

### **Long-term trends of rainfall and temperature in Sri Lanka**

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Rainfall fluctuations in Sri Lanka for the 125 year period from 1871-1994 and the fluctuations of the annual air temperature during the period 1931-1990 are studied using trend analysis. Long term rainfall data of 34 meteorological stations and temperature data of 17 meteorological stations are used in the analysis. Fluctuations are studied within the five homogeneous rainfall fluctuation regions proposed by Suppiah and Yoshino (1984) using empirical function analysis.

Generally decreasing trends of rainfall during the Northeast monsoon, and the First intermonsoon seasons and increasing trends during the southwest monsoon and the second intermonsoon seasons during the recent period are observed. Annual rainfall also show a generally decreasing trend since mid-1960s.

Warming trend during the most recent period is observed over all regions. A liner regression analysis performed for the 30-year period 1961 to 1990 show an increasing trend of temperature between 0.009 to 0.026 oC/year over Sri Lanka.