

UPDATE OF REGIONAL WEATHER AND SMOKE HAZE FOR SEPTEMBER 2011

1. Review of Regional Weather Conditions in August 2011

1.1 Weak Southwest Monsoon conditions continued to prevail in August 2011 with the low level winds over the region blowing mostly from the southeast or southwest.

1.2 The Northern ASEAN region was affected by two tropical storms in August 2011. Tropical depression “Lando” which developed to the west of the Philippines on 31 July 2011 tracked east off the coast of Luzon bringing scattered showers to the west coast of Luzon Island before dissipating in the late afternoon of 2 August 2011. Typhoon Nanmadol which made landfall in northern Philippines on 28 August 2011 was recorded to be the strongest storm to hit the Philippines in 2011. Typhoon “Nanmadol” brought strong winds and heavy rain to many areas in northern Philippines. Over 61,000 people were evacuated from their homes and at least 16 people were killed. After battering the Philippines, Typhoon “Nanmadol” continued to track northwest towards Taiwan before making landfall over Fujian, China on 30 August 2011.

1.3 In August 2011, the monsoon rain belt was located north of the equator. The northern ASEAN region continued to experience its traditional rainy season and wet weather conditions affected many parts of Thailand and Myanmar. Northern and central Thailand received more than 125% of average rainfall and Myanmar received more than 150% of average rainfall in August 2011. Meanwhile, the southern ASEAN region continued to experience its traditional dry season, with extended dry periods observed in parts of Sumatra, Borneo and Java. With the monsoon belt north of the equator, the parts of southern ASEAN south of the equator experienced well below average rainfall. Java, Sulawesi and the southern parts of Sumatra and Kalimantan received only 0-50% of average rainfall in August 2011. The regional rainfall pattern for August 2011 is shown in Fig. 1.

Percentage of Normal Rainfall for August 2011

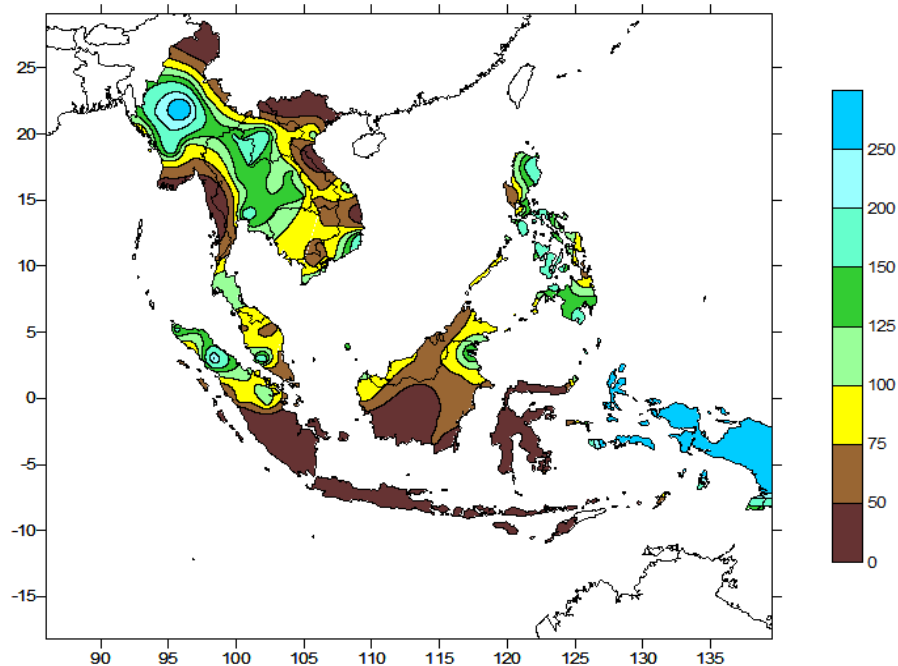


Fig 1: Percent of Normal Rainfall for August 2011

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

2.1 The prevailing rainy season over the northern ASEAN region continued to keep hotspot activities generally subdued. Sporadic hotspot activities were detected in Myanmar, Thailand and Vietnam during occasional brief dry periods.

2.2 Dry weather conditions over the southern ASEAN region led to surges in hotspot activities mostly in Kalimantan, central and southern Sumatra. In the first week of August, scattered hotspots with smoke plumes were observed in central Sumatra. Transboundary haze was observed to affect parts of the Straits of Malacca and the western coast of Peninsula Malaysia. Towards the end of August, escalations in hotspot activities occurred over parts of Kalimantan during an extended dry period. Persistent clusters of hotspots with widespread dense smoke haze were observed from fires in Central Kalimantan between 24 and 26 August. The smoke haze affected the air quality and visibilities in several parts of Borneo. Reduced visibilities of 1 km to 2 km were reported in Kuching, Pontianak and Banjarmasin while Kuching and Samarahan experienced air qualities in the moderate range. 880 and 714 hotspots were detected over Kalimantan on 24 and 25 August respectively. Scattered hotspots with localised slight smoke plumes were also observed in central and southern Sumatra during this period.

2.3 Satellite pictures depicting some of the hotspot activities in the ASEAN region during August 2011 are shown in Figs. 2 to 7.

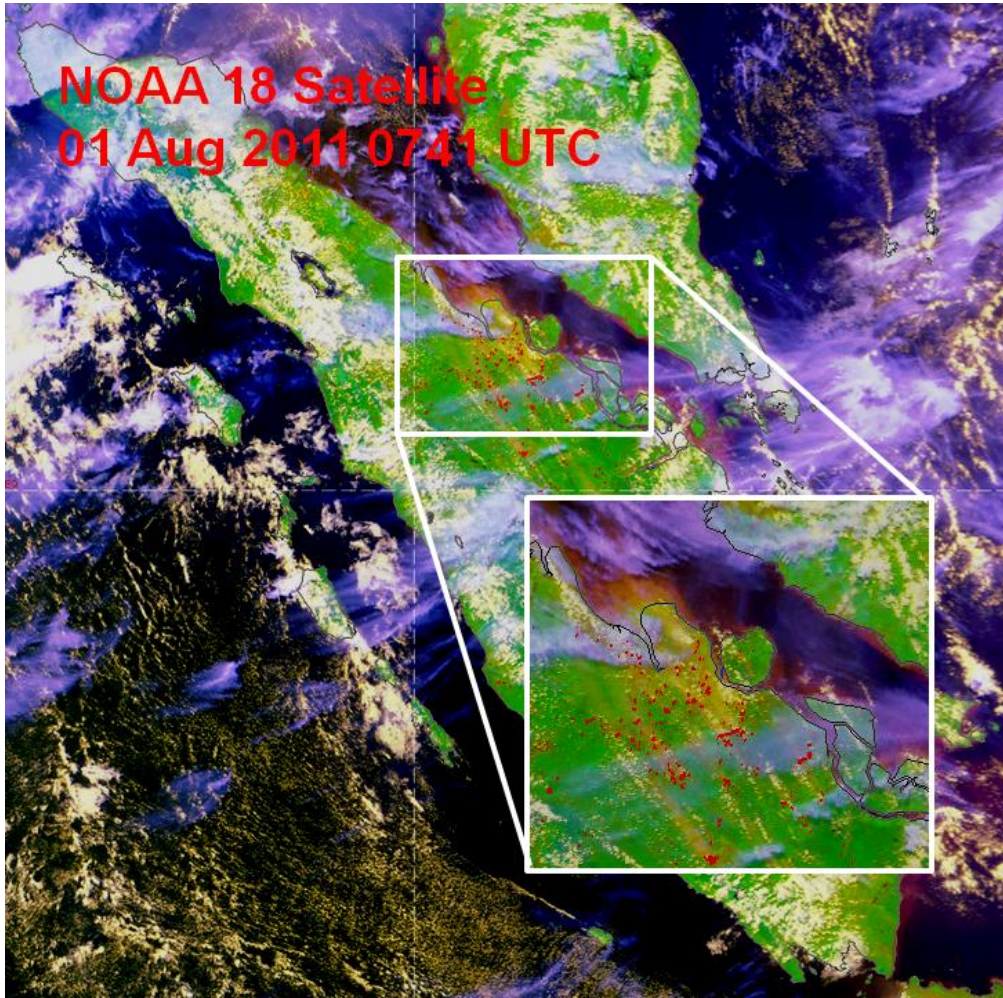


Fig 2: NOAA-18 satellite image on 01 August 2011 showing scattered hotspots with smoke plumes over Riau in Sumatra. Moderate haze was observed near the hotspots and its surrounding areas.

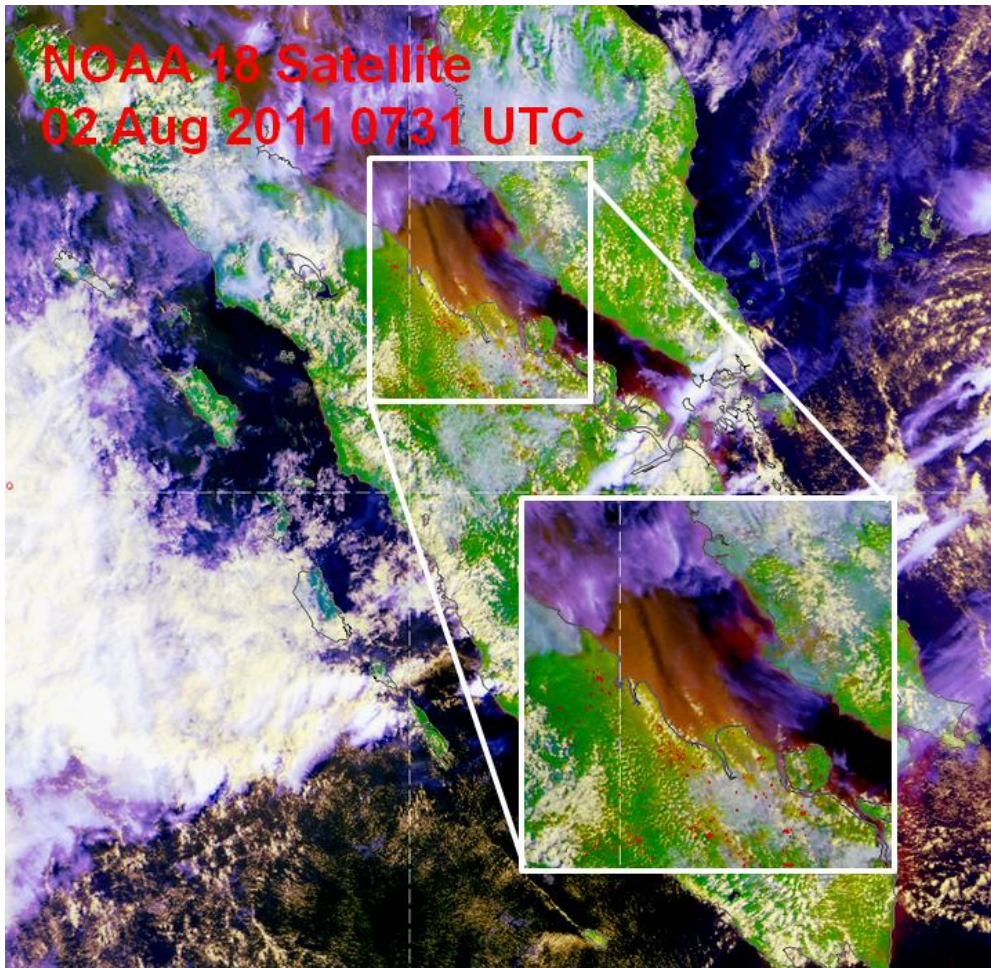


Fig 3: NOAA-18 satellite image on 02 August 2011 showing scattered hotspots with smoke plumes over Riau in Sumatra. Moderate haze was also observed over the Strait of Malacca.

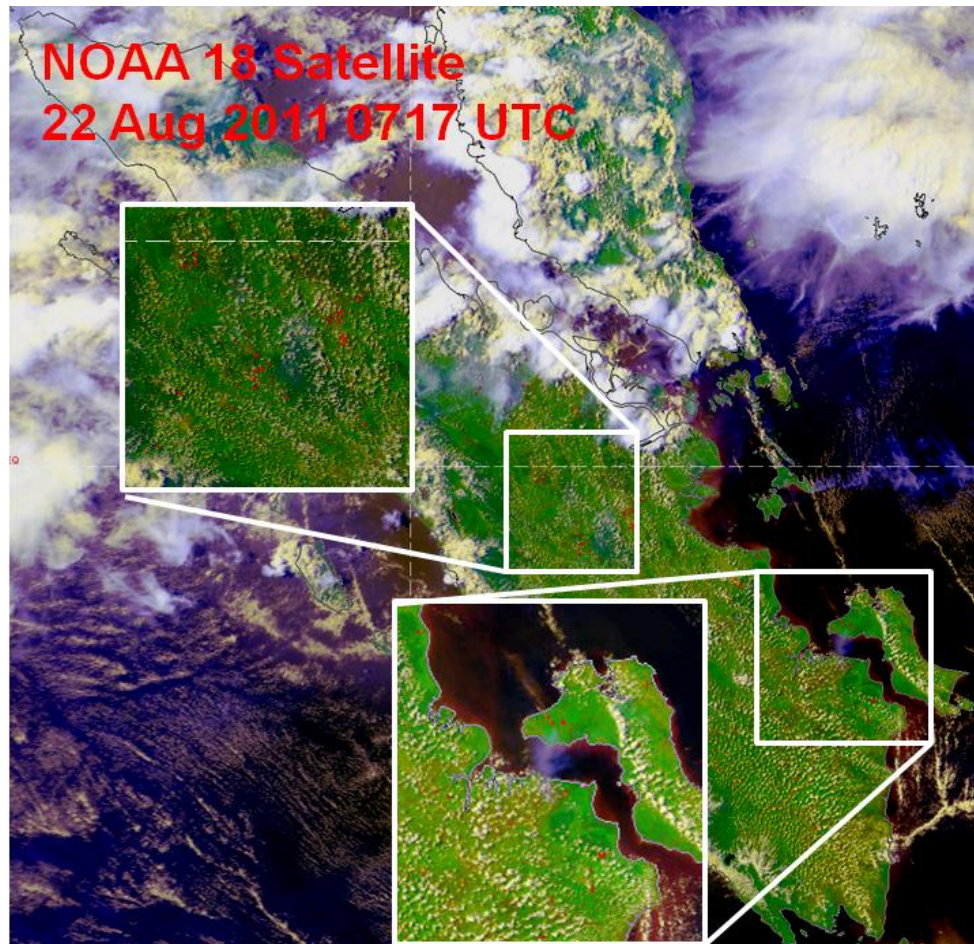


Fig 4: NOAA-18 satellite image on 22 August 2011 showing scattered hotspots with localised smoke plumes detected over southern Sumatra.

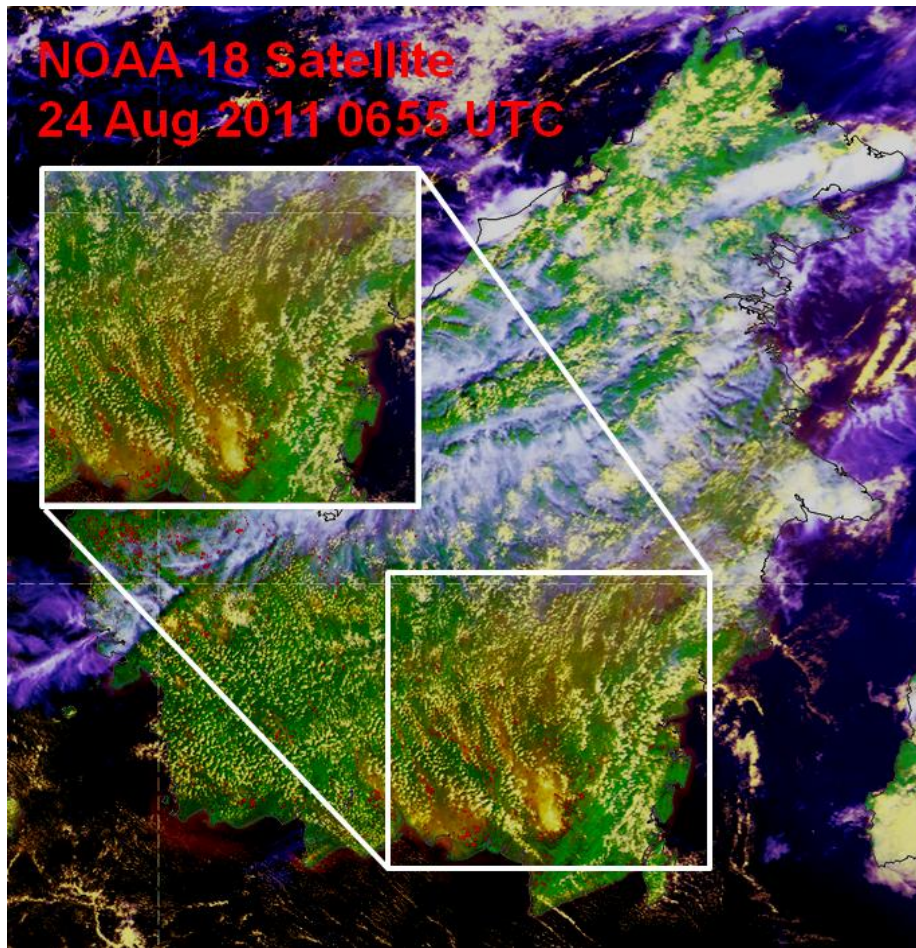


Fig 5: NOAA-18 satellite image on 24 August 2011 showing scattered hotspot activities with moderate to dense smoke haze over Kalimantan.

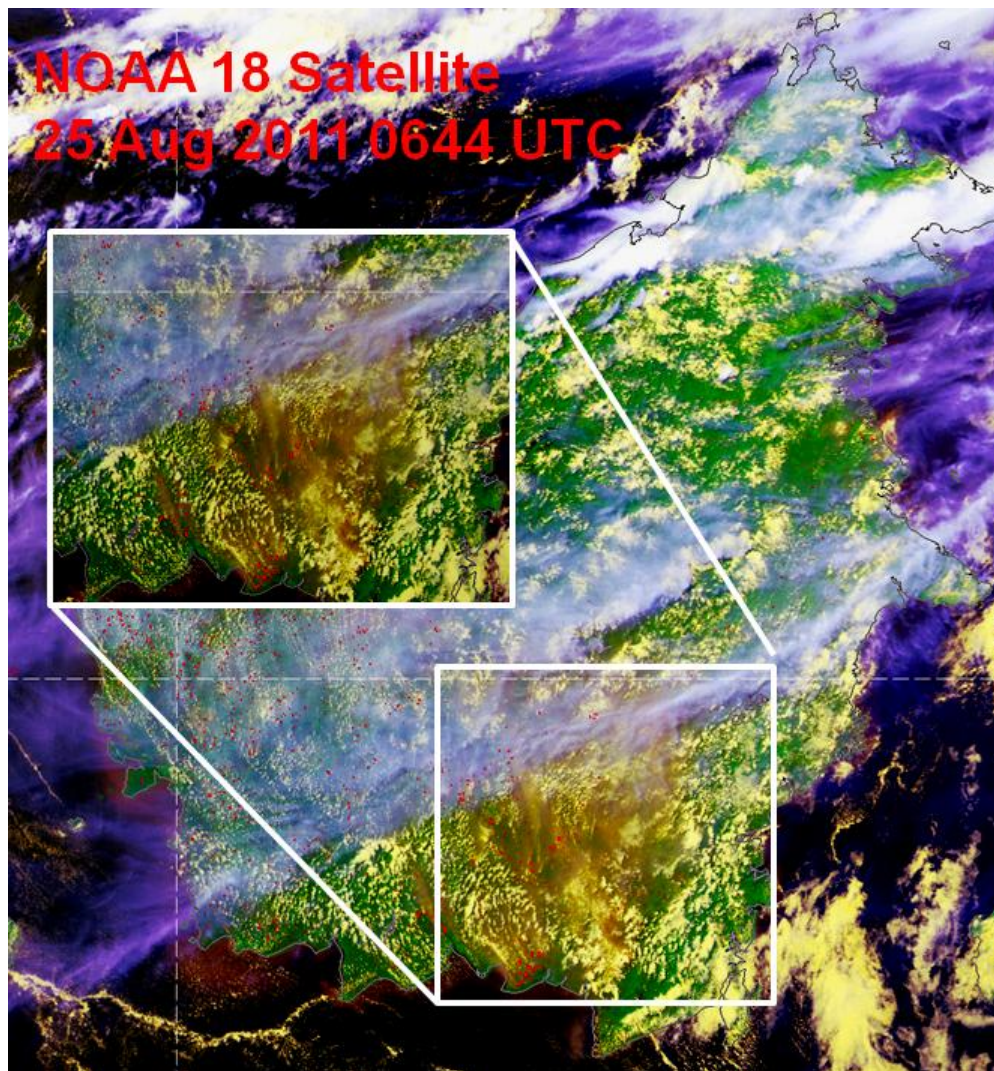


Fig 6: NOAA-18 satellite image on 25 August 2011 showing persistent clusters of hotspot activities with moderate to dense smoke haze over central and southern Kalimantan.

2.4 The hotspot charts for August 2011 for
 a) Cambodia, Myanmar, Thailand, Lao PDR and Vietnam;
 b) Sumatra, Borneo and Peninsular Malaysia; and
 c) Java, Sulawesi and the Philippines
 are shown in Figs. 8 to 10 respectively.

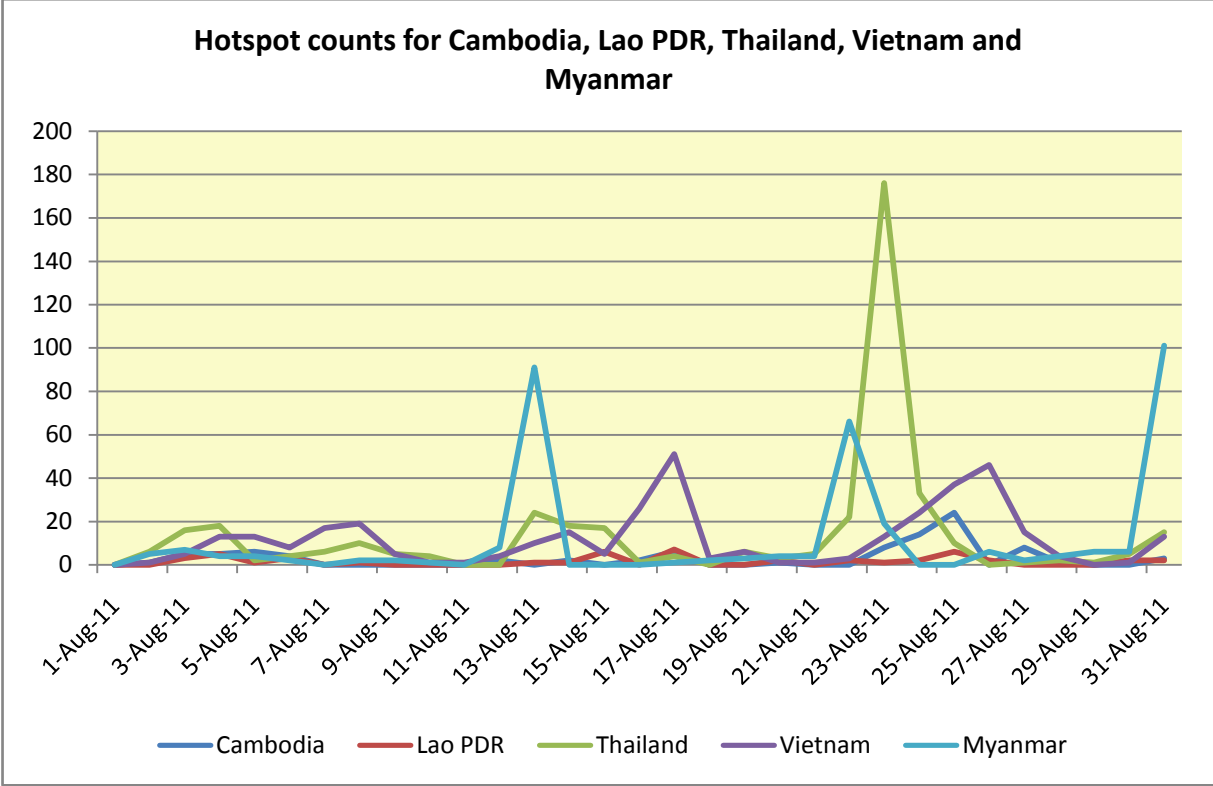


Fig 7: Hotspot Counts in Myanmar, Thailand, Lao PDR, Cambodia and Vietnam for August 2011

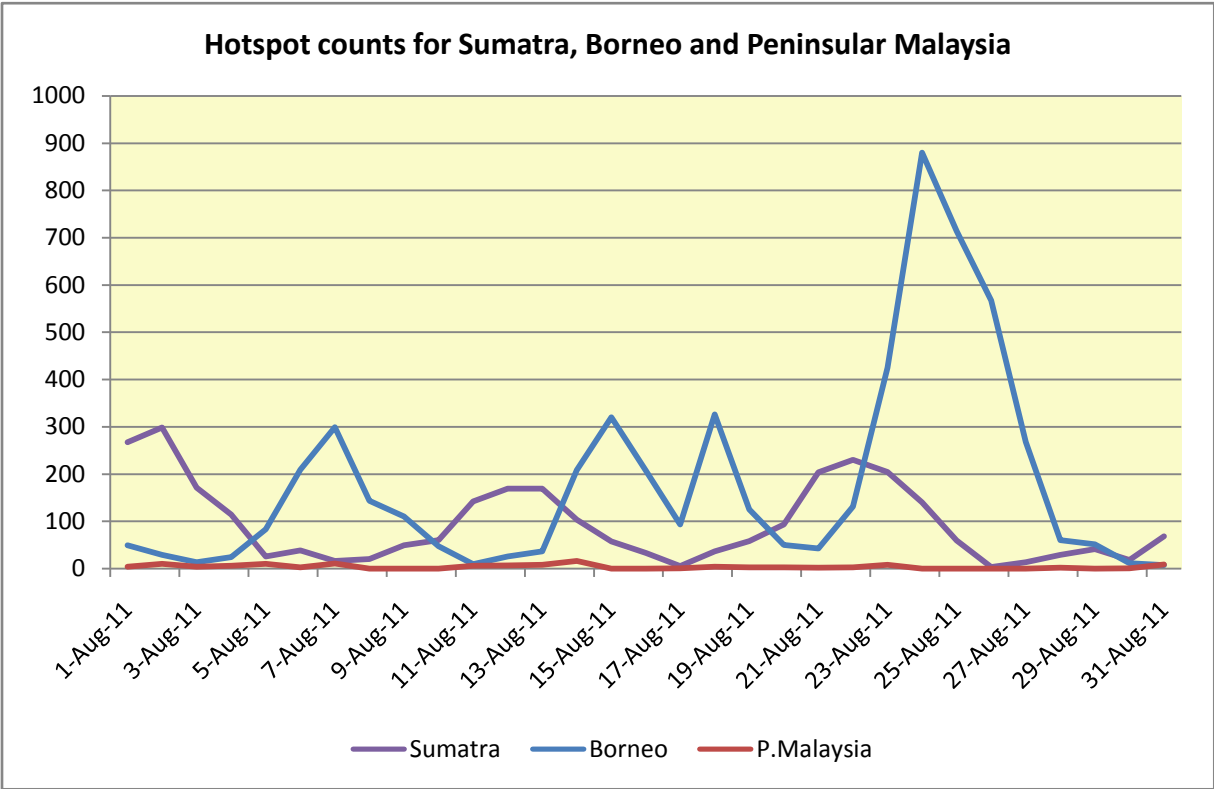


Fig 8: Hotspot Counts in Sumatra, Borneo and Peninsular Malaysia for August 2011

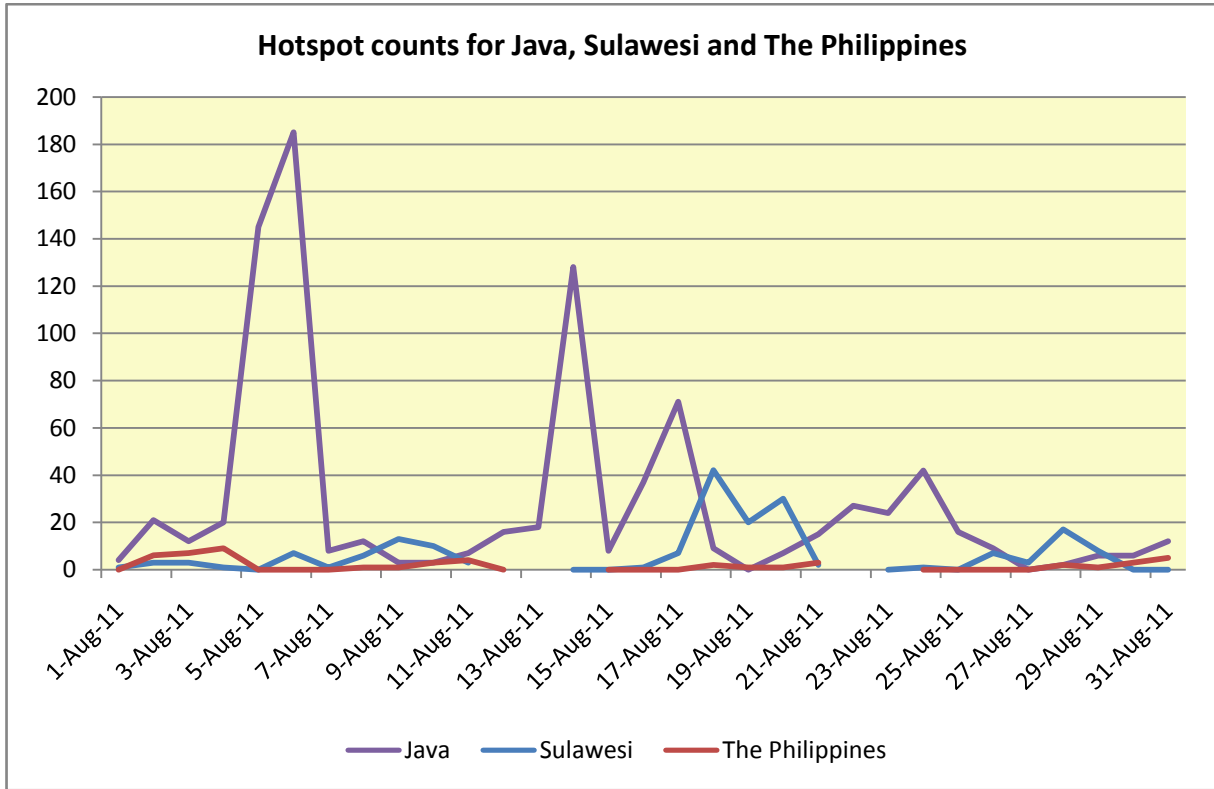


Fig 9: Hotspot Counts in Java, Sulawesi and the Philippines for August 2011

3. Status of the El Niño/La Niña

3.1 Neutral conditions (neither El Niño nor La Niña) continued to persist in the tropical Pacific Ocean. Most atmospheric and oceanic indicators of El Niño/La Niña including the equatorial Pacific Ocean temperatures (Fig. 11), trade winds, the Southern Oscillation Index and cloudiness over the Pacific showed little deviation from previous months and were mostly at levels indicative of neutral conditions.

3.2 The majority of international climate models forecast neutral conditions to persist for the rest of 2011, although some models indicate that a weak La Niña may develop towards the end of the year.

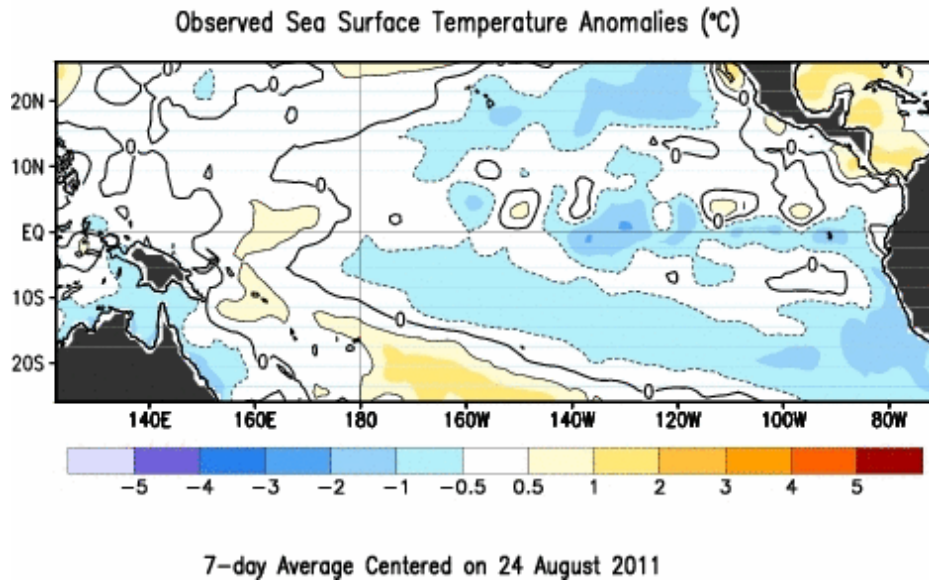


Fig 10: Sea Surface Temperature Anomalies in Tropical Pacific
(Source US NOAA)

CFS monthly SST (K)

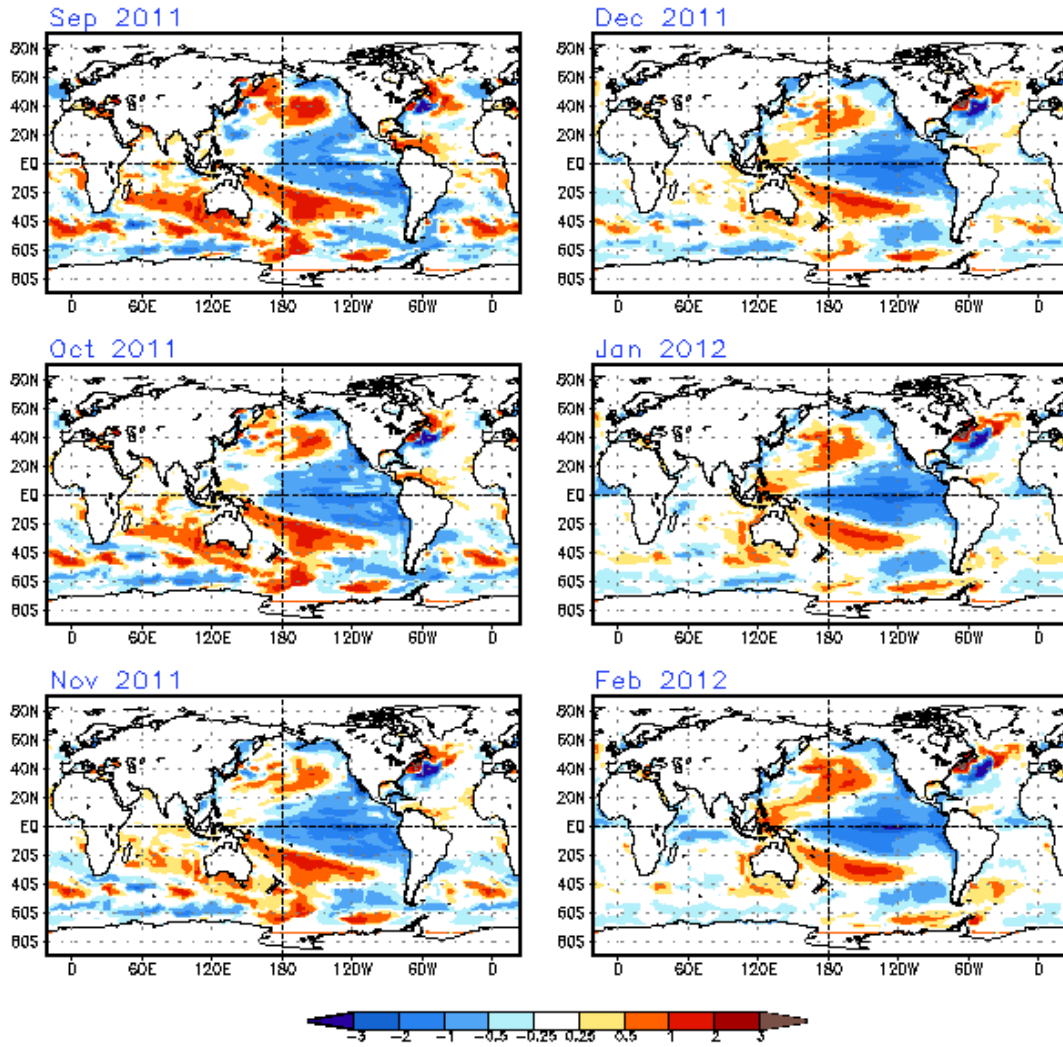


Fig 11: Forecast of the SST Anomalies (source US NOAA)

4. Outlook

4.1 The prevailing Southwest Monsoon conditions are expected to prevail till the end of September 2011 or early October 2011. With neutral conditions (neither El Niño nor La Niña) forecast for the rest of the year, rainfall is expected to be mostly normal in the ASEAN region. In September 2011, normal to slightly above normal rainfall is forecast for the ASEAN region except for south Kalimantan and Java where slightly below normal rainfall is expected. Rainfall for October 2011 is expected to be normal to slightly above normal. Rainfall outlooks for the next three months are shown in Figs. 13 -15.

4.2 In the northern ASEAN region, prevailing wet weather conditions can be expected in the region until the onset of the Northeast Monsoon in December 2011. While hotspot activities are expected to remain mostly subdued during this period, isolated hotspot activities could develop occasionally during brief periods of drier weather.

4.3 In the southern ASEAN region, the current dry season is likely to last till early October 2011. During this period, increases in hotspot activities can be expected in Sumatra and Borneo from time to time. Escalated hotspot activities leading to transboundary haze are likely to occur during extended periods of dry weather. Vigilance should therefore be stepped up for any escalation in hotspot activities in the fire-prone areas during the dry season. With the region transitioning into Inter-Monsoon conditions in October 2011, the hotspot situation over southern ASEAN region is expected to gradually improve.

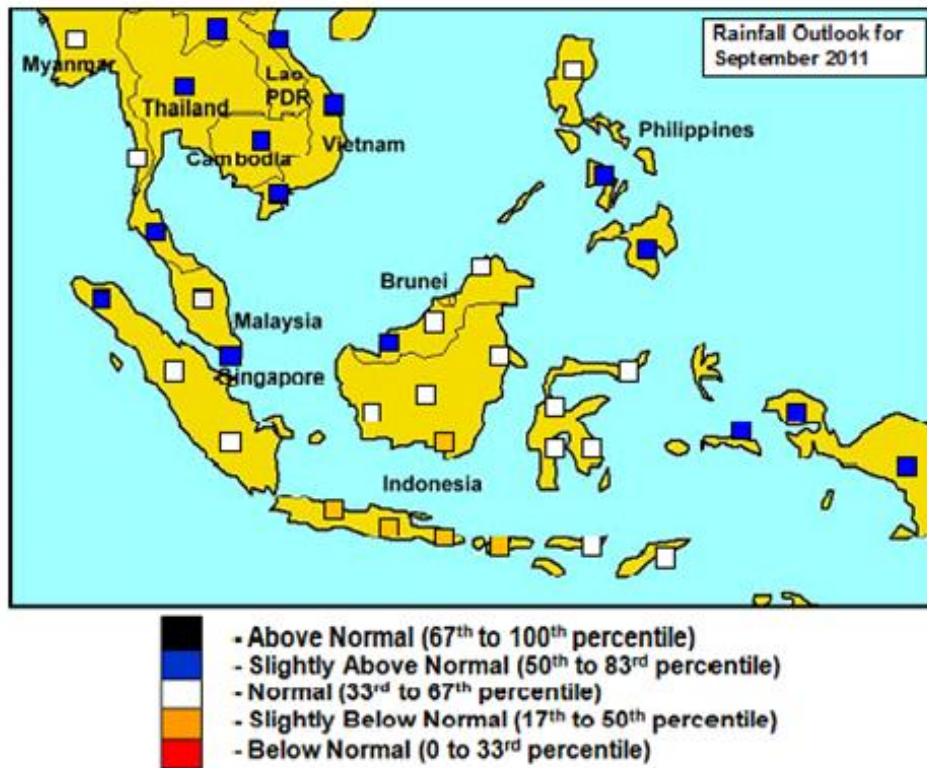


Fig. 12: Rainfall Outlook for the ASEAN Region (Sept 2011)

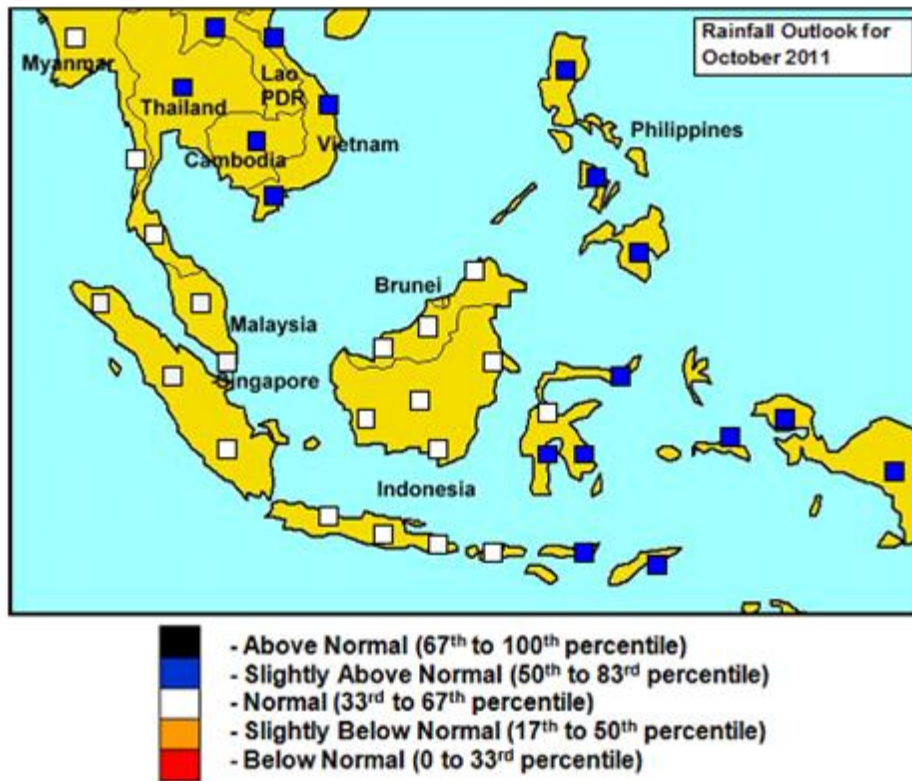


Fig. 13: Rainfall Outlook for the ASEAN Region (Oct 2011)

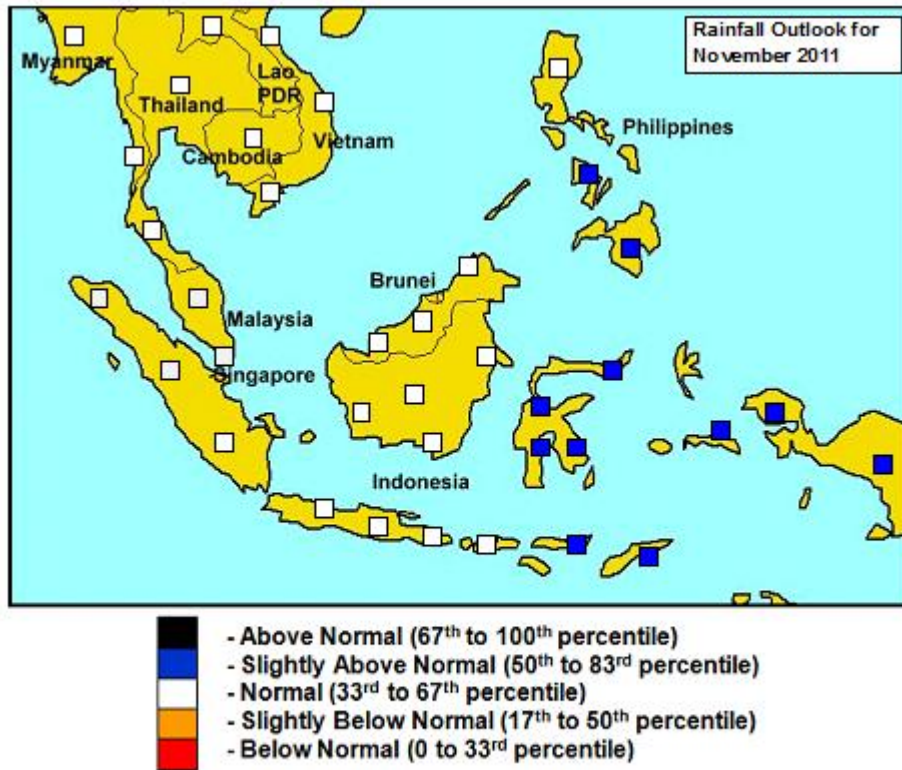


Fig. 14: Rainfall Outlook for the ASEAN Region (Nov 2011)