Characterization of Rainfall Variability of Vadamaradchi, Jaffna Using Rainfall Indices

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Abstract: Understanding and analyzing of climate change is important in the water resources management sector. Climate indices are defined as a calculations over a period of time that can be used to describe the state and changes in a variable under investigation. Rainfall indices can be used to explain the extreme rainfall conditions affecting crop cultivation and the water demand for crops. The objectives of this study were to assess rainfall variabilities using rainfall indices and identify rainfall trends using the Mann-Kendal trend test (MK trend test) in Vadamaradchi. All the indices except for R x 5 day and R95PTOT show a positive trend over the period in Ampan. However, a decreasing trend was observed in R x 1 day and R x 5-day rainfall in Karaveddi. In the case of Puloly, the rainfall days, R10, R20, R x 30, show increasing trends over the period concerned. The changing parameters are different in Puloly than in other areas. Even though a rise in some indices was observed in three regions, it expresses the regional vice difference in rainfall. It emphasizes the need for region vice analysis of rainfall to decide the agricultural operational procedures.

Keywords: Rainfall variability, Rainfall indices, Mann-Kendal trend test.

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