

Changing Indian Scenario from River Basin Studies to Water Management Studies and its Scientific Rationale

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Abstract : India's freshwater resources, though abundant, due to their uneven distribution in time and space, experiences extreme events like floods and droughts. The major rivers of the country contribute to almost 85% of the freshwater resources providing irrigation to more than 50% of the land under agriculture. The changes in climate, government policies, a nonscientific exploitation of water resources and over exploitation of groundwater resources have lead to an inefficient management of water resources. It is time that the effective algorithms need to be developed to evaluate and quantify the local resources incorporating the heterogeneities interms of hydrological variables in small and medium scales. Basing on the experiences gained in understanding the large river basins on a regional scale both the local and the central governments have adopted the concept of micro basins to handle the water resources. The water quantity and quality variations with reference to rainfall and hydrogeologic conditions of the country warns a more the scientific management of water resources.