

Computation of Flood and Drought Years over the North-West Himalayan Region Using Indian Meteorological Department Rainfall Data

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Abstract : The climatic condition over Indian region is highly dependent on monsoon. India receives maximum amount of rainfall during southwest monsoon. Indian economy is highly dependent on agriculture. The presence of flood and drought years influenced the total cultivation system as well as the economy of the country as Indian agricultural systems is still highly dependent on the monsoon rainfall. The present study has been planned to investigate the flood and drought years for the north-west Himalayan region from 1951 to 2014 by using area average Indian Meteorological Department (IMD) rainfall data. For this investigation the Normalized index (NI) has been utilized to find out whether the particular year is drought or flood. The data have been extracted for the north-west Himalayan (NWH) region states namely Uttarakhand (UK), Himachal Pradesh (HP) and Jammu and Kashmir (J&K) to find out the rainy season average rainfall for each year, climatological mean and the standard deviation. After calculation it has been plotted by the diagrams (or graphs) to show the results- some of the years associated with drought years, some are flood years and rest are neutral. The flood and drought years can also relate with the large-scale phenomena El-Nino and La-Lina.

Keywords : IMD, rainfall, normalized index, flood, drought, NWH

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