

STUDY ON RELEVANCE OF CLIMATE CHANGE ON INCIDENCE OF FLOODS AND DROUGHTS

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ABSTRACT

Increasing surface temperatures, changes in precipitation patterns and evapo-transpiration, influence the hydrologic (water) cycle significantly. These changes are expected to have significant impacts on regional floods, droughts, and by implication, the management of water resources. Whilst some areas may become wetter with increased precipitation and soil moisture availability, others, particularly in the sub-tropics, will be exposed to the increased incidence of drought and desiccation. Various studies on predictions of climate and their relevance with hydrologic extremes (i.e. floods and drought) are indicating about the intensification of the hydrologic cycle. This paper presents specific review of such studies and the results of the analysis on patterns of hydrologic extremes in various parts of India. It includes discussions on terrestrial mean annual precipitation, changes in the total amount of precipitation and its frequency and intensity which directly affect the magnitude and timing of run-off and the intensity of floods and droughts. The results indicates that the incidences if drought in arid, and semi-arid, regions of the country have been more frequent and severer as compared to sub-humid and humid regions.