

インドネシア海大陸における降水トレンドと年々変動

Trends and interannual variations of rainfall over the Indonesian maritime continent

*浜田 純一¹、レスタリ ソフィア²、シャムスディン ファドリ²、スナルヨ ハサン³、松本 淳⁴、山中 大学⁵

*Jun-Ichi Hamada¹, Sopia Lestari², Fadli Syamsudin², Sunaryo Hasan³, Jun Matsumoto⁴, Manabu D. Yamanaka⁵

1.首都大学東京都市環境学部、2.インドネシア技術評価応用庁、3.インドネシア気象気候地球物理庁、4.首都大学東京大学院都市環境科学研究科地理環境科学専攻、5.海洋研究開発機構大気海洋相互作用研究分野

1.Faculty of Urban Environmental Sciences, Tokyo Metropolitan University, 2.Agency for the Assessment and Application of Technology, 3.Agency for Meteorology Climatology and Geophysics, 4.Department of Geography, Tokyo Metropolitan University, 5.Japan Agency for Marine-Earth Science and Technology

Trend and interannual variations of rainfall amount and rainfall extremes over Sulawesi and the Maluku Islands in the eastern Indonesian maritime continent (IMC) were investigated using surface daily rainfall data at 23 stations during 1972–2012. Tendencies towards wetter conditions seen in the rainfall extremes are predominant features in the eastern IMC in accordance with increasing trend of the relative proportion of total rainfall amount from heavy rainfall. The interannual variations of the rainfall extremes were closely related to ENSO phases. The wetter (drier) condition is associated with La Niña (El Niño) event, especially for wet days at more than 90% of the stations. Heavy rainfall events increase during La Niña years at more than 60% of the stations. On the other hand, Villafuerte and Matsumoto (2015) described that a decreasing trends of annual rainfall amount and heavy rainfall were dominant in most parts of the IMC, except the eastern part using a gauge-based gridded rainfall dataset during 1951–2007. Decreasing trends of rainfall amount were also reported over Java Island in the western IMC that might be related to the weakening of the Asian winter monsoon (e.g., Aldrian and Djamil, 2008; Hamada et al. 2012). At the meeting, we will discuss temporal and regional differences of the trends and influence of ENSO over the whole maritime continent by analyzing the surface rainfall datasets for the older period (oldest record started from the middle of 19th Century) and the entire region of the IMC.

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