

Relationship between rainfall of Sri Lanka with sea surface temperature (SST) in the Indian Ocean during La-Nina condition

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Fluctuation of rainfall over Sri Lanka in relation to La-Nina events is examined by using monthly rainfall composite during La-Nina year. Percentage departure for every month is plotted using an index value computed for each station. Simultaneous SST correlation with rainfall over Sri Lanka during La-Nina year is examined by using monthly composite charts. Rainfall of principal meteorological stations for a period of 97 years and SST data from 1971 to 1990 in the Indian Ocean were used for this analysis. It is found that during La-Nina year there is a reduction in rainfall during North East Monsoon (NEM) period in Dry Zone. The most affected regions are eastern and southeastern part of the country. Above normal rainfall is received at the tail end of South West Monsoon period (SWM) throughout the country. This increasing trend of rainfall may be influenced by the Indian Ocean high SST anomalies during La-Nina condition. First Inter-Monsoon (FIM) and Second Inter-Monsoon (SIM) period recorded above and below normal rainfall during La-Nina year respectively. Temporal correlation maps of SST in the Indian Ocean showed negative and positive influence on the rainfall over the island. However, other regions of the country where above / below rainfall is received are unusual. It was noted that SST of the Indian Ocean has a direct influence on the rainfall variation over the country.