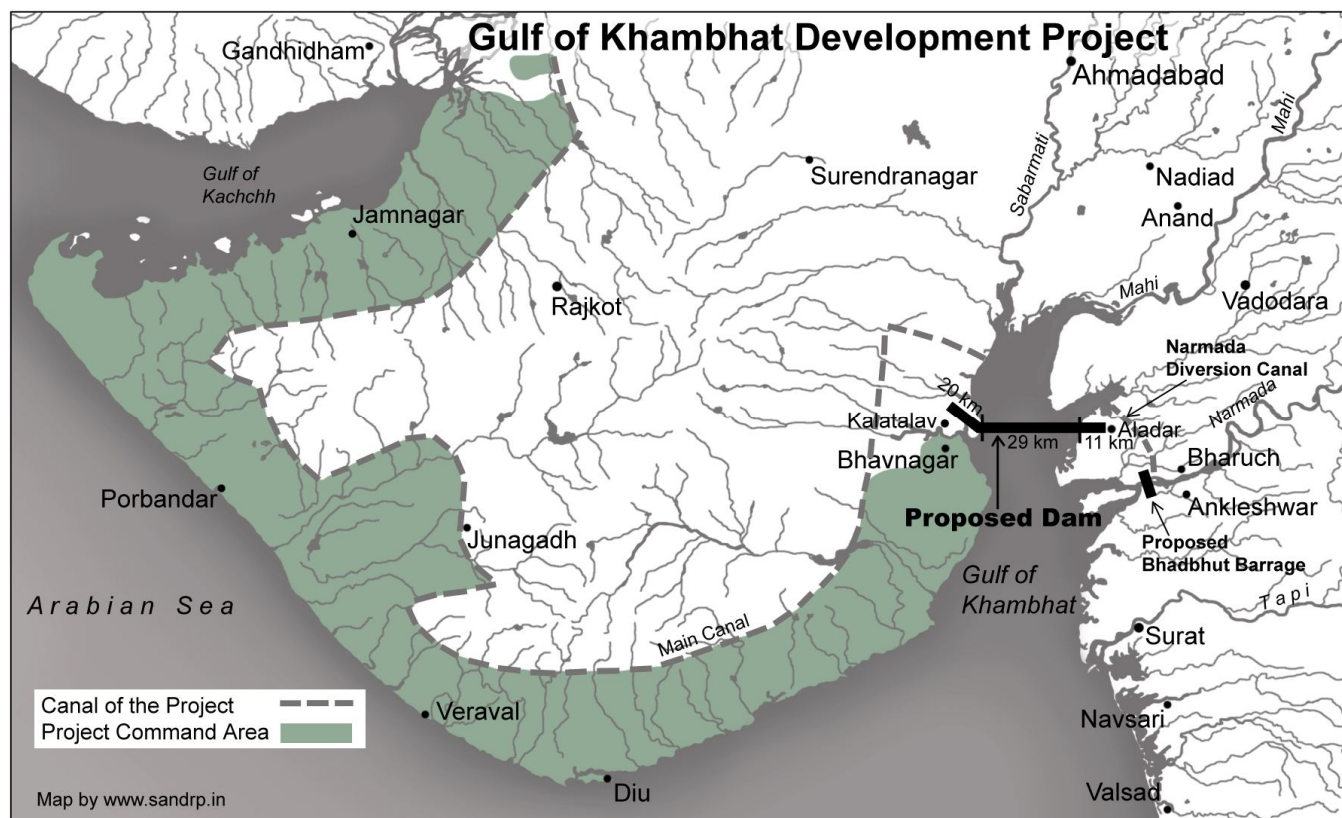


**Modi's hankering for illusory legacy of mega water project**

Gujarat Chief Minister Narendrabhai Modi may love it when called Chhote Sardar. But he has been hankering for a project that will leave behind a legacy that matches size of his self portrait, cannot be Chhote. So the project has to be BIG and it preferably should be a water project. Sardar Sarovar cannot fit that bill, there are too many other claimants for it and it is too costly, controversial and crisis ridden. Sujalam Sufalam that Modi started has left largely a legacy of corruption.



One likely candidate for such a legacy project that Modi has been eyeing for long is the Kalpsar Project.

It is indeed HUGE, Humungous project, larger than anything India has ever undertaken. In fact it is also proposed to be one of the biggest in the world. The basic proposal (the latest version, the versions have been changing pretty rapidly) is to construct a 30 km long dam (one of the longest in the world) across the Gulf of Khambhat between Bharuch and Bhavnagar districts. It is expected to create a reservoir of 2000 sq km area, over five times the area of Sardar Sarovar, the reservoir capacity is expected to be over 10 billion cubic meters, that is larger than the SSP reservoir capacity. The water from the reservoir whose level is expected to move between 5 m above mean sea level and 5 m below mean sea level and is supposed to be pumped over the height of 65 m to feed a 15000 cusec canal that is going to be 660 km long, the longest canal of India. The reservoir is supposed to trap the water of twelve rivers that empty their water in the gulf, including Narmada, Mahi, Sabarmati, Dhadar and some Saurashtra rivers. Its claimed benefits include drinking water supply of 1400 Million cubic meters, providing irrigation to 10 lakh ha, reclamation of 2 lakh ha of saline land, generation of tidal power, reducing road distance between South Gujarat and Saurashtra, tourism, among others. Nothing of this dimensions have ever been undertaken in India, nor possibly in the world if we look at the objectives of Kalpsar.

The project has been under study for some years now, the earliest detailed study dates back to 1988. But the studies have been rather patchy and unconvincing, necessitated frequent change in scope of the project. For example, till recently the dam was to be a 64 km long affair, now it has been reduced to 30 km length.

Netherlands has built some long dykes (for some details, see: <http://www.nethcold.org/nethcold/index.php?c=damsinNL>), but they are basically for protection from sea surge, creation of sweet water reservoir from sea was not one of their objectives. The longest of them is 32 km long Afsluitdijk dam constructed in 1932, about which the Netherlands Commission on Large Dams say, “At 32 kilometres long and 19 metres high at its highest point, the Afsluitdijk ranks eleventh among the world's largest dams.” In fact, following the construction of some of these dykes that lead to opening up the sea through sluice gates so that the saline water can enter the reservoir and rejuvenated the biodiversity. Take this statement from the Nethcold website, “The declining salinity of the water led to high mortality of the flora and fauna in Lake Grevelingen, which was created as a result of the dam. Therefore, in 1978, a sluice gate was constructed in the dam to flush the lake with seawater. The lake has since developed into an important nature conservation area.” Similarly for the Haringvliet Dam the site says, “As a result of the dam, the characteristic tidal flora and fauna has largely disappeared in the lower parts of the rivers. Recently, the government decided to gradually restore the tidal influence.” In case of the 8 km long Eastern Scheldt Storm Surge Barrier 65 gates had to be installed in 1986 following public pressure to keep the inlet open to sea “to conserve nature and the fishing industry.” This reversal of policies to let the sea and rivers meet may have some lessons for Gujarat if they were open to such lessons.

South Korea has built a 33 km long Saemangeum dam project in Yellow sea, that has been seen as a huge failure and embarrassment, and it was basically for reclamation of 28000 ha of land. It has failed as no freshwater reservoir could be created and no land could be reclaimed for agriculture as per the original plans, see for details: <http://www.birdskorea.org/Habitats/Wetlands/Saemangeum/Downloads/Birds-Korea-SSMP-Report-2006-2008.pdf>.

But what Gujarat plans is much bigger and more different than any of these. And Modi seems to be banking on creating a legacy of sorts through this project. He himself initiated “A survey to determine the boundary of Kalpasar dam” on Feb 5, 2004 (see: <http://www.narendramodi.in/pages/developmental-initiatives>). In May 2007 he travelled to South Korea to see for himself the Saemangeum project mentioned above (see: <http://news.oneindia.in/2007/05/17/modis-team-signs-mous-in-korea-1179415045.html>). More recently he told a journalist that he would like to see Kalpasar as his legacy. Its another matter that Dr Anil Kane, who considers himself pioneer of sorts to push this project has been trying for many years to somehow ensure some progress on this project.

Then what is the problem?

The first BIG problem is that of hydrological feasibility. All the rivers that flow into the proposed reservoir area are already dammed and water is over committed from those rivers. To illustrate, about 80% of the water in the proposed Kalpasar is supposed to come from Narmada River. Narmada has only 23 Million Acre feet of water annually, but the Narmada Water disputes tribunal has allocated 9 MAF of water to Gujarat, assuming Narmada has 28 MAF Water. And Gujarat has already planned to use about 15-20 MAF water from Narmada considering the command area, cropping patterns and non agriculture water use pattern planned. So even the surplus monsoon water from Narmada is not likely to be available for Kalpasar. Second big issue is that whatever little water flows from these rivers that into Gulf is mostly highly toxic. There are also serious questions about the geological feasibility of constructing this earth and rock-filled, longest dam in the middle of the surging sea, the foundation is yet to be gauged, the issue of salinity that exists in the gulf water and the soil underneath and how much more will leak into the dam. The reservoir with shallow depth and huge area will have huge evaporation losses, and pumping all the water into the canals through 65 m + height would be hugely energy intensive. The claims of project generating some 5500+ MW tidal energy is very doubtful and feasibility questioned by experts. The project will also destroy the coastal and deltaic fisheries, wetlands. India, as a signatory of Ramsar convention, cannot destroy coastal wetlands in such vast area without raising international issues, the project will also need clearances under the Coastal Zone regulations.

The bill of the project is appropriately large, considering the size of the legacy that Narendrabhai wants: Rs 54000 crores as per preliminary estimates. Modi won't be happy to know though that the Ministry of Environment and Forests' Expert Appraisal Committee on River Valley Projects declined to approve the terms of reference for the Environment Impact Assessment for the project in Sept 2010. The Committee raised many questions about feasibility of the project, including lack of a pre feasibility study. The seven member team from Gujarat, lead by Dr M S Patel, Secretary, Kalpsar Dept that went to MEF for this meeting has been told to come back with a lot more information before even the Terms of Reference for the project can be sanctioned. As we had written to EAC in July 2010 before the meeting (see: [http://www.sandrp.in/dams/Why\\_KALPSAR\\_project\\_should\\_not\\_be\\_cleared\\_for\\_TOR\\_of\\_EIA\\_Letter\\_to\\_MEF\\_July\\_2010.pdf](http://www.sandrp.in/dams/Why_KALPSAR_project_should_not_be_cleared_for_TOR_of_EIA_Letter_to_MEF_July_2010.pdf)), this failed attempt seemed more like an effort to get some legitimacy for a half baked idea.

Unfortunately, Gujarat Govt or Modi are not going to be deterred by this failure. The ambitious politicians of India have for long been hankering for new temples where they can be worshiped by posterity. Nehru did realise his mistake of calling mega projects as modern temples in 1958 when he called such hankering as megalomania. But not too many people know this afterthought of Nehru. Nor do the ambitious politicians like Modi realise that prayers can be offered in a small place of worship as effectively.

Incidentally, one of the many possible things Kalpsar can mean includes Kalpanic Sarovar or imaginary reservoir. Will this one ever become real is a question that is not going to be answered in Modi's lifetime.

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