

Monaragala is generally considered as a dry zone district. A three fourth of the total labour force is employed in agriculture related activities. Main income sources are paddy and annual crop cultivation. These crops are severely affected due to the decrease of annual rainfall. The objective of the present work was to study the long term rainfall trends of the district.

As there was no single functional meteorological station in the district only rainfall data were collected from three rain gauging stations namely, Bibile, Okkampitiya and Hambegamuwa for the period from 1965 to 1995. These stations represent wet, locations were averaged to obtain the district rainfall data. Long-term rainfall trends for annual rainfall and North-East Monsoon rainfall were computed using the simple linear regression technique.

The district receives 44% of its annual rainfall from North-East Monsoon, while inter-monsoon periods bring 42%. About 50% of the total annual rainfall is received during the months of October, November and December. Both monsoon and inter monsoon rains have significantly decreased during the study period.

Mean annual and North-East Monsoon rainfalls have decreased by 12.8 and 6.9 mm per annum respectively. Equations for estimation of average annual rainfall and North-East Monsoon rainfall for Monaragala district are  $y = 2608.7 - 12.8x$  and  $y = 1245.3 - 6.9x$  (where,  $y$  = expected rainfall and  $x$  = year) respectively.

These changes in rainfall pattern have a significant influence on agricultural activities and surface water bodies in the district. Therefore, in planning of future agriculture and water resources development activities in the district, due consideration should be given to these rainfall changes.