Is the Sardar Sarovar Dam boon or bane?

LEFT

There is as yet no credible assessment of the costs, benefits and impact of the project

Himanshu Thakkar

To assess whether the Sardar Sarovar Project (SSP) is a boon or bane, we need to have a credible assessment of all the costs, benefits and impacts once the project is completed.

First, the project is still incomplete (even after downscaling the canal network by about 18,000 km), as per Gujarat government figures, with over 30,000 km of canals yet to be completed; the Garudeshwar Dam downstream from the SSP is still under construction (without any social and environment impact assessment). Second, there is as yet no credible assessment of the costs, benefits and impacts of the project. But let us take an overview of the key issues.

Not going to plan

The basic justification offered for the SSP by the Gujarat government from the time of the Narmada Water Disputes Tribunal in the 1970s was that there is no alternative to SSP waters for the drought-prone areas of Kutch, Saurashtra and north Gujarat. Funnily, all the incomplete canal network of the project is in these very regions, while in the water-rich and politically-socially-economically powerful central Gujarat region (excluding the eastern tribal belt) the canal network was completed long ago and the people have been enjoying full use of the water, way beyond their share in the original SSP plans. So, the SSP's basic objective is far from achieved.

Social and environmental impacts have gone far beyond what was estimated at the outset when the project was cleared in the late 1980s. Rehabilitation of even the submergence-affected population is about 80% incomplete, but the Prime Minister, on September 17, 2017, his birthday, declared the project complete! One of the most glaring aspects of this episode is that even the highest judiciary of the country could not assure that the displaced population got a just rehabilitation as required by law.

There are many other dimensions of the impacts of the project. For example, the 150-km stretch of the Narmada downstream from the dam is now dry most of the year and the claim of 600 cusecs (cubic feet per second) being released not immediately downstream but several kilometres from the dam is not supported by any clinching evidence. In any case, that quantum was not the result of any participatory assessment, and is not sufficient to stop even salinity ingress, as was seen in the last several years. The livelihood of at least 10,000 families depending on the Narmada estuary stands destroyed, without any one talking about any rehabilitation or compensation. Similarly, there is no rehabilitation for all the other categories of people displaced by the dam.

Independent review a must

Incidentally, the Sardar Sarovar reservoir could not be filled, and even the extent to which it was filled (up to a maximum of 129.68 m against the full reservoir level of 138.68 m) was possible only by stopping all power generation at the River Bed Power House for almost two monsoon months, and by reducing power generation at the upstream Indira Sagar and Omkareshwar dams by over 95% and depleting the meagre water storage.

The best way to know if the project is a boon or bane would be through an independent review of

the project. Such reviews happened at least twice, one set up by the World Bank, another by the Government of India. In both cases, the outcome was the same: the project in its current form should not go ahead. That answer was available about 25 years ago.

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RIGHT

The project is a lifeline for drought-prone areas of Gujarat and a must for national water security

S. Masood Husain

The Sardar Sarovar Project was taken up after the Narmada Water Disputes Tribunal gave its final award vis-à-vis Gujarat-Madhya Pradesh in 1979.

Benefits aplenty

The benefits from the project are immense. Nearly 18.45 lakh hectares of land are projected to be irrigated in Gujarat — a very large area by any standards. Besides, 2.46 lakh hectares in Rajasthan will be also irrigated. This will increase agricultural production to the tune of about 87 lakh tonnes per annum. Then, there is an installed hydropower capacity of 1,450 MW, which would be generating about 100 crore units of electricity per year. Drinking water will be provided to 9,500 villages, 173 towns of Gujarat and 124 villages of Rajasthan.

The project will provide flood protection to an area of about 30,000 hectares which is prone to the fury of floods. And about a million jobs will be created mostly in rural areas as a result of the project. Most of the areas covered are drought-prone and parched areas. A certain portion of the water will also be used for industrial purposes. In addition, there are benefits to the environment. The Shoolpaneshwar Wildlife Sanctuary area is going to increase from 150 square kilometres to 607 square kilometres.

Environment safeguards have been put in place. Trees are being planted. A total of 76.1 million tree saplings have been planted; for every tree submerged, 92 are being planted. About 4,650 hectares are marked for compulsory afforestation.

The list of benefits shows how the SSP is a lifeline for the drought-prone and parched areas of Gujarat. The project was being conceptualised since the early 1940s but the dam construction could not be planned properly for a long time as there was no agreement on the sharing of waters. After the Narmada tribunal was instituted in 1969, and with the award announced in 1979, the project was operationalised in full swing. And it is only after assessing all the alternatives that the project was considered. In my opinion, there was no other alternative.

After completion, the project will affect 230 villages in Gujarat, Maharashtra and Madhya Pradesh; of this, four will be completely submerged. The rest will be submerged only when the water reaches the full reservoir level. About 32,600 families would be affected on account of submergence. Relief and rehabilitation is being undertaken by the Narmada Control Authority. Its relief package is considered to be the best so far.

Intrinsic to water security

We have to keep in mind that the water security of the country depends on water storage. Our water storage is low when compared to Russia (per capita storage of 6,100 cubic metres), the U.S. (1,960 cubic metres), China (1,100 cubic metres); in India, it is only about 200 cubic metres.

Unless we have water storage, we cannot have water security. As per the National Commission report of 1999, we should have storage of about 450 billion cubic metres; we have so far only developed 253 billion cubic metres of storage — dams and reservoirs taken together. About 50 billion cubic metres of storage is under development.

Our food security and energy security are also dependent on water security. Lastly, inter-linking of rivers is essential to addressing the problem of floods and droughts in the country because water from the basins of water-surplus Brahmaputra, Ganga and Mahanadi rivers can be channelised to deficit areas. This would require storage, hence the case for large dams.

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As told to Anuradha Raman

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CENTRE

The distribution system needs to be reimagined to carry dam water to every home and field

Tushaar Shah

After 35 years in the works, 48,000 crore in capex, 45,000 ousted families, 245 submerged villages and 250,000 hectares of land acquired, for Gujarat, the Sardar Sarovar Dam project still remains just that, a promise.

Little gain so far

Gujarat's major attraction from the SSP was 11 billion cubic meters (BCM) of water to irrigate 1.8 million hectares of its parched land. Sadly, the SSP irrigates less than a quarter of this area, benefitting little more land than was acquired to construct it. Is this benefit worth the costs?

Not yet. Since 1990, Gujarat has gained more from 800 crore invested in constructing half a million check dams and desilting old tanks and reservoirs. According to Central Ground Water Board data, Gujarat is the only State that has improved its groundwater levels since 2000. Many give credit for this to the SSP. But waters from the SSP circulate on less than 3,00,000 hectares of Gujarat's 19.6-million-hectare landscape and cannot possibly have improved groundwater recharge all over the State. It is the check dams and desilted tanks all over the landscape that did the job. If Gujarat's agriculture grew at 9% every year since 2000, it was largely because of groundwater recharge.

Aquifers are omnipresent. Farmers access them through wells and tube wells. Increased storage in aquifers directly and immediately translates into benefits for the user. Not so with dams like the SSP. Their benefits depend on an effective distribution system. The SSP has been let down by the failure of its distribution system.

Back in the 1980s, SSP planners had proposed that beneficiary farmers would volunteer land and labour to build last-mile water courses to their fields. This was realistic in 1980 but not so today. Between then and now, Gujarat and its agriculture have morphed. Tube-well irrigation with subsidised electricity has emerged as the backbone of agriculture. Even in canal commands, farmers prefer tube-well irrigation-on-demand than waiting for occasional canal water release.

No wonder farmers have refused land for last-mile canal connectivity. Instead, farmers invested their own funds to install close to 1,00,000 pumps and millions of meters of over-ground and underground pipelines to lift SSP water and take it to their fields.

This surfeit of private pipelines was a godsend for SSP managers to innovate a farmer participatory regime for water distribution. Instead, Gujarat treated entrepreneurial pipeline irrigators as ‘water thieves’, unleashing police on them. It was only after a decade of failure in building water courses that Gujarat finally settled for underground piped distribution. But even then, instead of letting farmers do this in a regulated and planned manner, it gave the job to contractors unaware of the local dynamics. It is early days, but the results do not look promising.

Reimagining the project

The Sardar Sarovar Project needs to be reimagined in today’s context. Gujarat’s irrigation challenge is the annual 10,000 crore subsidy bill for farm power supply. Spreading SSP water on depleted aquifers can cut this bill down to a quarter, bolster the finances of distribution companies and cutpower cost for the industry. Flouride in groundwater that most Gujaratis use for drinking is a public health time bomb. Bringing SSP water to every home can defuse this.

With 11 BCM in live storage, Gujarat can ensure water for people and livestock for two successive droughts. But all these can happen only if it creates and masters a distribution system that carries dam water to every home and every field.

Tushaar Shah is a senior fellow at the International Water Management Institute

The new U.S. Fed Chairman is unlikely to opt for policies that might upset the President’s plan

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