

Investigating the Impact of Climate Change on Future Runoff of River Satluj

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ABSTRACT

Climate change has been emerging as one of the challenges in the global environment. Information of predicted climatic changes in basin scale is highly useful to know the future climatic condition in the basin that ultimately becomes helpful to carry out planning and management of the water resources available in the basin. Climatic scenario is a plausible and often simplified representation of the future climate, based on an internally consistent set of climatological relationships that has been constructed for explicit use in investigating the potential consequences of anthropogenic climate change. This study based on statistical downscaling, provide good example focusing on predicting the rainfall and runoff patterns, using the coarse general circulation model (GCM) outputs. The outputs of the GCMs are utilized to study the impact of climate change on water resources. The present study has been taken up to identify the climate change scenarios for Satluj river basin, India.

Keywords: Climate change, climatic scenario, General Circulation Model, statistical downscaling