

Declining water yield in Cauvery basin a cause for concern, say scientists

Perennial streams, which fed Cauvery, are drying due to increase in farming activities in forests

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CAUVERY river is in crisis. It is not just about the ongoing water dispute among two states — Karnataka and Tamil Nadu — but also about the state of the Cauvery catchment area and a decline in water yield, says a report by the researchers of Indian Institute of Science (IISc), published over a year ago.

Water yield in the Cauvery river basin is coming down every year, faster than the rate of declining rainfall in the region. Scientists are now suggesting the authorities concerned to find out an ecological solution for the conflict, as catchment destruction and decreasing rainfall does not seem to be helping Karnataka.

Professor T V Ramachandra, head of Wetland and Energy Research Group, IISc, who headed a project on Cauvery catchment study in Lakshmana Tirtha river in Kodagu district, a major tributary of Cauvery, states that, instead of the present 50 tmcft of water in the reservoirs in Cauvery basin, the state could have



had more if the catchment destruction was arrested.

“Change in land use in the catchment area has its own adverse effects. This has been proved in cases of Malaprabha (deforestation in Khanapur forests), Sharavathi (deforestation in Shivamogga and surrounding areas) and Cauvery river (deforestation in Kodagu district),” says Ramachandra.

“The water availability in a catchment depends upon the integrity of the land use and meteorological parameters. The land use in the catchment plays an important role in maintaining the water flow into the rivers or streams. A number of perennial

streams, which fed Cauvery, are drying due to increase in agricultural activities in the shola forests of Ghats in Kodagu district. Both Karnataka and Tamil Nadu must come forward to reverse the damage,” he said.

“All major cities, which are dependent on Cauvery for drinking water must carry out a study on what is happening to the current water that is available in the respective cities. For instance, Bengaluru needs about 18 tmcft of water per year and it receives rains close to 15 tmcft. Why are we letting our cities like Bengaluru and Tanjavur not use local resources than be solely dependent on the river?” he questioned.

Alarming data

The IISc conducted a study on Lakshmana Tirtha catchment of the Cauvery river basin, which has an area of 3,969 sqkm

The land use assessment was done using remote sensing and GIS, which showed the catchment is dominated (61.94 per cent) by agriculture and horticulture, followed by forests with an area of 14.3 per cent followed by other land uses

The study concluded that due to human habitation and anthropogenic activities, large-scale change in land use has affected the hydrologic regime across watersheds in Cauvery basin

In 2016, the Cauvery basin has 30 pc deficient rainfall and the state must try some immediate measures to ensure water security in the coming summer, experts warn