

Integrated water resources management in the vulnerable Indian environment

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Abstract India, with 16.7% of the world's human population and 15% of the farm animal population, but with only 2.42% of the geographical area of the globe, receives an average of 1% of global rainfall, which contributes to 4% of the global freshwater resource. The per capita availability of water at the national level has reduced from about 5177 m³ in 1951 to 1820 m³ in 2000, with a great variation in water availability in different river basins. By 2025 and 2050, per capita water availability is projected to fall to 1341 and 760 m³, respectively. The hydrological cycle is greatly influenced by changing land use/land cover and anthropogenic transformations. This paper aims to understand vulnerable environments such as the flood prone, drought prone and climate change prone Himalaya. Integrated watershed management is required for understanding hydrological processes and their interaction.

Key words integrated water management; vulnerable environment; floods; droughts; climate change; community participation; India