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Look within. Thirsty Bengaluru can look beyond Cauvery, says IISc

Quality water management and rejuvenation of lakes can meet the city's needs

Subhash Chandra N S

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(http://www.bfirst.in/sites/default/files/images/articles/2016/10/12/River%20Cauvery.JPG)

Bengaluru: The ongoing water dispute between Karnataka and Tamil Nadu has raised apprehensions over impending severe water crisis during this summer. But is River Cauvery, the only source that could quench the thirst of the growing city, Bengaluru? Not necessarily, says a study by the Indian Institute of Science (IISc).

For, the study – by Energy and Wetland Group in Centre for Ecological Sciences (CES) of IISc – has found that the City has 30 TMC of water but what urgently needed is quality water management.

The study, 'Water situation in Bengaluru' undertaken by senior scientist Dr TV Ramachandra and researchers, Dr Durga Madhab Mahapatra, Vinay Shivamurthy and Dr Bharath Aiythal points out that recycle and reuse of water, water harvesting and maintaining of existing lakes will not only just quench the thirst of citizens, but also ensures surplus water for the City. Also, rejuvenation, re-establishment of interconnectivity of lakes, harvesting of rainwater and treatment and reuse of sewage were also suggested by other researchers.

"However, the success of sustainable water path depends on the political will, bureaucracy shedding its colonial style of functioning and citizen's assertion for their right for quality water," the study observes.

According to the research, the City receives about 747 mm rainfall which accounts to at least 14.80 TMC if it is harvested and managed properly in all three valleys of the City. Vrushabavathi valley (Vrishbavathi and Suvarnamukhi rivers) contributes 49 per cent (7.32 TMC), Koramangala - Chellaghatta valley, 35.7 per cent (5.2 TMC) and the Hebbal valley, 15.3 per cent (4.2 TMC). Nearly, 73 per cent of Bengaluru's water demand can be met by efficient harvesting of rainwater.

Besides, the sewerage generated by households in the City is about 20.05 TMC of water and if treated properly, can be utilised up to 16.04 TMC!

Citing City's Jakkur lake as a model, the study says "Sewage treatment with complete removal of nutrients and chemical contaminants can be achieved by adopting decentralised treatment plants, similar to the success model at Jakkur lake."

The City's domestic water requirement is 20.05 TMC, (if the requirement is 150 litre per person per day). According to the study, 10.79 TMC or 12 TMC (surplus water) available in the City provided the City administration opts for decentralised optimal water management through - rainwater harvesting by rejuvenating lakes - the best option to harvest rainwater is through interconnected lake systems; treatment of sewage generated in households in each locality; conservation of water by avoiding the pilferages and rejuvenation of lakes helps in retaining the rainwater.

Interestingly, during 1800, the storage capacity of Bangalore lakes was 35 TMC. In 1970's,

lakes covered an area of nearly 3,180 hectares. Now, it has reduced to 2,792 hectares and the capacity is a meagre 5 TMC, but due to accumulated silt, the capacity is now just 1.2 TMC.

On lakes management, the study has strongly advocated the ban on use of phosphates in the manufacture of detergents to prevent frothing of lakes. On, decentralisation front, it's time the administration agencies adopted 5R's - rejuvenate, retain, recycle, reuse, and responsible citizens' active participation with good governance.

But why policy makers shy from decentralised harvesting? It is not an attractive proposition for the decision makers. The financial gain is much higher in the case of mega projects (such as water diversion) compared to the decentralised models, lament researchers.

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