

## E1-35 Annual and seasonal trends in rainfall in Sri Lanka

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This study was carried out using monthly rainfall data from 12 stations of Sri Lanka representing 3 stations in South-West Region (zone 1), 5 stations in Hill Country Region (zone 2) and 4 stations in North-East Region (zone 3).

The annual rainfall variations of selected stations and the monsoonal rainfall variation of the 3 zones were studied using time series analysis of data of the 97 year period (1900 - 1996).

Trend analysis indicates that Nuwara Eliya has a remarkable decreasing trend, 5.34 mm per year in annual rainfall for the period 1990 - 1996. Decreasing trend in other stations is also evident, except Colombo. Colombo has a decreasing trend for the period 1920 - 1996. However, if the period 1990 - 1996 is considered Colombo has an increasing trend. When the annual rainfall variation of zones is considered, even though the decreasing trend is seen, it is not statistically significant. Mean annual cycle of zones show dominant peaks during 2 inter-monsoon periods in association with the march of the sun. When the correlation coefficients are considered for the zones of mean annual cycle, there are significant relationships between zones. This indicates that the 3 zones are in the same group when the annual mean cycle is considered.

Significant linear relationship was not observed between South-West Monsoon and North-East Monsoon for any of the stations. Both monsoons rainfall have decreasing trend in the 3 zones. Zone 2 shows a greater decreasing trend than the other 2 zones considered.