## E1-31 Recent variations of rainfall and air temperature in Sri Lanka

T K Fernando
*Dept of Meteorology, Colombo 7*

Since, over 100 years of air temperature and rainfall data upto 1986 have been analysed earlier for trends, the period considered for this study was 1987 - 1996. Data from 12 meteorological stations were individually analysed.

The following results were obtained.
*Annual rainfall* Increasing trends were seen over most parts of the country except for 2 small areas in the extreme south and the North-Western province. The rate of increase varied between 18.6 mm/year and 72.3 mm/year. These values were statistically significant at the 5% and 10% levels respectively.

*Annual mean air temperature* Increasing trends were seen almost everywhere except for a small region in the South-West quarter. 75% of the regression coefficients were statistically significant. For the whole country there was an average rate of increase of 0.025°C/ year (significant at the 10% level).

*Annual mean minimum air temperature* Increasing trends were evident over most parts of the country except the southern part of the South West quarter. More than 80% of the regression coefficients were significant. For the whole country there was an average rate of increase of 0.061°C/year (significant at the 2.5% level).

*Annual mean minimum air temperature* Increasing trends over the eastern region and decreasing trends elsewhere were seen. Nearly 70% of the regression coefficients were significant. A decreasing trend of 0.030°C/year (significant at the 10% level) was seen for the whole country.

A comparison of coefficients of variation for the two 10-year periods, 1977-1986 and 1987-1996 indicated that the annual rainfall has become less variable during 1987-1996 at 10 of the 12 stations.