

TRENDS IN DAILY CLIMATIC EXTREMES OF TEMPERATURE AND PRECIPITATION IN NEPAL

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ABSTRACT

The daily temperature data for 36 years from 1971 to 2006 and the precipitation data for 46 years from 1961-2006 of Nepal were analyzed. The network of stations was so chosen that it encompasses all the climatic zones of the country as far as possible. Trends in precipitation and temperature extremes have been investigated using the precipitation and temperature indices of climate extremes for this study using specially designed software, RClimDex.

General increasing trend has been observed in the temperature extremes. Most of the temperature extreme indices show a consistent different pattern in the mountainous and the terai belt. The trend is of relatively higher magnitude in mountainous region. Such pattern may be associated with the occurrence of prolonged fog in the terai region. Days and nights both are becoming warmer and cool days and cool nights are becoming less frequent. The precipitation extremes show increasing trend in total and heavy precipitation events at most of the stations. However, the systematic difference is not observed in extreme precipitation trend between hills and low land southern plains of terai. The evidence suggests complex processes in precipitation extremes, but at the same time there is indication that more weather related extreme events like floods, landslides can be expected in future.

KEY WORDS: Temperature indices, precipitations indices, trends, RClimDex, Nepal