

ANNEX 1

केवल सरकारी प्रयोग के लिए
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12.9.90



नर्मदा नियंत्रण प्राधिकरण
NARMADA CONTROL AUTHORITY

पर्यावरण उप-दल की
Environment Sub-Group
नीची बैठक की कार्यसूची
Agenda for Ninth Meeting

स्थान : पर्यावरण भवन,
नई दिल्ली
Venue : Paryavaran Bhawan
New Delhi

दिनांक : 7 सितंबर, 1990
Date : 7th September, 1990
समय : 11 बजे सुबह
Time : 11 A.M.

इंदौर
Indore
अगस्त, 1990
August, 1990

group. The latest review shows that a number of studies and services are still being carried out, based on which Environmental Action Plans would be formulated. In the absence of a definite time frame for each of the studies, surveys or action plans, the implementation of the requisite safeguards and action plans pari-passu with the construction of engineering works, would obviously not be possible. Under the circumstances, the approval granted must be deemed to have lapsed.

The Ministry of Environment and Forests have been pointing out with concern that, if the field surveys are completed only by 1993, the action plans could be formulated thereafter and, as such, the formulation and implementation of the environmental action plans is not receiving the attention it deserves. On the other hand, notices are being received from the concerned NGOs to initiate action under Environment (Protection) Act, 1986 because of the failure of the project authorities to ensure formulation and implementation of the environmental action plans pari-passu with the engineering works.

It is, therefore, considered imperative that project authorities be directed to:

- (a) Seek renewal of environmental and forestry clearance beyond December, 1987. The project authorities to submit Time-bound environmental and forestry Action Plans with realistic target dates for completion of studies/surveys and implementation of Action Plan. Revised schedule of Environmental Action Plans to be dovetailed with revised construction schedule for SSP/NSP. In the absence of these documents, supported with facts and reasons for lapses, the approval granted earlier would automatically lapse.

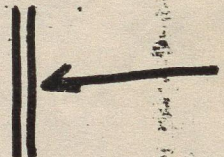
It may be mentioned that SSP is to provide partial benefits by 1975, but the dam is to be filled to full height only by 1977-78. Similarly, the NSP dam is proposed for completion by May, 1990. The environmental safeguard measures have, therefore, to be completed conforming to the schedule of construction of the dam in terms of the conditions of clearance. State Governments are, therefore, requested to furnish their definite programme for completion of the requisite studies, preparation of Action Plans and their implementation consistent with the construction

3 THE NEED FOR DRAINAGE

Only about 6% of the Stage I CCA is irrigated each year at present. With the implementation of the Narmada Project the proportion of the area irrigated will increase dramatically. This increase will have a major impact on the groundwater system of the area as a result of the substantial increase in groundwater recharge. It is estimated that the annual recharge will be almost doubled as a result of the irrigation.

The increased recharge will cause watertable levels to rise at a rate of about 1 to 2 m per year. Over much of the study area the watertable will rise and within a few years encroach upon the crop root zone causing waterlogging and salinisation. This will result in reduction or complete loss of crop production. In parts of the area with good natural subsurface drainage the watertable will reach equilibrium at a depth below groundlevel such that it will have no deleterious effect on crop production. The areas with good natural subsurface drainage are virtually all of zone 1, broad bands adjacent to the Narmada and Mahi rivers in zones 2 and 3, and narrow bands adjacent to the main natural watercourses where they are deeply incised in zones 2 and 3. The estimated percentage of each zone which will be liable to waterlogging and salinisation with irrigation development are given below

ZONE 1	ZONE 2	ZONE 3	ZONE 4
Very small	54	64	100



In addition to the deleterious effects resulting from the rise in watertable, further constraints on agricultural production may be caused where the surface drainage system is not able to prevent inundation of crops following storm rainfall. In parts of the study area the natural surface drainage system is adequate but in other parts that natural surface drainage system is not well developed and loss of production due to inundation occurs. Generally the natural surface drainage system is well developed in zone 1 and poorly developed in zone 4. Conditions in zones 2 and 3 lie between the two extremes.

(NOTE: ZONES 1-4 FORM 22.3% OF COMMAND AREA)

From: 'NARMADA MAHI DOAB - DRAINAGE STUDY'

Govt. of Gujarat, Narmada Planning Group
(Core Consultants, Ahmedabad
M. MACDONALD & PARTNERS, U.K.)

Table No.6 Reclassified Areas of Zone 7

Description	Super-Critical Area	Problematic Area	Irrigable Area	Total
Percentage of Total Area :	40.5%	33.26%	26.2%	100%
Geographical Area (Ha)	236585	194150	152928	583663
Population '71	64392	137427	96776	298595
Cultivators	8746	16902	14287	39935
Net Cultivated Area (Ha)	82091	142441	103932	328464
%N.C.A. to geographical area	34.7	73.4	63.0	56.3]
%Net Area Irrigated to N.C.A.	0.4	1.9	4.6	2.4
Population per Sq.Km.	27	71	63	51
Cultivated Area (Ha) per Cultivator	9.4	3.4	7.3	8.2

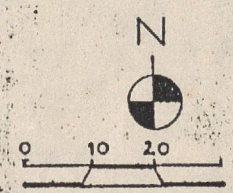
Source: ORG Survey and Census Data.

From: Critical Zones in Narmada Command - Problems and Prospects.
 Report 1, Zone 7. ORG, Baroda. (Study done for
 Narmada Planning Group).

ANNEX 4

← COMMAND AREA SHOWN BY THE SHADED SECTION →

MAP SHOWING
COMMAND AREA OF
SARDAR SAROVAR
PROJECT



REFERENCE:	
NARMADA MAIN CANAL	
BRANCHES	
DISTRICT BOUNDARY	
TOTAL COMMAND AREA	
DROUGHT PRONE AREA	
	Bird Sanctuary
	great Indian Bustard Sanctuary
	Bear Sanctuary
	Black Buck Sanctuary
	Wild Ass Sanctuary



SOURCE: FACTS (UPDATED); Sardar Sarovar Narmada Nigam Ltd
Nov 1990.

ANNEX 5

(iv) Financial Plan: The financial plan and budget for resettlement and rehabilitation is provided by the States. A small component of the project is supported by external credits. As you know the World Bank has continued with the agreed credits.

(v) There are no major unresolved issues between States and Centre. Given the commitment of the parties to the projects, no difficulty is expected in implementation of the project.

→ (vi) Drought in Kachchh, Saurashtra and North Gujarat: The Sardar Sarovar Project as envisaged now will reduce substantially, the distress due to drought in Kachchh, Saurashtra and North Gujarat by say 2025 AD. A publication 'Benefits to Saurashtra and Kachchh areas in Gujarat' brought by the NCA is enclosed for your information.

(vii) Quicker and sustainable alternatives: As already stated, various alternatives have been considered and the project as envisaged and being implemented would provide the optimum benefits. The techno-economic viability has been examined by all concerned before approval. Development of water resources of rivers such as Narmada on lines planned in our country has proven to be a sure, economic and sustainable method for the scale of areas and populations served. Techno-economic viability of such projects and their multiplier effect on poverty alleviation, stabilisation of rural societies through gainful employment and stoppage of migration to urban habitats has been recognised by several researchers.

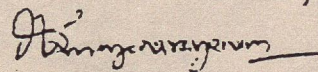
You may rest assured that the status of the project including policies and action plan for implementation has been considered in all aspects by the participating State Governments and Government of India periodically. This was also conveyed to you during the meeting held by Union Minister (Water Resources) on 23-5-92 when you had raised similar issues.

I hope that the NBA will now come to terms with the ground realities and contribute their might in helping realisation of the resettlement and rehabilitation package for the Sardar Sarovar Project oustees. Any clarifications that you may have to seek may please be taken up with Narmada Control Authority whose main office is at Indore.

With best wishes and regards,

Encl. As above

Yours sincerely,



(N. SURYANARAYANAN)

Ms. Medha Patkar,
Narmada Bachao Andolan,
C/o. Parivartan,
Nimbalkar Chambers,
Dandia Bazar,
VADODARA - 390 001.

SOURCE : LETTER FROM
N. SURYANARAYANAN,
COMMISSIONER, (JT. SEC)
MINISTRY OF WATER RESOURCES
GOVT. OF INDIA
TO MEDHA PATKAR, DATED 2 DEC 1992

TIMES OF INDIA MAR 23, 1993

CITY/REGION

State requests WB aid to tackle salinity

By A Staff Reporter
GANDHINAGAR, March 22.

A RS. 1100-CRORE scheme to prevent salinity ingress on Saurashtra and south Gujarat coastal areas has been submitted by the state government for financial aid to the central government and the World Bank.

Announcing this in the state assembly today, the Finance Minister, Mr. Chhabildas Mehta said that the state government had prepared four projects for preventing salinity ingress which was originally to cost around Rs. 578 crores but now the cost had gone up to Rs. 1100 crores. Considering the limited resources available with the state, Mr. Mehta said that projects, along with maps and other relevant documents had been submitted to the World Bank through the central government for its aid so that the problems could be solved once and all.

Replying to the debate on the Appropriation Bill, the Finance Minister pointed out that the state government had been making provisions of Rs. 20 to Rs. 25 crores in each budget to solve the problem of salinity ingress on the Saurashtra coast but the amount was found to be too inadequate. Therefore, the World Bank had been approached.

Agreeing with the concern expressed by the members on the glut of cotton and its falling prices, he said that the state government had sought the permission of the Centre for the export of cotton and also requested it to direct the Cotton Corporation of India to step up its purchases from Gujarat. He also assured the members that the state's share of Rs. 11 crores in the Crop Insurance Scheme would be paid to farmers by the end of the current month. He admitted that the Centre was delaying the Crop Insurance amount to farmers and said that the state government had repeatedly taken up the issue with the Centre in the past.

The Finance Minister also admitted that the financial allocations for various small and medium scale irrigation schemes was gradually going down and explained that the state government had to divert funds for the prestigious Narmada project to complete it as per the revised schedule. He told the house that the Express highway between Ahmedabad and Baroda would be completed by 1995 and the past "mistakes" would not be repeated.

Mr. Mehta said that the government was examining the feasibility of introducing uniform octroi rates in all civic bodies in the state to avoid hardships to traders and businessmen. He said that the government had constructed 30,000 rooms for primary schools but it was virtually impossible to meet ever-increasing demand for school rooms.

He told the house that the state Cabinet was examining a proposal to review the decision of the state government to pay dearness allowance at the Centre's rate as it had inflicted heavy financial burden on the state exchequer. He pointed out that a single hike in the rate of pension on par with the Centre increased the financial burden of the state to the tune of Rs. 33 crores.

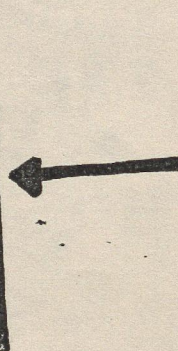
Referring to the criticism of smuggling of arms from the Kutch border, Mr. Mehta said that the government in consultation with the Centre had introduced several measures to check this anti-national activity. He said that the government was also concerned about the series of bomb blasts in Bombay and had taken various precautionary measures. The House later passed the Appropriation Bill in a voice vote.

Newsprint price-hike assailed

By A Staff Reporter

AHMEDABAD, March 22:
The executive committee of the

SOURCE : TIMES OF INDIA (AED) 23 MAR 1993



NARMADA CONTROL AUTHORITY

DRINKING WATER
FROM
SARDAR SAROVAR PROJECT

DECEMBER, 1991
INDORE

(PL. SEE NEXT PAGE)

The GWSSB has tentatively fixed major offtake points along the main canal and branch canals for serving areas of Sabarkantha, Mehsana and Banaskantha Districts, and Kachchh and Saurashtra. For serving Sabarkantha area, offtake point is indicated near Dehgam on the main canal. For serving Mehsana district, offtakes are proposed at the heads of Kharaghoda and Dholera branch canals. For serving Kachchh area, offtakes have been proposed near Bhachau, Anjar and Mundra on the Kachchh branch canal. For serving areas in Saurashtra, major offtakes are proposed at the tail end of Saurashtra Branch canal i.e. Bhogavo reservoir, tail end of Botad branch canal, tail end of Vallabhipur branch canal and tail end of Morbi branch canal. Areas of Bhavnagar district will be served mostly from the offtake on Botad branch canal. Offtake from Bhogavo reservoir will serve areas of Rajkot and Junagadh districts and the off-take from Morbi branch canal will serve Jamnagar district.

6.0 Detailed demand statements and tapping points will be prepared by the GWSSB so that a project report is ready within about a year. This project, whose cost would run into several thousand crores, will have to be sanctioned and implemented so that by the time the Narmada Canals reach the needy areas, the water supply scheme is implemented and kept ready to supply the required quantity of drinking and industrial water to various regions in North Gujarat, Saurashtra and Kachchh.

7.0 As regards industrial water supply, the Industries Department is finalising its plan for use of Narmada waters based on the following principles.

- (1) Narmada waters are precious and limited and should be used very economically and efficiently. The industries to which water will be supplied should treat the effluent to the acceptable standard and make it usable for irrigation purposes. Recycling of water within the industry should be encouraged.
 - (2) Water available for industrial use should be allocated to different regions so as to disperse the industries over a larger area and avoid concentration.
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ANNEX 8

SOURCE:

"Planning for
Prosperity"
Sardar Sarovar
Development Plan

by Sardar Sarovar
Narmada Nigam,
Gandhinagar (Guj.)

NOV 1989

- net irrigation requirements based on the stipulated cropping pattern;
- b) Non-agricultural water demand will have an even distribution over the year. During monsoon surface waters from existing drains, wells, ponds etc., will be available for this use. The actual water needs during monsoon will only be of the order of 20% of the average demand. The balance needs would be satisfied through local monsoon sources;
 - c) NWDT has considered Rajasthan's water demand mainly for rabi season. Rajasthan have asked for a peak requirement of 2500 cusecs through the main canal;
 - d) The total water demand from first fortnight of March to first fortnight of May is low. From the point of view of minimizing the losses resulting from lower flows and scattered need during the summer, the canal flow has been confined only to regions 1, 2 and 3 i.e., in early reaches of the main canal and in the areas where there is relatively higher summer irrigation. In these regions, during the summer period (March I to May I), ground water use will be nil to ensure certain minimum flow in the canal. All other regions will meet the summer demands through ground water;
 - e) Installed ground water capacity for Narmada command has been stipulated at around 9200 cusecs. This has been arrived at on an average capacity utilisation factor of about 40 per cent as against the existing average capacity utilisation of 30 per cent in Gujarat. Given the capacity, fortnightly variations

Land admeasuring about 16 ha. has been transferred to the Fisheries Department for the creation of a hatchery.

Health Aspects

3.1.29 The following measures have been planned for monitoring and controlling the spread of diseases.

- a) Surveillance and control of water related and communicable diseases.
- b) Malaria.

Additional Resources to be raised to Bridge Up the Gap between Expenditure planned and Budgetary Support

3.1.30 As per present estimates, the project cost on completion is likely to be about Rs. 9400 crores. There would be a shortfall of Rs. 2350 crores during the Eighth Five Year Plan 1992-97 and various sources of financing are under consideration to bridge this gap. Among the alternative are :

- a) A Public Deposit Scheme
- b) Rupee Bonds
- c) Bank Finance (With NABARD Refinance Facility) through a consortium of commercial banks.
- d) Non-convertible Redeemable Debentures
- e) N.R.I. Bonds.

Public Deposit Scheme has been in operation since 1988. This source has now dried up due to non-attractive interest rate as compared to other schemes in the capital market. On 28.5.1992 CCI has approved a proposal of cumulative and non-cumulative bonds aggregating Rs. 300 crores submitted by Nigam on 13.2.1992. The Nigam is in the process of its implementation. Proposal for permission of N.R.I. Bonds is yet pending with Govt. of India.

SOURCE : "DEVELOPMENT PROGRAMME 1993-94"

Government of Gujarat

February 1993

SARDAR SAROVAR PROJECT REVIEW IS NECESSARY AND POSSIBLE

The Sardar Sarovar Project (SSP) has emerged as the focus of the development debate, especially in the area of the water and energy management, rights of the tribals, involuntary displacement, participatory development, decision-making in public projects and the development paradigm itself.

The issues raised in the context of the SSP go far beyond one particular project, and have implications for all developmental efforts in the country. At the same time, the situation in the Narmada Valley has taken a serious turn, and notwithstanding claims of "ideal resettlement" by the government, at least about three hundred families are going to be affected by the submergence of the dam this year, people whom the government has not been able to resettle.

Even as this note is being written, the first 45 houses, of village Vadgam (Gujarat) and Manibeli (Maharashtra), all tribal, have submerged; the residents experiencing a wonderful new "resettlement" - arrest and abandonment by the police. These families are today out on the streets. The famous Shoolpaneshwar temple in Manibelli is also under water.

The time has come for the Nation to respond on this issue immediately. A comprehensive review of the SSP has become a must.

Let us see in detail why the Review is necessary, and how it is possible.

PROJECT PLANING AND APPRAISAL

The Narmada Water Disputes Tribunal Award (NWDTA) has been projected as the very basis and justification of the SSP. It is also said that the Tribunal studied the whole project for ten years, so that all the studies and appraisals are over. Nothing could be far from the truth. In fact, the very basis on which the tribunal based its award are found to be invalid today. Moreover, **the NWDT either underestimated, or did not even appraise many of the critical impacts and key issues**

The NWDT assumed that the yield of the Narmada would be 28 million acre feet (MAF) of water. However, the NWDT had only 18 years of river flow data to make this calculation. Since this data is not sufficient, it made certain extrapolations from the earlier rainfall data - which itself was many times inaccurate. The latest studies, based on the now available 42 years' data indicate that **the yield assumed by the NWDT was an overestimate and the correct yield is only 23 MAF - a decrease of 17 %!** Thus, the very basis of the project planning is changed.

The scale of the project's social impact was grossly underestimated by the NWDT. The NWDT estimated that the number of families affected in MP would be only about 7366 and those in Maharashtra would be about 467. Today, these figures have changed to 33014 and 3500 respectively! Moreover, the NWDT had not even considered the other categories of affected people who also are severely affected - the Canal affected, the Colony affected, the Sanctuary affected, etc. Thus, the impact of the project considered by the NWDT in making its judgement about the advisability of the project was a gross underestimate.

As far as the environmental impacts go, the NWDT had not even mentioned a word about these.

The NWDT was supposed to examine the possible alternative ways of achieving the same aims (See issues framed by the Tribunal, in NWDTA Vol. I). However, the NWDT never studied any possible alternative solutions of the water problem of Gujarat, nor the best possible utilisation of the Narmada waters.

In fact, the aim of the Tribunal was primarily to resolve the dispute over sharing of the waters, and not to develop the optimal solution for use of the water resources of the Narmada Basin.

It is thus clear that the NWDT had *not* studied or assessed the key parameters. Also, the parameters that it had assessed have dramatically altered now.

Other Assessments are in the same state. Most of the critical studies pertaining to Resettlement and Rehabilitation (R&R) and Environmental impacts are either incomplete or not yet started.

Even today, there is no accurate estimate available of the number of people to be affected by the project, either by submergence or otherwise. There are no comprehensive plans for R&R for the three states with the proper estimate of the total land and other resources required. Land is searched for (or asked for, in the case of Maharashtra) on an *ad hoc* basis.

In the case of the Environmental impacts of the project also, the story is the same. **There is no comprehensive Environmental Impact Assessment of the project done as yet!** Many of the critical studies - Catchment Area Treatment, Compensatory Afforestation, Impacts in the Command Area, Loss of Fisheries, Eusturine and Downstream impacts, Rim Stability and Seismicity, Flora - Fauna studies, Impact on health - all these are either incomplete or not even yet started.

In fact, the very clearance granted to the project by the Ministry of Environment and Forests (Govt. of India) (MoEF)- which was a conditional clearance as the studies had not been done - was declared lapsed by the Ministry in Sept. 1990 due to the non-fulfillment of the conditions (SEE ANNEX 1). Since the Planning Commission clearance incorporates the

conditions imposed by the MoEF, it too can be considered lapsed. **Thus, the project is being carried out without the required clearances.**

When the critically important social and environmental impacts are not yet fully assessed, how can any cost-benefit analysis of the project be done? Even otherwise, till date, there has not been a proper, realistic assessment of the costs, and the financial plan is not ready even today.

Thus, the very basis upon which the project should be planned is non-existent.

ENVIRONMENTAL IMPACT

While the comprehensive assessment of the Environmental impact is lacking, the preliminary studies are indicative of the tremendous environmental impacts of the project.

It is important to understand that the environmental impact is not only the loss of forest, substantial as this loss is. In SSP, for example, the most serious impact will probably be in the command of the project. **Thousands and thousands of hectares of land is going to be affected by waterlogging and soil salinisation.** For example, in the first four zones, the region between Narmada and Mahi, (representing about 22.3 % of the command area) approximately 43 % of the land is prone to be affected by these problems. Detailed studies indicate that the prevention or mitigation will be either impossible or too expensive (SEE ANNEX 2). In the Bhal area, Zone 7, (another 12.5 % of the command) the recommendation of the study is that over 46 % of the area is "super-critical" and canal irrigation should be avoided in this area completely! (SEE ANNEX 3)

Another important impact is that on the downstream of the dam. **There will be sea water ingress as the dam holds up the river water, leading to soil salinisation, degradation of water resources downstream** of the dam. The blockage caused by the dam and the impact on the estuary will **completely destroy the fisheries of the river**, both upstream and downstream. Just downstream itself, **there are about 5,000 fishing families who stand to lose their source of livelihood!**

There are many more serious impacts which need to be looked into in detail, which are beyond the scope of this brief.

It is thus clear that the environmental concern stems not from an elite concept of 'green countrysides', but from the basic concern that environmental impacts of the project will degrade and destroy our very resource base - land, water, forests - leading to a destruction of very basis of survival of hundreds of thousands of people

THE QUESTION OF BENEFITS

Despite the huge social, environmental and financial costs involved, the SSP is still being justified on the ground that this project, and this project alone, will solve the critical water crisis of the drought-prone areas of Gujarat. However, examination of the facts shows that this is a total myth.

The areas with the maximum water problem in Gujarat - namely Saurashtra and Kutch - are almost completely left out of the project. (SEE ANNEX 4 MAP)

Only 1.6 % of the cultivable land in Kutch, and 9.24 % of cultivable land in Saurashtra is to receive irrigation from the project, leaving the rest high and dry.

Even this meagre benefit shown on paper will reach these areas, if at all, only in 2020 AD (Saurashtra) and 2025 AD (Kutch), as is made clear by both, the Government of India, as well as the World Bank (SEE ANNEX 5).

However, even if the people of these regions are ready to wait for these meagre waters upto 2020, there is no likelihood of these waters ever reaching these areas.

As has already been noted, **the water yield of the Narmada had been overestimated by about 17 %**. The actual flow will be much less.

The irrigation potential of the SSP is based on the regulated released of water from the Narmada Sagar Project. (NSP) **If the NSP is not built, as is most likely to be the case, the irrigation benefits of the SSP will decrease by almost 30%.**

The present project benefits are based upon an assumed irrigation efficiency of 60 %. This is a highly unrealistic assumption, not based upon any real experience. The World Bank's Irrigation Sector Review for India (1991) shows that the highest efficiency in India has been 36 %. A realistic assessment of the SSP shows that **the irrigation efficiency will be about 42 % at best ! This means that the area to receive the irrigation will decrease substantially.**

The projected irrigation to over 18 lakh hectares is based upon a extensive distribution of water. For achieving this, **the Government has claimed that practically no water will be given for sugarcane in the command. However, already seven new sugar factories are coming up in the earliest reaches of the command area, awaiting water from the SSP !** This means that a large portion of the waters will be used up in the earlier area, leaving the last reaches (Kutch and Saurashtra) high and dry.

All these factors mean that the irrigation benefits of the project are going to be substantially lesser than projected. Not only does this destroy the basis of the cost-benefit analysis, but also means that the tail ends - the regions that need water the most are never going to get it.

In fact, for the regions of Saurashtra and Kutch, the SSP is a double burden. While it is justified on their names, they are not getting any water from the project. Meanwhile, almost all the State's resources (for irrigation) are being diverted for the SSP, leaving no resources for the region.

Of late, even strong supporters of the dam have started accepting the fact that injustice is being done to Kutch and Saurashtra. A massive rally of 25,000 was held in Bhuj (Kutch) on 16 June 1993 demanding a review of the distribution of the waters from SSP.

As far as **Drinking Water** is concerned, this has been made into a very big emotional issue, and a large part of the support to the dam comes from the blind acceptance of the government's claim that the SSP will be "a permanent solution to the water problem of Saurashtra and Kutch". However, an examination of the facts show that this is far from the truth.

The SSP promises to provide 0.86 MAF of water for drinking purposes. When the case was being argued in front of the NWDT, Gujarat did not propose any villages to get drinking water. Since then, claims have changed from 131 urban centres and 4720 villages to 7235 villages in 1990 to 8215 villages today while the quantity of the water has not changed! The claimed 8215 villages contain about 200 that are uninhabited. The exaggerations are obvious as is the effort to mislead the public.

Moreover, surprising as it may sound, **there is not a single paisa allotted to the drinking water supply scheme in the project!** All that the project will do is to allow 0.86 MAF water to be taken from the canals for drinking purposes. The supply system is not considered the project's concern. According to the Narmada Control Authority (NCA), **the cost of this scheme will run into "several thousand crores". No one knows where this money will come from. Even the plans are not ready yet, nor the feasibility studies started** (SEE ANNEX 7). In any case, the waters, if ever, will reach Saurashtra only by 2020 and Kutch by 2025, as shown both by the World Bank as well as Govt. of India documents.

To rub salt in the wounds, the dam operation program is such **that canals beyond the first 144 kms (i.e. beyond Mahi river) will remain dry in the critical months of summer - from 15 March to 31 May.** In these hot summer months, the time when water is most scarce, the areas of Saurashtra and Kutch will be left to their own resources (See ANNEX 8).

Thus, there are no plans, no money, no priority for the drinking water. If drinking water was really a priority, the government would have taken up the much cheaper and faster alternatives of watershed development and rainwater harvesting, which have been proved to work even in the most problematic area in Kutch (See ANNEX 9).

The **power benefits** from the project are also highly exaggerated. While claiming that the SSP will generate 1450 MW, the authorities are misleading the people. 1450 MW is

only the installed capacity of the Project, the actual energy generated will be about 439 MW (on an average continuous basis) in the beginning (when little water will be diverted to irrigation) decreasing to only 50 MW in the final stage (as maximum water will be diverted to irrigation) ! Moreover, over 25 % of the power benefits depend upon the regulation by the upstream Narmada Sagar Project, which seems quite unlikely to ever come up. Of course, the power house will provide peaking power throughout, but it is a very expensive way of getting peaking power. Far cheaper options exist which have not been considered.

This assumes great importance today because there is no money for the power project, and the States want to hand over the SSP-Hydro to a private concern (for about 2,700 crore rupees). Apart from the impracticality of this, this will mean that the States will have to pay commercial prices for the power. Can they afford it? Won't it be better to invest in more optimal investment options for the same amount of electricity? Many exist, including the Demand Side Methods like Efficiency Improvements, Irrigation Pumpset Improvement, Conservation, Transmission and Distribution loss control, and the supply side ones like co-generation and renewable energy technologies like wind, biomass etc. (Today, many planners and bureaucrats are dismissive of these, little realising either their potential or the progress and maturity of these technologies demonstrated in other countries - USA, Japan, Sweden, China, Brazil. etc. Today we laugh at these; tomorrow we shall be importing these very technologies from them).

Little as the benefits are, even their distribution is socially unjust. As is clearly seen, the waters are meant more for the sugarcane growing landlords of Baroda and Kheda districts, rather than the drought-prone areas of Kutch and Saurashtra. Even in the areas where the waters will go the poor people, landless farmers won't really benefit from them. It is only the richer farmers who will be benefitting, as past experience has shown.

DISPLACEMENT

The social disruption caused by the displacement of the project is one of the biggest costs that we are paying for the meagre benefits expected. Unfortunately, even this is not fully assessed yet.

Very few people know that the first displacement due to the project took place in the early sixties when over 700 families were displaced to make way for the colony to house the engineers and officials. **These families still await the full compensation!** Actually, the government does not even accept them as the project affected people (PAP). Except those affected by the submergence, all other categories of the affected people are not recognised as the PAPs, even though they are as seriously affected. Such categories include the canal affected people (170,000 families, 24,000 seriously affected), the Colony affected, the Sanctuary affected (108 villages), secondary displacement affected, downstream affected, Catchment Area Treatment Affected and Compensatory Afforestation affected etc. The numbers of these run into several lakh people, and these are completely out of the so called "ideal" resettlement policy.

Even for the submergence affected people, there is no clear estimate of the number of people affected. The NWDT said that 467 families would be affected in Maharashtra and 7366 in MP. Today these figures are 2731 in Maharashtra ("likely to go up to 3500" in the government's words) and 33,014 in MP! In the case of MP itself, the figures have changed from 23,000 to 30,000 to 33,014 in the last one year. And still, even the basic surveys are incomplete, so it is sure that this number will go up!

Policy is the next key issue. There is no common policy for all the three states. Even today, the policy considers only "land for land" as the basis of resettlement and rehabilitation. (R&R) **There is no consideration of replication or substitution of the other support bases of the tribals - namely the forest (for fuelwood, fodder, housing material fruits, roots, medicines, cash-earning produce etc) and the river (clean, plentiful water, fish).** Even the land is not properly identified. There are no comprehensive plans for R&R. Predictably, there are extremely serious problems of land cheating, inadequate and bad quality of land, complete shattering and splintering of the community, lack of fuelwood and fodder (most of the cattle has had to be sold or left in the old village), unavailability of water, and so on.

The situation has reached such proportions that many families have abandoned their R&R sites and returned to their old villages. These include families from Vadgam, Katkhedi, Makadkheda (Gujarat), Manibeli (Maharashtra), Chilakda, Amlali, Katerkheda, Dabhani, and Chachkuwa (MP).

The Morse report in fact predicted many of these things when it unequivocally concluded that the Resettlement and Rehabilitation was impossible.

However, the greatest sign of the total failure of the R&R is the fact that, at the beginning of this monsoon, there were at least 300 families in the first 18 villages of Gujarat and Maharashtra that were expected to be submerged, but none had been resettled. Today, as the waters are rising in the valley, over 45 houses have already been submerged, rendering all these families homeless, propertyless. Many more are expected to be submerged in the coming week.

Is this the "ideal resettlement"?

FINANCIAL VIABILITY

No one is willing to say how much the project will cost. The proposal submitted to, and conditionally approved by the Planning Commission put the project cost at 6,406 crore rupees. Meanwhile, in 1985, the World Bank estimated the cost to be 13,641 crore rupees. Mr. C.C. Patel (then an independent consultant, later Chairperson of the Sardar Sarovar Narmada Nigam) estimated the cost of the project to be 11,154 crores in 1988. Today, the

Govt. of Gujarat claims that it will cost Rs. 9,400 crores. It is not sure if this includes the share of MP and Maharashtra. (SEE ANNEX 10). But this definitely does not include the cost of the Drinking Water scheme, expect to run into "several thousands of crores" (SEE ANNEX 7). **Independent experts estimate the realistic cost of the project (excluding the drinking water scheme) to be about 20,000 crore rupees.**

Moreover, nobody even knows from where this money will come from. The Government of Gujarat's budget for 93-94 (SEE ANNEX 10) says **that in the cost of 9,400 crores, there will be a shortfall of 2,350 crores** in the 8th Plan itself; more in the subsequent ones! Moreover, **this figure is under the assumption that the World Bank loan would continue, and a new World Bank loan start, from Jan 94.** The other announcements (Bonds etc.) made to raise the money are nothing but expensive gimmicks, and the half heartedness of these is clear from the documents (Annex 10) and the miserable response to the previous deposit schemes.

It is clear that the SSP is going to be a financial white elephant, going the way of hundreds of other incomplete projects in the country.

A disaster on all fronts. Do we want it to go on? Especially when the true solutions to the energy and water problems exist that are cheaper and faster, socially and environmentally benign, which have gotten sidelined because of the focus and false hopes placed on the SSP. This is precisely the reason why we need a review of the project - to expose the disaster and bring out the alternatives - or rather - the true solutions.

TWO QUESTIONS

1. But is the Review possible? Doesn't the Tribunal expressly forbid a review till 45 years?

This is a misconception. All that the Tribunal says is that there must be a review (of certain aspects.) any time after 45 years (Clause V NWDTA). However, even before that, the Tribunal allows for a review of any and every aspect of the Award (Clause XIV Sub Clause 16 NWDTA). In fact, this provision has been used earlier to modify the type of the power plant.

Moreover, the project can't go on unless it gets the required clearances from the Central government. Today, all these clearances are conditional in nature (with the environmental clearance lapsed) and hence have necessarily be reviewed to check fulfillment.

And, lastly, if, in response to changing situations, the country can even amend the constitution itself, is the Tribunal Award above the constitution?

2. What about the expenses incurred till now? Will they not go waste?

Till now, only about 10 % of the total cost has been spent. In fact, we stand to lose much more by continuing with the project since the impacts of the project - social, environmental, financial - are disastrous. Also, much of the money spent has been spent on infrastructure, which can be put to use, and on human resources and administration, which is not really a loss.

Most importantly, good financial and economic sense says that if we are going to lose more by continuing with the project, it is better to stop and treat the unutilisable expenditure as sunk cost than to sink more money into a questionable venture.

Let us not throw good money after bad.

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