

## **Coping with Drought in Maharashtra**

The atrocious drought in Maharashtra is set to break all the records. With millions estimated to be affected, lakhs of cattle rendered hungry without fodder, this drought is the worst kind of natural disaster that the state has faced. Almost 1/5th of Maharashtra is reeling under drought.

There is rampant outcry over the acute crisis of water and the farmers are worst hit as it has impacted their crops. The farmers are committing suicides in aftermath of this drought. The Central Government has yet not approved the thirty thousand crore fund requested by the Maharashtra Government. On the contrary, IPL season six has been given a mega launch with multicore investments. It is really shameful and strange to see the situation that millions of people are dying without food and water and the same Government lavishing sports events in the same country.

According to official figures, 15 districts comprising 11,801 villages are declared as drought-affected. There is acute water scarcity in 1,779 villages & 4,709 smaller habitations. Some of the villages are facing drought for the second consecutive year. 6200 villages are affected by drought in Vidarbha alone. The dams in Maharashtra are in a sad state. It is ironical that the state having the largest number of dams in the whole country is currently facing droughts. According to estimates, Maharashtra has almost 25-30% of the total dams in the country. Big dams like Jayakwadi, Ujani and Koyna are running dry and have to rely on their dead stock for supplying water.

## **Causes of Droughts**

Indian agriculture is heavily dependent on the climate: a favorable southwest summer monsoon is critical in securing water for irrigating Indian crops. In some parts of India, the failure of the monsoons result in water shortages, resulting in below-average crop yields. This is particularly true of major drought-prone region of Maharashtra.

All such episodes of severe drought correlate with El Nino-Southern Oscillation (ENSO) events. El Nino-related droughts have also been implicated in periodic

declines in Indian agricultural output. Instead of the usual high pressure air mass over the southern Indian Ocean, an ENSO-related oceanic low pressure convergence center forms; it then continually pulls dry air from Central Asia, desiccating India during what should have been the humid summer monsoon season. This reversed air flow causes India's droughts.

### **Drought Prevention and Preparedness**

Conservation and management of natural resources is required for building drought proof resilient system in the villages. The Government has embarked upon a scheme for creation of natural resources data base for this district with application of Remote Sensing and Geographical Information System. However, the application of knowledge of inventories of natural resources at the ground level is still at the incipient stage.

### **Watershed Management and Drought Monitoring**

Water conservation through participatory watershed management and its judicious use are the important components of Sustainable Drought Management. The Government and Civil Society should encourage the use of ICT tools effectively at different stages, incorporating historical development works in the watershed, GIS maps, satellite imagery, spatial and nonspatial data thematic maps, GPS, Hydrological Modeling, Web-GIS system, mobile-embedded tracking system and eGram, multi-temporal remote sensing. Monitoring and declaration are the primary tasks to agricultural drought management.

### **Conclusion**

Frequent drought in Maharashtra has threatened livelihood, food security, quality of life of people and ecological balance. The government interventions in the view Sustainable Drought Management are discerned in form of water, soil and forest management. However, natural resources (water, soil and forest) accounting and monitoring through remote sensing and GIS at village level is still at the incipient stage. Further, the government implemented micro watershed project in the sample villages could not achieve desired goals (underground water recharge, afforestation, soil conservation, crop diversification and employment generation).

Therefore, scarcity of water (for drinking and irrigation purposes), food and fodders still persist. Some programmes failed because of politically motivated drought declaration, weak interface between early warning and farmers, lack of awareness and community participation, inefficient delivery system and inability to understand people's responses to drought. These known problems have to be fixed on priority basis for achieving the desired objectives.