Monsoon indicators for Borneo

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Abstract

The two most significant synoptic forces governing the climate of the Southeast Asia region are the Asian Monsoon and El Niño Southern Oscillation (ENSO). Several previous studies had successfully established climatic indices to capture the signals of these two large-scale circulations. Such indices would enable researchers to investigate empirical relationships between synoptic forces and the local climate of a particular region. However, the monsoon indices created from these previous studies were based on the geographical layout over much larger areas, which covered the south and east Asian regions. In order to better understand the influences of monsoon signals on the local climate of Borneo, RD1 and RD2 monsoon indices are, therefore, established. These new indices are created using sea-level pressure within the specific domain of Southeast Asia, which is 75° E – 140° E; 20° S – 30° N. They are created specifically to diagnose relationships between monsoon signals and the surface climate of Borneo, and to suit the local features of the region.

Keywords: Borneo, El Niño Southern Oscillation (ENSO), local climate, Monsoon indices, surface climate, synoptic forces