IDENTIFYING RAINFALL PATTERN IN HAMBANTOTA DISTRICT USING GLOBAL ATMOSPHERIC DATA

T. Kularajasingam
Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka.

Rainfall in Sri Lanka has multiple origins. Monsoonal, Convectional and expressional rain accounts for a major share of the annual rainfall. The mean annual rainfall varies from under 900mm in the driest parts to over 5000mm in the wettest parts.

The objective of this study is to analyze the rainfall pattern in Hambantota District, one of the potential areas for further development in Sri Lanka. Economy of the Hambantota District is basically agriculture. Climatically, Hambantota District can be said to be a dry semi-arid region that has hot dry weather characterised by bright sunshine.

In the analysis, an attempt has been made to examine the variations of rainfall over Hambantota District and to find possible correlation with global atmospheric variables such as Darwin Sea Level Pressure, Tahiti Sea Level Pressure, Southern Oscillation Index, Sea Surface Temperature anomalies for the regions Nino (1+2), Nino 3, Nino 3.4, Nino 4 and the Snow Cover on annual scale. Five stations have been chosen from Hambantota District namely Ambalantota, Angunupa, Kirama, yala and Hambanatota. The regions have been classified according to the annual rainfall amounts. The annual areal rainfall data of 21 years (1980-2000) have been analyzed. According to the correlation between the rainfall and the global atmospheric variables, a statistical multiple regression model was developed to forecast the future rainfall pattern of Hambantota District.