malaysia;

are shown in Figures 2F to 2G respectively.

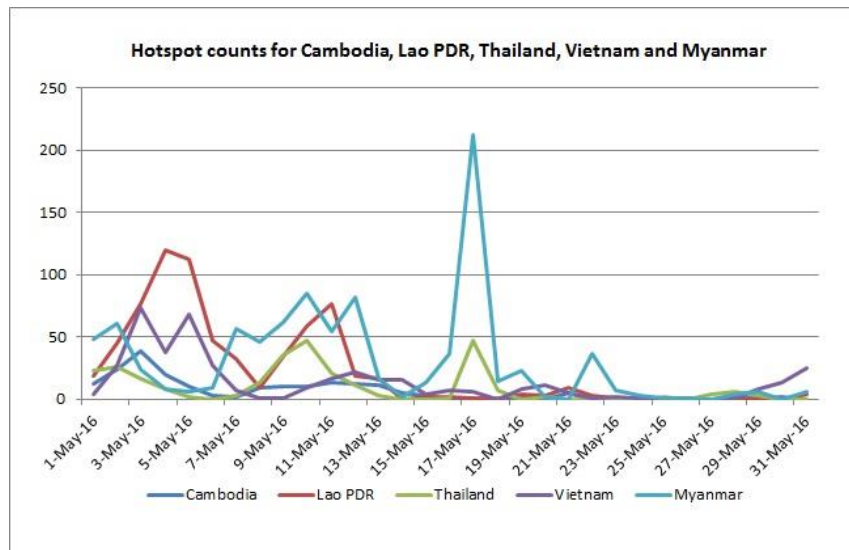


Figure 2F: Hotspot Counts in Cambodia, Lao PDR, Thailand, Vietnam, Myanmar for May 2016

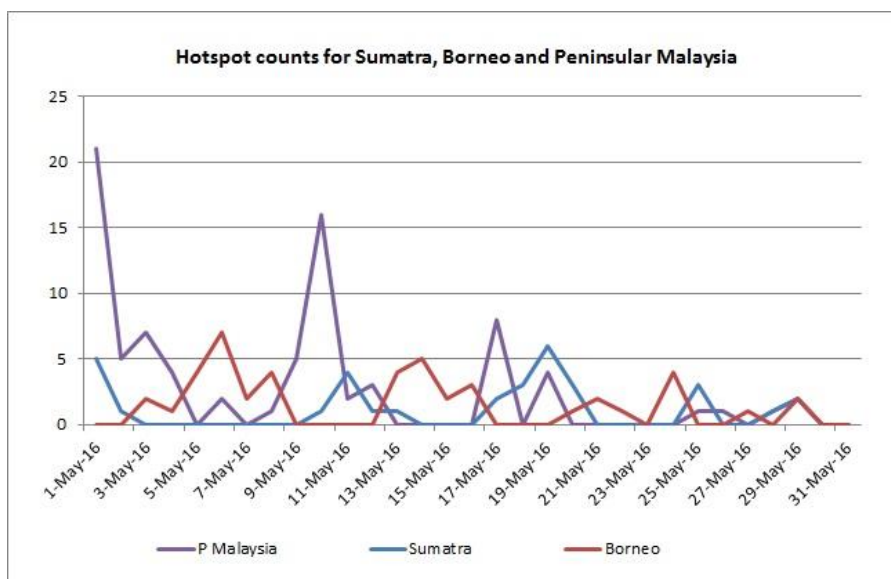


Fig 2G: Hotspot Counts in Sumatra, Borneo and Peninsular Malaysia for May 2016

3. Status of El Niño/La Niña

3.1 The prevailing El Niño weakened further in May 2016, approaching neutral levels based on Niño3.4 sea-surface temperature (SST) readings. The large-scale atmospheric patterns, such as the trade winds near the equatorial Pacific Ocean returning to near average conditions and the cloud patterns showing less of the typical El Niño characteristics, continue to respond to the weakening of the El Niño conditions.

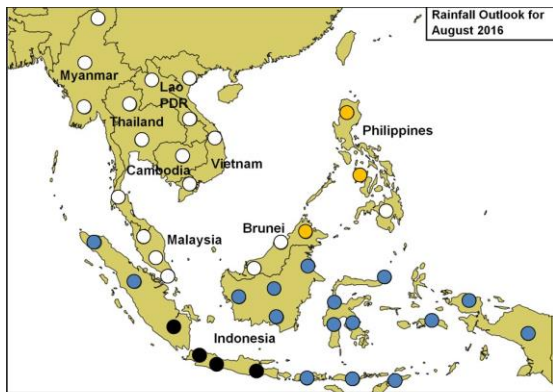
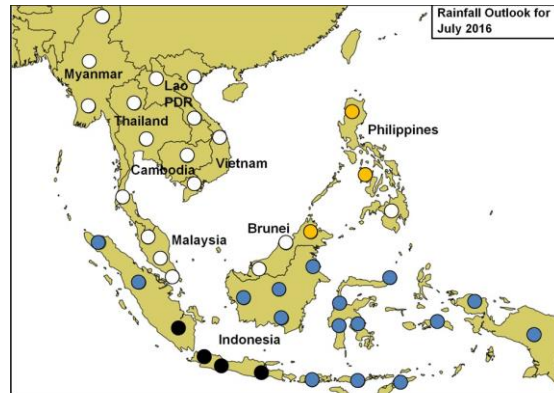
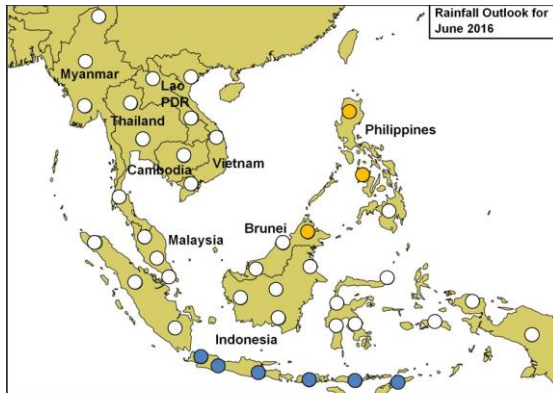
3.2 International climate models and expert assessment predict the end of El Niño by mid-2016. While there has yet to be consensus among experts if La Niña or neutral conditions are to occur in the second half of 2016, model outlook increasingly suggest that La Niña conditions are favored more than neutral conditions, but the possibility of neutral conditions prevailing for the rest of the year cannot be ruled out.

3.3 The ASEAN region is currently in the Southwest Monsoon season (June-September/early October), where the La-Niña is known to have considerable impact (wetness) on the western part of the Maritime Continent.

4. Outlook

4.1 The ASEAN region is currently in the Southwest Monsoon season (June – early October). During this period, prevailing winds are forecast to blow from the south-easterly or south-westerly direction. Although models project that La Niña conditions are favored over neutral conditions in the later part of 2016, extended periods of dry weather conditions are still possible. This could contribute to an increase or escalation in hotspot activities in the southern ASEAN region, in particular over the fire-prone provinces of Sumatra and Kalimantan.

4.2 In June 2016, normal rainfall is expected for most parts of the ASEAN region except in Northern Borneo and parts of Philippines where below-normal rainfall is expected. Above-normal rainfall is forecast for most parts of the southern ASEAN region, particularly over Indonesia, for July and August. The rainfall outlook for the ASEAN region for June 2016, July 2016 and August 2016 is shown in Figures 4A – 4C.



- - Above Normal (67th to 100th percentile)
- - Slightly Above Normal (50th to 83rd percentile)
- - Normal (33rd to 67th percentile)
- - Slightly Below Normal (17th to 50th percentile)
- - Below Normal (0 to 33rd percentile)

Figure 4: Rainfall Outlooks for the ASEAN Region – June 2016 (top left), July 2016 (top right), and August 2016 (bottom left)