

The Case of Maharashtra's Disappearing Water

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Maharashtra is facing a severe drought while there are allegations of a massive scam in the execution of irrigation projects. The white paper on irrigation projects, brought out by the state government, glosses over a number of major concerns. Until there is a fundamental shift in state policy based on the willingness to look upon the right to water as being on par with the right to life, the state will continue to frequently face the spectre of drought.

The Maharashtra government's "white paper" on the irrigation issues before the state is a very pale shade of white indeed. We will look at some pertinent issues in the current drought/irrigation/scarcity debate that is raging in the state and examine those arising from the so-called white paper in terms of policy-level implications and in the context of the nature of the political economy.

It has been estimated that more than 11,800 villages in 14 districts of Maharashtra are facing an acute scarcity of drinking water this year.¹ This is an unprecedented situation. Drought is not a new feature and in fact an interesting work done in the 1950s worked out the cyclical flow of rainfall patterns that predicted low precipitation occurring due to the rain shadow of the Western Ghats.² This work argued that water scarcity in the rain shadow remained a perennial situation in the Deccan plateau. However, the present drought resulting

almost 89. The drought, which occurs every third or fourth year, affects the basic livelihoods and ruins the life of the rural marginalised population. Traditionally, the sufferers of this cyclic phenomenon are the landless labourers, small and marginal farmers, dalits and women in these areas. However, to this group is added that of farmers, traders and the middle classes, as in varying degrees water is a matter of necessity for all across the class spectrum.

In the Marathwada region a large percentage of the geographical area has come under the spectre of drought.³ This can be best understood by citing the reports of committees constituted by the Maharashtra government from time to time (Table 1).

The increasing area in the perpetual water-scarce region raises questions regarding the issue of irrigation and water policy with the fundamental one being about the rights-based approach in policy planning.

Where Is the Water?

Maharashtra has the largest numbers of dams in the country. As per the National Register of Dams the state had 1,845 large dams by 2009.⁴ This one fact alone is indicative of the bias towards large dams as a dominant trend in the state's

Table 1: List of Drought-Affected Blocks in Marathwada Region as Reported for Three Decades

Fact-Finding Committee 1960	Sukhtankar Committee 1973	Subramanyam Committee 1987
Vaijapur, Gangapur, Beed, Asti, Patoda, Majalgaon, Georai, Bhoom, Paranda, Ahmadpur, Kalamb, and Osmanabad (total 12 blocks)	Vaijapur, Gangapur, Kannad, Paithan, Khultabad, Aurangabad, Beed, Asti, Patoda, Majalgaon, Georai, Bhoom, Paranda, Ahmadpur, Kalamb and Osmanabad, Tuljapur (total 17 blocks)	Vaijapur, Gangapur, Kannad, Paithan, Khultabad, Aurangabad, Ambad, Beed, Asti, Patoda, Majalgaon, Georai, Kej, Bhoom, Paranda, Ahmadpur, Kalamb, Osmanabad, Tuljapur, Omerga, Washi, Lohara, Latur, Ausa, Nilanga and Renapur (total 26 blocks)

Source: Tracking Drought, Sampark, Pune, 2005.

from water scarcity is a matter of grave concern as it has resulted despite the expenditure of thousands of crores allegedly in the attempts to provide water. Another area of concern is that with every passing decade the geographic spread of drought-prone area has kept increasing. As per the Sukhtankar Committee report one-third of the geographical area (78 blocks) of the state was considered vulnerable to being drought-prone. According to the *Drought Prone Reassessment Committee (Subramanyam Committee Report 1987)* the number of drought-prone blocks in Maharashtra went up to

policy design though these dams have performed poorly in irrigating the lands. As per the state's *Economic Survey* the gross irrigated area to the gross cropped area in Maharashtra in the year 2011-12 was 17.9%. This was far below the national average of 45%.⁵ It noted this as a major area of concern in the state and mentioned that out of the total net irrigated area almost 65% was irrigated by wells. This is ironic since 90% of the dams in Maharashtra have been conceptualised for the specific purpose of irrigation alone. Why does the water in Marathwada for instance not remain in

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the dams for which they were conceptualised in the first place?

Let us consider the biggest project conceived for irrigation purposes in the Marathwada region to understand the disappearance of water. The biggest irrigation project in Marathwada was launched in 1965 and envisaged construction of a reservoir on the Godavari River at Jaikwadi near Paithan. This project was planned with the assumption that 215 thousand million cubic feet (TMC) of water would flow into the reservoir at the Jaikwadi dam site. It was assumed that about 115 TMC of water would be reserved for the upstream area to store. Thus 100 TMC of water would be available for the command area spread over Aurangabad, Jalana, Beed, Nanded and Parbhani districts. However, the actual executed projects in the upstream regions of Nasik and Ahmednagar areas were designed to store 190 TMC of water. This violated the first assumption of planning as more water was stored upstream than the original planned design of Jaikwadi. One can cite the example of Nandur Madhmeshwar in curtailing Jaikwadi. As a result today the Jaikwadi reservoir has been reduced to being simply dead storage. The Jaikwadi dam, designed with a dependability⁶ of 75%, is now operating at a dependability of less than 20% (Jadhav Y R).⁷

Koornor⁸ located in Tuljapur block of Osmanabad district is another case of water disappearing from the dams. The salient feature of the Koornor medium project was its good catchment area estimated at 32,300 ha with the storage estimated at 36,600 TMC. In 1968, the project was planned at 75% dependability and the evaluation carried out in 1985 pegged the dependability at 74.8% of efficiency. In

Table 2: Types of Work in Koornor Catchment

Type of Work	Total TMC Harvested
Minor irrigation projects	7,880
Soil conservation treatment, contour bunding	8,721
Percolation tanks	5,567
Krishna valley projects	6,728
KT Weirs	4,120
Krishna valley work	9,545

Source: Minor irrigation local sector, minor irrigation zilla parishad, Krishna Valley Development Board and Department of Agriculture as computed by Shahaji Narwade.

2003, the dam went dry for the first time. Table 2 is self-explanatory.

The disappearance of water may be explained due to the works carried out in the catchment area. Originally designed at 75% dependability in 1968 it came down to almost 46% by 2004. The construction of the structures in the catchment area effectively converted the dam and its water from a provider of water to agriculture to supplier of water to the nearby town.

Politics of Dams

Let us look at the larger question regarding irrigation and dams. The Government of India spent close to Rs 1,30,000 crore from 1991 to 2007 on major and medium irrigation projects with the sole objective of achieving a significant increase in the net area under canal irrigation in the country. Over a decadal year period after expending capital on such a massive scale there was virtually no increase.⁸ The net area irrigated by canals stood at around 17.79 million hectares at the start of the 1990s. By 2004 it fell to almost 14.60 million hectares. In fact in the period during which the net canal-irrigated area was decreasing the net area irrigated by tube wells increased. The reasons for this decrease in the net area irrigated by canals are not far to seek. They are: lack of maintenance of irrigation infrastructure, absence of and lack of political will to put the canal network in place, siltation and waterlogging and a water intensive crop regime. It has been estimated that by 2005 around Rs 19,000 crore were required to maintain the existing irrigation network against which the provisions made were to the tune of around Rs 2,820 crore.⁹ Further, as has been observed in various works one of the major reasons for such a setback lies in the failure to put in place the distribution network after a dam is constructed. The absence of a distributive canal network results in the non-irrigated area remaining constant despite the creation of a dam.

Another dimension to this is the changing nature of the irrigation pattern in the country. The emphasis is now on groundwater exploitation over surface water usage. This shift perhaps also has to do with the shrinking operational

holdings in agriculture and with irrigation beginning to adapt to the farm sizes. The governance framework for the usage prescription of groundwater is extremely weak in the state and at times gets selectively applied.

As a result of the combination of factors discussed above the national situation of major and medium irrigation management remains critical to say the least. Despite the observed changing trend of reduction in irrigated land from canals and increase in irrigated lands due to exploitation of groundwater, the policy prescription does not seem to be changing.

As far as Maharashtra is concerned what is surprising is that the white paper completely papers over the cracks in a blatant manner. It chooses to ignore completely the state's *Economic Survey* and a host of reports that were generated at the behest of the state government itself, such as the Vadnere Committee report or the Mendhegiri Committee report. Is it because these reports contain the uncomfortable truth? However, within the compulsion in which this white paper was crafted there are certain disturbing points that it acknowledges such as the factors responsible for cost overruns, administrative bottlenecks and wrangles. Needless to say it fails to elucidate correctly the status of irrigation and to explain the stagnant nature of irrigated area in the surface irrigation context.

This policy stasis raises some fundamental questions. While at the level of policymaking it is now known over a decade and more that the so-called big dams are not the answer to irrigate our fields as well as to take care of drinking water requirement in the rural areas why then do we not see a decisive shift in the policymaking? Why for instance when one reasonable watershed of 1,000 to 1,200 hectares would cost around Rs 1.5 to 2 crore to build did the government spend Rs 75,000 crore without the necessary outcome? Does the state think of creating a credible watershed work in the same cost and overcome water scarcity in all the villages in the state? Maharashtra has been a pioneer in the watershed movement in the country with Mendhwan in Ahmednagar district

that ushered in the Indo-German Watershed programme. Why have the learning outcomes arising from that major initiative not become the state's policy?

A Simple Truth

The critical issue finally lies in being able to understand one simple truth, namely, that water is critical for sheer survival. Thus the right to water must be as fundamental as the right to life. We need to realise however that such a right is difficult to access as democratic institutions and the free market have got fused in such a way that the political

economy now operates in a completely unfettered manner on autopilot. It will take a fundamental shift in policy to even attempt a rudimentary answer to the crisis that Maharashtra faces today. One may safely assume that till such a policy rethink does not become possible the recurrence of droughts will be a familiar phenomenon.

NOTES

- 1 Official circular of Ministry of Agriculture, Maharashtra, Dated 18 March 2013.
- 2 H H Mann, "Rainfall and Famine", Bombay, 1955.
- 3 Abhange and Jadhav, 1999, Maharashtra Sinchan Vikas.
- 4 Register of Large Dams, Central Water Commission, Government of India.
- 5 *Economic Survey* Report of Maharashtra 2011-12: http://mahades.maharashtra.gov.in/files/publication/esm_2011-12_eng.pdf
- 6 Dependability of the dam is calculated on the basis of number of years when the dam shall hold water as per capacity, for instance 75% dependability would assume that out of 100 years the dam would be full for 75 years.
- 7 Retired superintendent engineer and executive member, Marathwada Janata Vikas Parishad, presented in Smarnika in the fifth Adhiveshan of Marathwada Janata Vikas Parishad, held in Omerga during 24-25 May 1997.
- 8 Himanshu Thakkar and Swarup Bhattacharya, South Asian Network on Dams, Rivers and People, Delhi, 2009.
- 9 World Bank Report on India's Water Economy, 2005, Tushar Shah, *Past Present and Future of Canal Irrigation in India*, India Infrastructure Report, 2011.