PRECIPITATION VARIABILITY UNDER CLIMATE CHANGE AT KAIDU RIVER WATERSHED, CHINA

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Abstract

This study considers changes on precipitation at Kaidu River Watershed. Precipitation data from 1961 to 2013 were provided by the National Climatic Centre of China. Excel software was employed to calculate the average monthly and annual values analyzed and presented into graphics with use of Origin Pro.8. The results show similarity of increase of the average month at both streams of the river. However, the average inter-annual average precipitation is higher at the upstream station 260.5 mm across 1961 and 1975 decreasing to 246.79 mm between 1976 and 1990, then considerably increases to 293mm between 1991 and 2005 and 314.38 mm between 2006 and 2013, whilst the downstream total station's average annual accounts decreases from 105.29 mm (1961-1975) rising to 107.57 mm and 133.76 mm in the years of between 1976 and 1990 and 1991 and 2005 respectively then fell to 104.15 mm across 2006 and 2013. This can express that Kaidu River, is likely exposed to increasing precipitation that can generate the flooding which, in turn, may impact human activities and ecosystem. From the above findings, it is suggested to consider climate change and promote public awareness and preparedness for precipitation patterns management and adaptability.

Key words: Climate change, Kaidu River Watershed, Precipitation, China