

Variation in the onset of the rainy season over the Indonesian Maritime Continent

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Determination of the onset of the wet season is very important for setting the planting date and ensuring adequate water during plant growth in Indonesia. Previous research has concluded that based on rainfall characteristics, Indonesia can be classified into three regions. This study investigates the variation in the onset of the rainy season using the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG) method and three other methods, including Agronomy, Anomalous Accumulation and modified BMKG, for different regions in Indonesia. With the exception of the BMKG, other definitions calculate the onset from the first day of the driest 14 days in the year. The Agronomic definition has a very good correlation with modified BMKG ($r \geq 0.7$). High correlation is found in all stations in Sumatera and Java Islands except in Banda Aceh ($r = 0.27$). The occurrences of the driest period can be used to predict the Agronomics' onset days for stations with annual rainfall less than 3,000 mm ($r > 0.6$). The BMKG method has a high probability of ignoring true onset days particularly for stations in northern Sumatera Island. Spatial and temporal variations reveal that the Agronomic definition predicts the most spatially coherent onset day.