Drought mitigation strategy for Bundelkhand Region of Uttarakhand and Madhya Pradesh

The Bundelkhand region comprising of seven districts of Uttar Pradesh State and six districts of Madhya Pradesh State is complex, diverse, rain fed, risky, under invested, vulnerable, socio-economically heterogeneous, ethnically unique, agrarian and backward relative to other regions. The region has been afflicted with meteorological, hydrological and agricultural drought continuously for the past four years (since 2004–05) and an Inter-Ministerial Central Team was constituted by the Agricultural Minister to suggest mitigative measures.

The pro-active mitigating strategy of reducing vulnerability by enhancing coping mechanisms and resilience of the production systems is quite different than the calamity relief. The mitigation is also planned around normal or excessive rainfall years when there is enough precipitation for recharging soil with water, aquifers, surface storage and adequate production to acquire assets. Participatory integrated management of inputs and natural resources including social capital, innovative institutions and involvement of community is prioritized for Bundelkhand due to various reasons.

Medium term strategy includes renovation, repairs, desilting, raising embankments and crest height to increase storage capacity. Digging trenches, constructing gully plugs, check dams and gabions in non-arable land is the primary step to improve biomass productivity. Long term strategy includes digging of farm ponds, wasteland and private land management. Sensitizing and organizing communities and other stake-holders into various institutions, participatory planning, and complementation and exit protocols may be observed for long lasting solutions.

Water resource management deals with ground water development, surface water development and various surface water schemes mend for droughts like canal system and lift irrigation system in UP. It also discusses about command area development. Prioritization of water resource development scheme according to the state requirement is recommended. Various methods for increasing water use efficiency like pressure irrigation system and participation irrigation management is undertaken. Crop residues contribute 67% to the animal fodder and coping mechanisms for mitigating vulnerability to drought have to be farming system centric. So medium term and long term plans for the same are undertaken. Long term plans include measures like bridging yielding gap, crop rotation, seed production and seed banks, intensification and diversification and bringing up of agricultural markets.

Various other determining factors are livestock management and status of forest. The overall drought mitigation strategy is no single component process. It's an amalgamation of various related steps and aspects which need to blend together and should complement each other.