

Appendix D: The Major Narmada Dams

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Statements by Critics of the Narmada Project

1. A *Narmada Bachao Andolan* statement re-posted to Friends of River Narmada site <http://narmada.org/introduction.html> (accessed 2 Aug 2010)

We recognise the complexity of the issues involved. However, once one cuts through all the rhetoric, lies and subterfuge of the vested interests, the gross inequities are clear. Large numbers of poor and underprivileged communities (mostly tribals and dalits) are being dispossessed of their livelihood and even their ways of living to make way for dams being built on the basis of incredibly dubious claims of common benefit and "national interest". For us, this is simply immoral and therefore unacceptable. No purported benefits can be used to justify the denial of the fundamental rights of individuals in a democratic society. And given the evidence of past megadam schemes in India and elsewhere and what has already happened in the Narmada Valley, we believe that the promised benefits will never be realised.

A quick look at the ground reality would disabuse anyone of the real nature of the dam-builder's enterprise. Large dams imply large budgets for related projects leading to large profits for a small group of people. A mass of research shows that even on purely technical grounds, large dams have been colossal failures. While they have delivered only a fraction of their purported benefits, they have had an extremely devastating effect on the riverine ecosystem and have rendered destitute large numbers of people (whose entire sustenance and modes of living are centered around the river). For no large dam in India has it been shown that the resettled people have been provided with just compensation and rehabilitation. At a more abstract level, the questions that arise in the Narmada Struggle challenge the dominant model of development (of which Sardar Sarovar dam is a prime example) that holds out the chimerical promise of material wealth through modernisation but perpetuates an iniquitous distribution of resources and wreaks social and environmental havoc.

We would like to emphasize that the water problems of drought-prone areas of Gujarat, like Kutch, Saurashtra and North Gujarat (the Government's *raison d'etre* for the dam) are admittedly real. However given the nature of the plans for Sardar Sarovar, it will never solve these problems. On the contrary, in the shadow of the costliest project ever undertaken in India, it is unlikely that alternative schemes that would genuinely address these problems would be implemented. Sardar Sarovar takes up over 80% of Gujarat's irrigation budget but has only 1.6% of cultivable land in Kutch, 9% of cultivable land in Saurashtra and 20% cultivable land in North Gujarat in its command area. Moreover, these areas are at the tail-end of the command and would get water only after all the area along the canal path get their share of the water, and that too after 2020 AD. In summary, all available indicators suggest that these needy areas are never going to benefit from the Sardar Sarovar Project.

In simple terms, the struggle over the river Narmada holds a mirror to our national face and challenges our commitment to professed ideals of justice, equality and democracy.

2. Friends of River Narmada (from their website, www.narmada.org)

In particular, we are a support and solidarity network for the *Narmada Bachao Andolan* (Save the

Narmada movement) which has been fighting for the democratic rights of the citizens of the Narmada Valley. The Friends of River Narmada is entirely volunteer-based. The Friends of River Narmada holds:

- that the Narmada Valley Development Project (NVDP) has been conceived without adequate participation from the people who are going to be affected;
- that many dams of the NVDP are not viable solutions to many of the problems (power, drinking water, flood control, irrigation) they set out to solve, and that there needs to be a greater emphasis on the search for alternative solutions from all concerned (Government, NGOs, people);
- that the construction and planning of many dams of the NVDP has disrupted (and will potentially disrupt) the lives of millions of people without just and adequate compensation;
- that the people of the Narmada Valley are waging a just and legitimate struggle to assert their right to life, livelihood, and participation in their own development;
- that while the country can ask for sacrifices from its people, such people must be justly and adequately compensated for the sacrifices that they are thus making;
- that while the country can ask for sacrifices from the people of the Valley for the greater cause of national progress, the burden of sacrifice should be distributed across the nation, and not be restricted to a specific group of people;
- that the NVDP is merely an example of a much bigger problem that is manifesting itself across the country: the Union Carbide disaster in Bhopal, the Enron controversy in the Dabhol Power Project in Maharashtra, the controversy over the Cogentrix project, the forgery of Environmental Clearances by Ernst & Young; the controversy over the construction of the Bangalore-Mysore highway, the human rights abuses over the port construction at Maroli, and the list goes on.
- that the struggle in the Narmada Valley consequently throws up much deeper issues about the developmental choices being followed in India and elsewhere, and that there needs to be a much wider debate of these choices;

... the *Narmada Bachao Andolan* is a symbol of hope for people's movements all over the world that are fighting for just, equitable, and participatory development.

Statement regarding the Benefits of the Sardar Sarovar Dam

Supreme Court of India, 2000

Judgment in Narmada Bachao Andolan v. Union of India and Ors (2000), pp. 8-9 and 19-20

The benefits expected to flow from the implementation of the Sardar Sarovar Project had been estimated as follows:

Irrigation: 17.92 lac hectare of land spread over 12 districts, 62 talukas and 3393 villages (75% of which is drought-prone areas) in Gujarat and 73000 hectares in the arid areas of Barmer and Jalore districts of Rajasthan.

Drinking Water facilities to 8215 villages and 135 urban centers in Gujarat both within and outside command. These include 5825 villages and 100 urban centers of Saurashtra and Kachchh, which are outside the command. In addition, 881 villages affected due to high contents of fluoride will get potable water.

Power Generation: 1450 Megawatt.

Annual Employment Potential:

7 lac man-years during construction

6 lac man-years in post construction.

Protection against advancement of little Rann of Kutch and Rajasthan desert.

Flood protection to riverine reaches measuring 30,000 hac, 210 villages including Bharuch city and 7.5 lac population.

Benefits to:

- a) Dhumkhal Sloth Bear Sanctuary.
- b) Wild Ass Sanctuary in Little Rann of Kachchh
- c) Black Buck Sanctuary at Velavadar.
- d) Great Indian Bustard Sanctuary in Kachchh
- e) Nal Sarovar Bird Sanctuary.

Development of fisheries: Deepening of all village tanks of command which will increase their capacities, conserve water, will recharge ground water, save acquisition of costly lands for getting earth required for constructing canal banks and will reduce health hazard.

Facilities of sophisticated communication system in the entire command.

Increase in additional annual production on account of

Rs. in crores	
Agricultural production	900
Domestic water supply	100
Power Generation	440
Total	1400

The allegation that the said project was not in the national or public interest is not correct seeing the need of water for burgeoning population is most critical and important. The population of India, which is now one billion, is expected to reach a figure between 1.5 billion and 1.8 billion in the year 2050, would necessitate the need of 2788 billion cubic meter of water annually in India to be above water stress zone and 1650 billion cubic meter to avoid being water scarce country. The main source of water in India is rainfall, which occurs about 4 months in a year and the temporal distribution of rainfall is so uneven that the annual averages have very little significance for all practical purposes. According to the Union of India, one third of the country is always under threat of drought not necessarily due to deficient rainfall but many times due to its uneven occurrence. To feed the increasing population, more food grain is required and effort has to be made to provide safe drinking water, which, at present, is a distant reality for most of the population especially in the rural areas. Keeping in view the need to augment water supply, it is necessary that water storage capacities have to be increased adequately in order to ward off the difficulties in the event of monsoon failure as well as to meet the demand during dry season. It is estimated that by the year 2050 the country needs to create storage of at least 600 billion cubic meters against the existing storage of 174 billion cubic meters.

Dams play a vital role in providing irrigation for food security, domestic and industrial water supply, hydroelectric power and keeping floodwaters back. On full development, the Narmada has a potential of irrigating over 6 million hectares of land and generating 3000 mw of power. The present stage of development is very low with only 3 to 4 Maf of waters being used by the party States for irrigation and drinking water against 28 Maf availability of water at 75% dependability as fixed by NWDT and about 100 MW power developed. 85% of the waters are estimated as flowing waste to sea. The project will provide safe and clean drinking water to 8215 villages and 135 towns in Gujarat and 131 villages in desert areas of Jalore district of Rajasthan, though against these only 241 villages are getting submerged partially and only 4 villages fully due to the project.

There is merit in the contention of the respondents that there would be a positive impact on preservation of ecology as a result from the project. The SSP would be making positive contribution for preservation of environment in several ways. The project by taking water to drought-prone and arid parts of Gujarat and Rajasthan would effectively arrest ecological degradation, which was returning to make these areas inhabitable due to salinity ingress, advancement of desert, ground water depletion, fluoride and nitrite affected water and vanishing green cover. The ecology of water scarcity areas is under stress and transfer of Narmada water to these areas will lead to sustainable agriculture and spread of green cover. There will also be improvement of fodder availability, which will reduce pressure on biodiversity and vegetation. The SSP by generating clean eco-friendly hydropower will save the air pollution, which would otherwise take place by thermal generation power of similar capacity.

The displacement of the tribals and other persons would not per se result in the violation of their fundamental or other rights. The effect is to see that on their rehabilitation at new locations they are better off than what they were. At the rehabilitation sites they will have more and better amenities than which they enjoyed in their tribal hamlets. The gradual assimilation in the mainstream of the society will lead to betterment and progress.

Sardar Sarovar Narmada Nigam on benefits of Sardar Sarovar Dam, 2007

I.M. Sahai, "Insight: Completing Sardar Sarovar" *International Water Power and Dam Construction* 59(5): 12-14 (May 2007).

Irrigation The project will provide Irrigation facilities to 1.78 million hectares of land covering 3112 villages in 15 districts of Gujarat. It will also irrigate 75,000 ha. of land in the two desert districts of Barmer and Jalore in the neighbouring State of Rajasthan, and 37,500 ha. of land in the tribal, hilly tract of Maharashtra. About 75% of the command area of the project in Gujarat is traditionally drought-prone, as is its entire command area in Rajasthan.

Drinking water A special allocation of 1 billion m³ of water has been made to provide drinking water to 135 urban centres and 8215 villages (about 45% of the total number) in Gujarat. This is expected to cover a population of 18 million presently, and over 40million by the year 2021. It is expected that all the habitations of the arid region of Saurashtra and Kutch regions of Gujarat, and all 'no-source' villages and those affected by fluoride and salinity in north Gujarat will benefit. Water-supply requirements of several industries will also be met from the project, giving a boost to economic development in the command area.

Power The two power houses at full production would generate 1450MW of electricity, to be shared by three States -- Gujarat, Maharashtra and Madhya Pradesh -- in a proportion of 16:27:57. This would provide much-needed peaking power to the Western Power Grid of the country, which presently has only limited hydropower.

Flood protection The project is also expected to provide flood protection to riverine reaches measuring an estimated 30,000ha, covering Bharuch city and 210 villages in Gujarat, and thereby to a population of about 0.4 million.

Location Plan of Projects in Narmada Basin

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http://en.wikipedia.org/wiki/File:Location_Plan_of_projects_in_Narmada_basin_.jpg)

LOCATION PLAN OF THE PROJECTS IN NARMADA BASIN

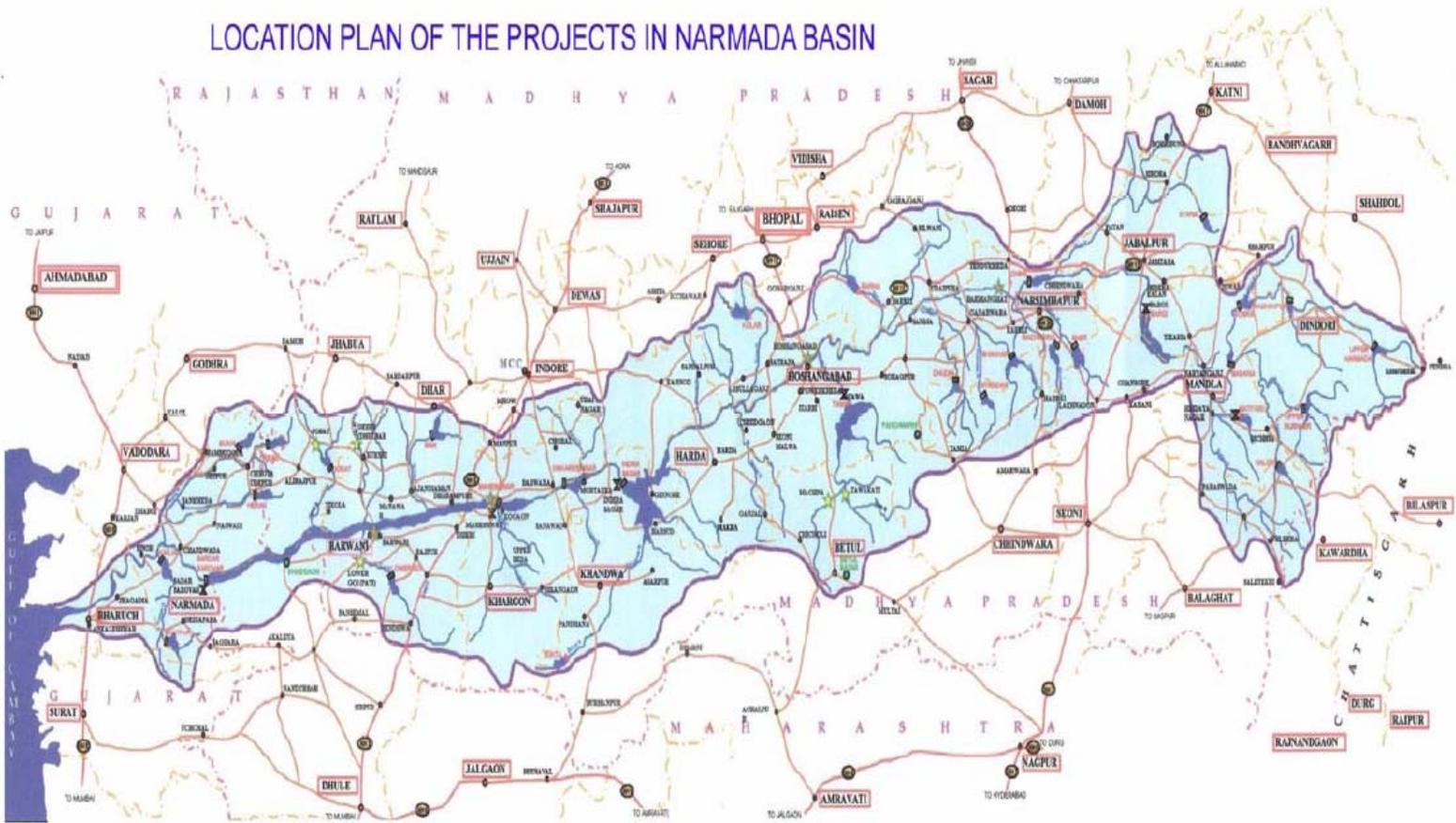


Table summarizing main features of the primary Narmada Dams and their reservoirs
(Dams are listed left to right, in order of location, proceeding upriver)

Dam	Sardar Sarovar	Maheshwar	Indira Sagar	Omkareshwar
size	128 m high 1210 m. long	35 m. high 825 m. long	92 m. high 302 m. long	73 m. high 949 m. long
irrigation	1,792,000 hectares	none	265,000 hectares	283,000 hectares 1,470,000 hectares (Bus Std Aug 2007)
electric power	1450 MW	400 MW	1000 MW	520 MW
area of land submerged	34,860 hectares	640 hectares	91,340 hectares	940 hectares
reservoir capacity	9,500,000,000 cubic meters (9.5 cubic km)		9,740,000,000 cubic meters (or 9.74 cubic km.)	
land ratio: submerged to irrigated	1.65%			
oustees	48,269 families	?	39,289 families	5,452 families

Sources: physical features in Dattaprasad Dabholkar. 1993. [in Marathi as *Mate Narmade*, 1990] *Oh Mother Narmada...* Devadatta Dabholkar, trans. (New Delhi: Wiley Eastern Ltd), Table 4, p. 13; Sardar Sarovar and Indira Sagar oustee estimates from the Narmada Control Authority; see Resettlement and Rehabilitation at http://nca.gov.in/rnr_index.htm (accessed 16 Aug. 2010); Omkareshwar oustees from "Omkareshwar Dam project work to start soon. Business Standard, 30 August 2007. <http://www.businessstandard.com/india/news/omkareshwar-dam-project-work-to-start-soon/296221/> (accessed 9 Aug 2010).

Diagram of Narmada Riverbed

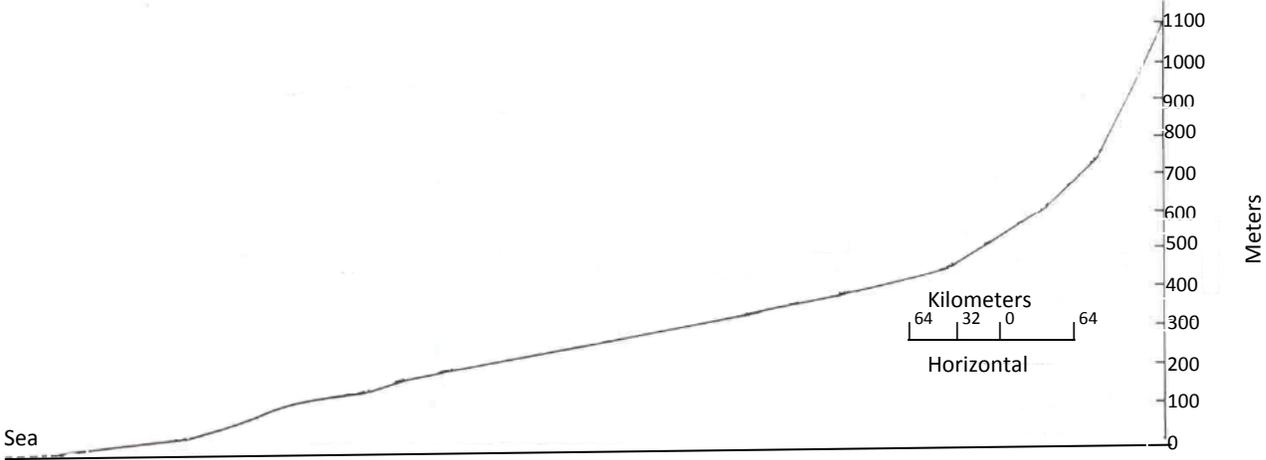
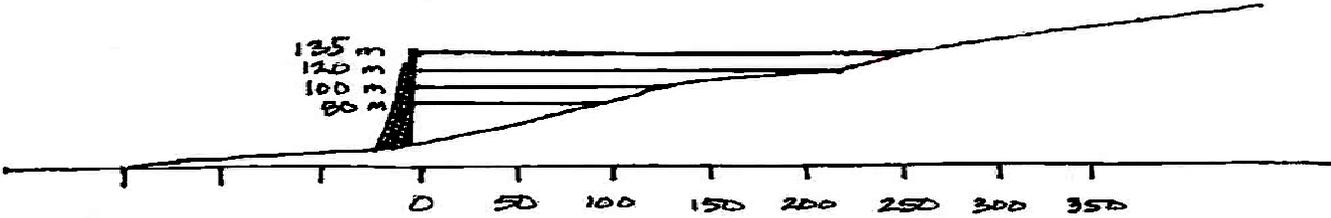


Diagram of length of reservoir created by the Sardar Sarovar Dam at different heights



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