

**1. Review of Regional Weather Conditions**

1.1 In the first half of October 2019, the prevailing winds over the northern ASEAN region blew mainly from the northeast or east, and the prevailing winds over the southern ASEAN region were generally from the southeast or east. Winds were weaker over the equatorial areas. During this period, anomalously strong northeasterly or southeasterly winds prevailed over the ASEAN region.

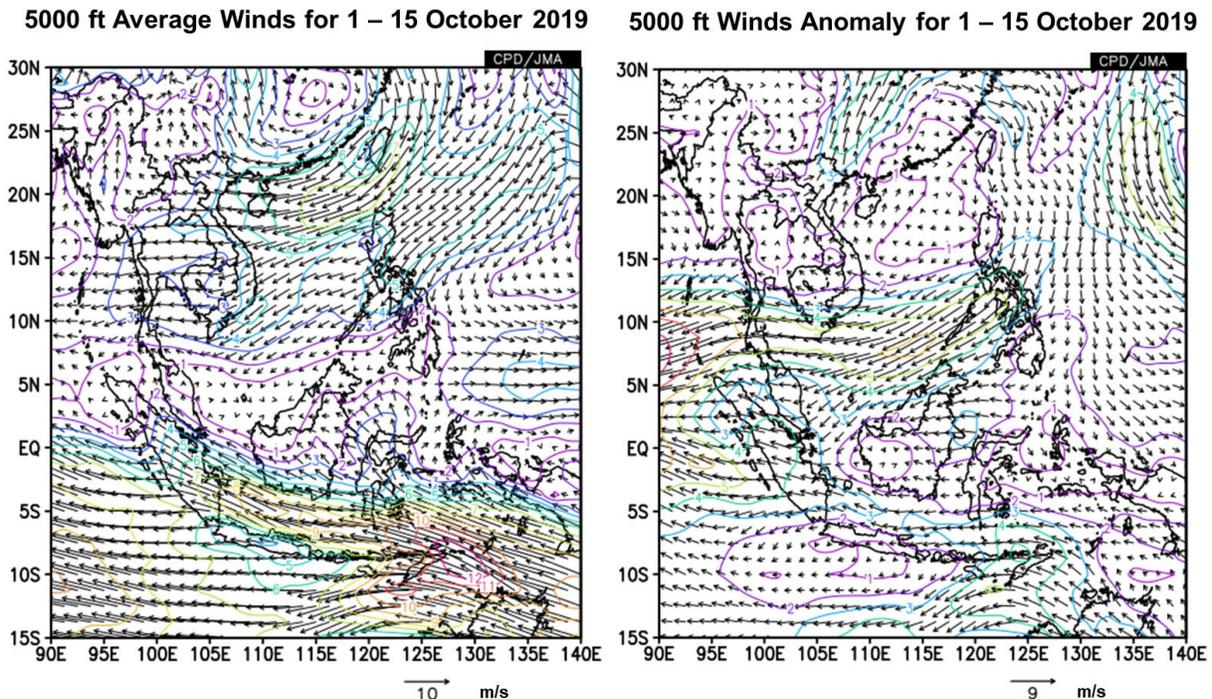


Figure 1 5000 ft average winds (left) and anomalies (right) for 1 - 15 October 2019. (Source: JMA)

1.2 Drier-than-normal conditions were experienced in parts of the Mekong sub-region, including southern parts of Lao PDR, Viet Nam and Thailand, and much of Cambodia. In the southern ASEAN region, the presence of the monsoon rainband along the equatorial region brought showers to northern Sumatra, Malaysia, Singapore and some parts of Kalimantan. However, drier conditions persisted over southern Sumatra, southern and western Kalimantan and Java.

1.3 The daily average rainfall and the percentage of average rainfall for the first fortnight of October 2019 are shown in Figures 2 and 3 respectively.

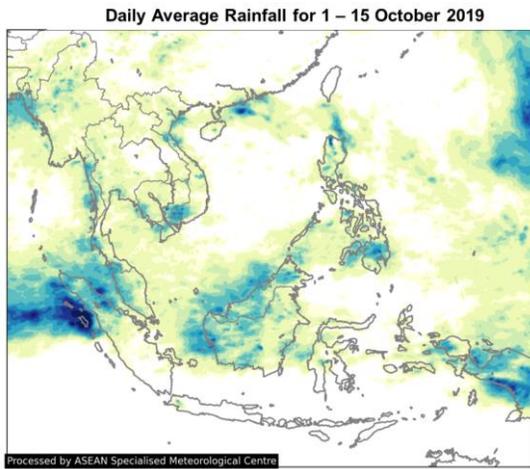


Figure 2 Daily average rainfall for the ASEAN region in the first fortnight of October 2019. (Source: JAXA Global Satellite Mapping of Precipitation)

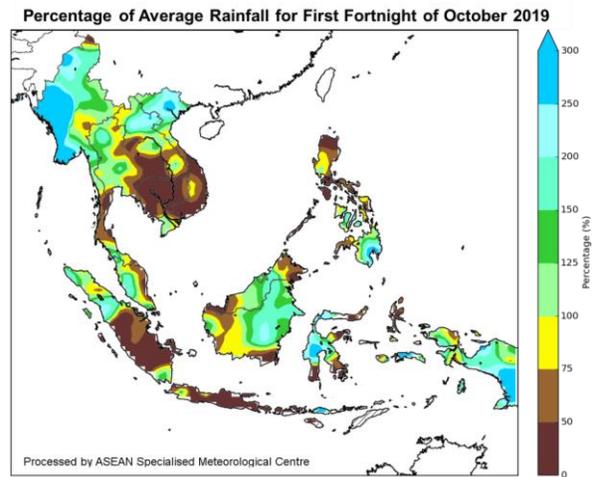


Figure 3 Percentage of average rainfall for 1 – 15 October 2019. The rainfall data may be less representative for areas with a less dense rainfall network. Hatched areas indicate climatology dry mask (average daily rainfall below 1 mm). (Source: IRI NOAA/NCEP CPC Unified Precipitation Analyses)

1.4 Over the tropical Pacific Ocean, El Niño – Southern Oscillation (ENSO) remained neutral. In the Indian Ocean, the positive Indian Ocean Dipole (IOD) remained strong in the first half of October 2019

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

2.1 During the fortnight, the hotspot activities in the northern ASEAN region were generally subdued.

2.2 The occurrence of showers in the equatorial ASEAN region helped to subdue the hotspot activities in many parts of Sumatra and Kalimantan. However, hotspots emitting moderate to dense smoke haze persisted in the southern parts of Sumatra and Kalimantan where drier-than-normal conditions prevailed. These hotspots were mostly detected in southern Sumatra (namely in the provinces of Jambi, South Sumatra and Lampung) and in South, East and Central Kalimantan.

2.3 Figures 4, 5 and 6 show satellite images over the ASEAN region in the first fortnight of October 2019.

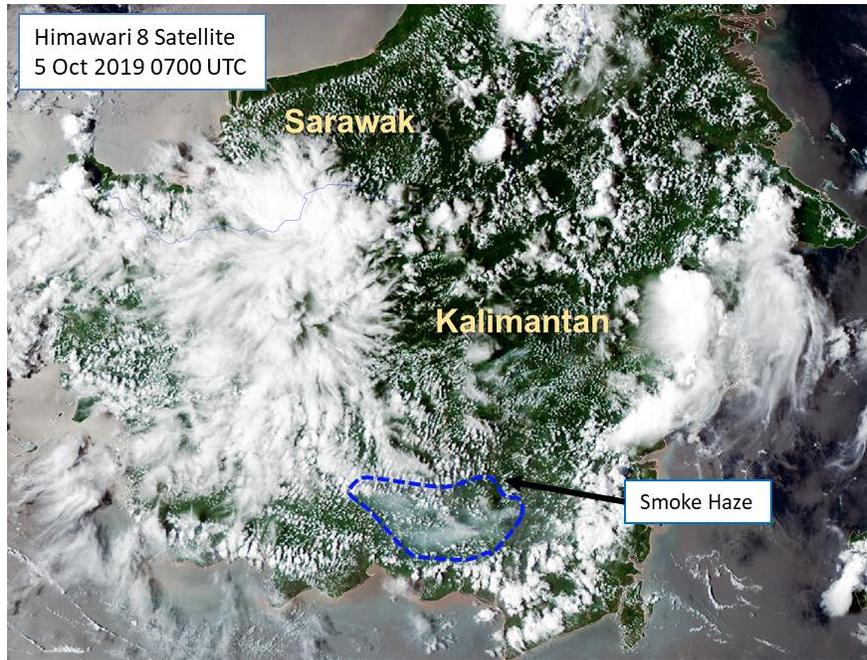


Figure 4: Smoke haze from hotspots in Central Kalimantan (marked by blue dotted lines)

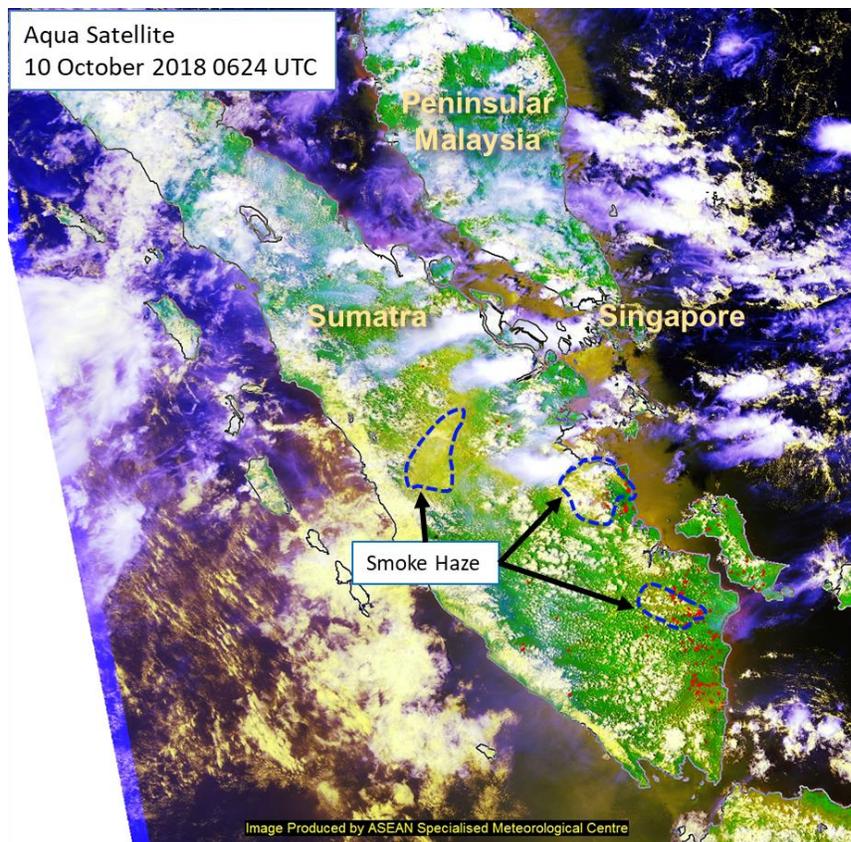


Figure 5: Smoke haze from hotspots in southern parts of Sumatra (marked by blue dotted lines)

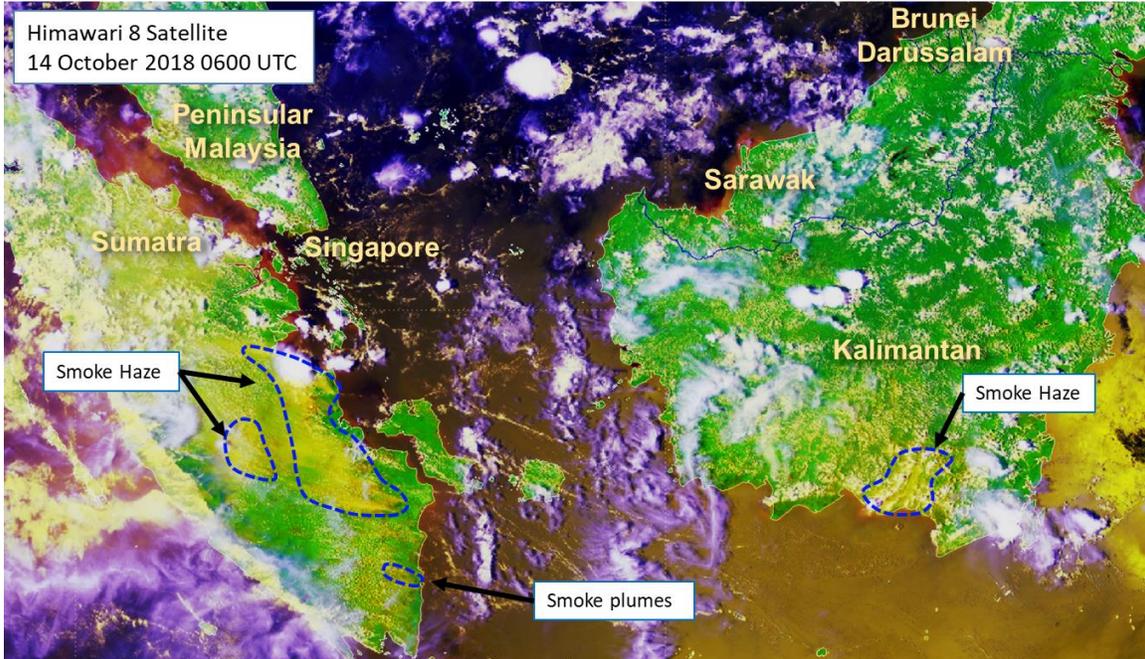


Figure 6: Smoke haze emanating from hotspots in southern parts of Sumatra and Kalimantan (marked by blue dotted lines)

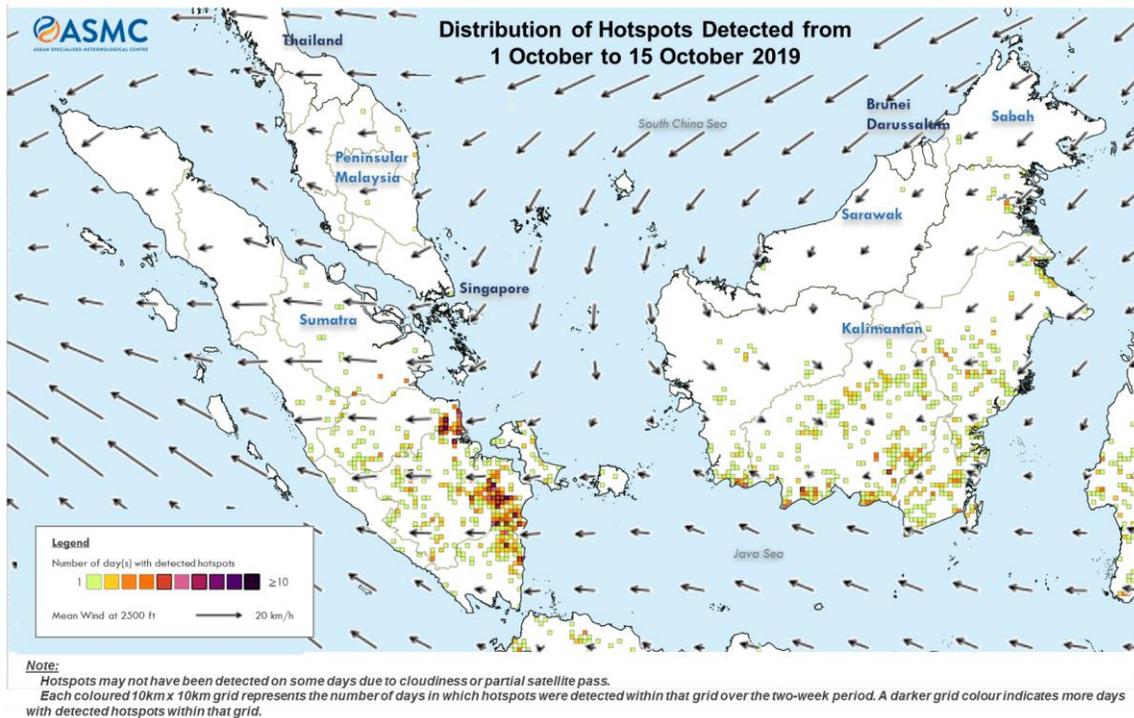


Figure 7: Distribution of hotspots detected based on NOAA-20 satellite surveillance and prevailing winds in the first half of October 2019 (Source of prevailing winds: JMA)