

# Rejuvenating the river: The science-policy disconnect

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## “The Arkavathy is dead”

is a common refrain among those in and around Bangalore who worry about water, rivers and lakes. And indeed, till it is joined by the highly polluted Vrishabhavathy near Kanakapura, the Arkavathy river is mostly dry for most of the year. Of the three major reservoirs built on it, Hesaraghatta has been almost entirely dry for the last twenty years, TG Halli has not filled completely after 1993, and only Manchanabele gets filled regularly, because of the stream from Savanadurga forest.

“Rejuvenate the Arkavathy” seems

then the obvious step to take, and the campaigns are bearing fruit: last year, the government sanctioned Rs. 22.4 crore for rejuvenating Hesaraghatta, and is also spending money on clearing channels, setting up recharge structures and tree planting programmes.

But there appears to be a major disconnect here between science and policy. Science (both hydrological and social) alerts us to critical issues that need to be clarified before jumping into action. First, we need to ask ‘what’ we mean by rejuvenating the Arkavathy and ‘for whom’. The river has already been dammed in many places, so it is neither pristine in any sense nor will it ever have much flow in the stretches below these

tank bunds and dams. So does rejuvenation mean reservoirs filling up more frequently? If so, then who benefits from these reservoirs? The big three are primarily meant to supply water to urban areas, not communities living close to the river. The smaller ones are meant for irrigation, but farmers have long ago switched to borewells. Any water left in lakes to support birds and wildlife, cannot be extracted for urban supply.

Second, we must rigorously understand why the Arkavathy is not flowing or the reservoirs are not filling up today. Rainfall records show no decline over the past thirty years. That leaves us with only three possibilities: the rain disappears into highly depleted aquifers and

so does not come out into the river, the rain is absorbed by the soil but is increasingly extracted via wells or used by trees, or vegetation in streams, or the rain results in runoff but that runoff never reaches the tanks because the channels are blocked, thereby stagnating at various other points and evaporating off.

There is a lot of evidence in support of the first theory: hundreds of thousands of borewells in the catchment pump out enormous quantities of groundwater and feed it largely to horticultural crops or residences. Groundwater levels in this region (the upper Arkavathy catchment) are definitely falling due to over-pumping. In this situation, more check dams

will hardly help, because the water is infiltrating anyway. What is needed is a limit on pumping, allowing the groundwater to recuperate, and making it eventually available to the river and downstream users.

There is some evidence for the second theory: the area under eucalyptus plantations and coconut, banana and other irrigated crops has increased significantly. In this context, more tree planting will certainly not help. The need may be to revert back to eucalyptus or acacia plantations back to the grasslands and savannas they probably were.

There is much less evidence for the third (‘million puddles’) theory. Certainly sand mining creates puddles in the

river bed, and builders and farmers have encroached into stream beds. But if this was a major factor, one would hear of hundreds complaints of stagnation and flood damage in such locations.

Rushing in to ‘solve’ the problem without thinking through what the problem is and why it has occurred may actually worsen the problem. A better connect between science and policy is sorely needed.

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