

Dams, Rivers & People

UPDATE ON RELATED ISSUES

SANDRP

ISSUE ONE

FEBRUARY 2003

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ABOUT DAMS, RIVERS & PEOPLE

To clearly reflect the issues we are dealing with, we have decided to change the name of our periodical to *Dams, Rivers & People*. Essentially, however we will continue to cover the issues we did in *Update*. We are numbering this issue as Issue One as we are starting with new name. We hope that *DRP* will become a medium of useful information dissemination & interaction. We would be happy to know your responses & suggestions about *DRP*.

The *DRP* will be available both in electronic (text and word versions) and printed versions. The softcopies of *DRP* are also available at www.narmada.org/sandrp and www.janmanch.org/newsletters.

The suggested minimum annual contribution for the *DRP* is Rs. 100/-, which would cover the cost of printing and mailing. Please send your DD in favour of YUVA, payable at Mumbai and send it to our Delhi address.

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RIVER LINK: SOME BASIC INFORMATION

HISTORY

August 1980 A National Perspective for Water Development framed by the Ministry of Water Resources

July 1982 National Water Development Agency set up to carry out detailed studies in the context of National Perspective

Sept 1999 Report of the NCIWRDP

Oct 31, 2002 Supreme Court order suggesting inter-linking of major rivers

Nov 2002 Govt announces that feasibility studies for six of the peninsular link proposals are ready.

Dec 16 2002 Govt appoints a task force under the chairmanship of Suresh Prabhu

Dec 7 2002 Justice (Retd) B N Kirpal clarifies that the Supreme Court observation on linking of rivers was only a suggestion.

The Task Force Time Table

- The task force will prepare Action Plan-I giving an outline of the time schedules for the completion of feasibility studies, detailed project reports, estimated cost, implementation schedule, concrete benefits and advantages of the projects by April 30, 2003.
- Prepare Action Plan-II giving options for funding and execution of the project as also the suggested methods for cost recovery by July 31, 2003.
- Meeting with the CMs of various States and Union Territories to deliberate over the project and to elicit their cooperation during May/June 2003.
- Completion of the feasibility studies by 31.12.2005;
- Completion of detailed project reports by 31.12.06;
- Implementation of the project by Dec 31, 2016.

SC remark on rivers linkage was only a suggestion

BANGALORE, Dec 7 (UNI): Former Chief Justice of India B N Kirpal today said that the Supreme Court observation on linking of rivers did not amount to policy intervention as it was only a "suggestion" made to the Union Government, which was free whether or not to act upon it. He was speaking at a two-day national round table on "Law, Economic Reforms and Liberalization". (SENTINEL 081202)

Readers may recall that the whole national debate and political rhetoric surrounding the issue of linking rivers started after the Supreme Court bench headed by the then Chief Justice B N Kirpal "suggested" on Oct 31, 2002 that govt may take up linking of the major rivers of India.

The proposal The National Perspective Plan for inter linking of Indian rivers has been divided in two components. (i) Peninsular Rivers Development and (ii) Himalayan Rivers Development Component.

Under the Peninsular Rivers Development Component, NWDA has completed the Water Balance Studies of 137 basins / sub-basins and 52 diversion points, 58 Reservoir Studies and 18 Toposheet Studies of link alignments.

Under the Himalayan Rivers Development Component, the Water Balance Studies at 19 diversion points, Toposheet studies of 16 Reservoirs, and Toposheet Studies of 19 link alignments have been completed.

Pre-feasibility studies of 30 link schemes have been completed. Further, the Feasibility Reports of 6 links under Peninsular Component have also been completed. Field Surveys & investigations of another 18 links are under progress. It is planned to complete Feasibility Reports of all the identified links under Peninsular Component by 2004 and Himalayan Component by 2008 as per the current mandate of NWDA. (PIB PR 051002)

Proposed Links Under Study

Peninsular Component

1. Mahanadi (Manibhadra)– Godavari (d/s)
2. Godavari (Inchampalli) – Krishna (Nagarjunsagar)
3. Godavari (Inchampalli Low Dam) – Krishna (Nagarjunsagar Tail Pond)
4. Godavari (Polavaram) – Krishna (Vijaywada)
5. Krishna (Almatti) – Pennar
6. Krishna (Srisilam) – Pennar
7. Krishna (Nagarjunsagar) – Pennar (Somasila)
8. Pennar (Somasila) – Cauvery (Grand Anicut)
9. Cauvery (Kattalai) – Vaigai – Gundar
10. Ken – Betwa
11. Parbati – Kalisindh – Chambal
12. Par – Tapi – Narmada
13. Damanganga – Pinjal
14. Bedti – Varda
15. Netravati – Hemavati
16. Pamba – Achankovil – Vaippar

Himalayan Component

1. Kosi – Mechi
2. Kosi – Ghagra
3. Gandak – Ganga
4. Ghagra – Yamuna
5. Sarda – Yamuna
6. Yamuna – Rajasthan
7. Rajasthan – Sabarmati
8. Chunar – Sone Barrage
9. Sone Dam – Southern Tributaries of Ganga
10. Brahmaputra – Ganga (MSTG)
11. Brahmaputra – Ganga (JTF) (ALT)
12. Farakka – Sunderbans
13. Ganga – Damodar – Subernrekha
14. Subernrekha – Mahanadi (NCIWRDP: p. 180-6)

Govt's blue ribbon commission is sceptical about River Link Proposals

The National Commission for Integrated Water Resources Development Plan (NCIWRDP), set up by the Govt of India and which the then Union Minister claimed was a "blue ribbon commission, has been quite sceptical about the river link proposals. Shockingly, the commission was not given basic information about the Himalayan component. Let us see what the commission had to say about the various link proposals.

About the KL Rao proposal, the NCIWRDP said on p. 179 of its report dated Sept 1999, "Later, detailed examination showed that the proposal was very costly and lower cost alternatives were available."

About the garland canal of Captain Dastur, an air pilot having no experience in water resources development, the NCIWRDP said, "His scheme was *prime facie* impractical".

About the current river link proposals being perused by NWDA and the govt, the NCIWRDP says:

➤ "No Socio economic criteria appear to have been laid down for evaluating the proposals". (p. 181)

➤ **Classified data!** "Unfortunately, the Himalayan component data being classified, were not available for analysis." (p. 187) So the data was not made available even to a commission appointed by the Union govt! Can one imagine greater data paranoia of our water resources establishment? What were they afraid, except fear of exposure by some friendly scrutiny?

➤ "Inter basin transfer involves storage of water, construction of canals and numerous major cross drainage works which may result in water logging and other environmental impacts **more adverse than the normal water resources projects.**" (Emphasis supplied.) (p. 197)

➤ However, looking at the available information, the NCIWRDP said (p. 187-8), "The storages and links involved are of very large sizes and lengths; and the costs of construction and environmental problems would be enormous... For Thar desert area, it would perhaps be desirable to promote and zone low density tree cover as far as possible...On the basis of published information, the Commission is of the view that the Himalayan component would require more detailed study using system analysis techniques. Actual implementation is unlikely to be undertaken in the immediate coming decades".

East flowing rivers Nine links (see the table on next page for details) are proposed for interlinking east flowing Peninsular rivers. These linkages involve construction of five dams and nine link canals. The head works will submerge 0.25 M Ha and require rehabilitation of more than 0.5 M people. The links will require concurrence between the concerned states.

➤ After examining the six east flowing rivers, namely Mahanadi, Krishna, Godavari, Cauvery, Vaigai and Pennar, the NCIWRDP concludes (p. 192), "**Thus, there seems to be no imperative necessity for massive water transfers.** The assessed needs of the basins could be met from full development and efficient utilisation of intra-basin resources except in the case of Cauvery and Vaigai basins." (Emphasis supplied.) Even the shortages in the Cauvery and Vaigai basins are just 5% and 8% even after increasing the present irrigated areas to 1.4 times in case of Cauvery and 1.6 times in case of Vaigai!

➤ About the NWDA claim that Godavari and Mahanadi being water surplus, NCIWRDP make it clear "It may be pointed out that Orissa and Andhra Pradesh have claimed that all the waters of Mahanadi and Godavari could be utilised within the basins and that there are no surpluses."

Par-Tapi-Narmada Link NCIWRDP says, "The link consists of seven reservoirs on these rivers and a 400 km long link canal connecting these reservoirs and carrying the water through Ukai reservoir and to the target command areas north of Narmada. **Taking the entire system, the cost of water delivered is high and can hardly be borne by the farmers at prevailing agricultural prices.** The irrigation rates may have to be very heavily subsidised which is not in conformity with current thinking. It is felt that these links should be deferred". (Emphasis supplied.)

Damanganga-Pinjal Link Project This water is to be supplied for domestic and industrial use for Mumbai. It involves construction of a dam across Pinjal River, a tributary of Vaitarna River. The link involves inter state issues between Gujarat and Maharashtra.

Pamba – Achankovil- Vaippar This link proposal envisages diversion of 634 Mm³ from the Pamba and Achankovil river basins in Kerala to Vaippar basin in Tamil Nadu for irrigation of 91 000 Ha in TN, generation of 500 MW through Pump Storage scheme and regulated releases of 150 Mm³. The scheme involves interstate problems. **Kerala govt, however, rejected the report of the NWDA.** Kerala Chief Minister, while replying to questions in the state assembly on 16th Feb, 1999, said the State had questioned the credibility of the NWDA study team, the report of which had been submitted for consideration to the technical advisory committee. He added that the Centre for Water Resources and Management had examined the matter and reported that Pamba and Achankovil do not have surplus water.

Netravati – Hemavati This is for diversion of water from the west flowing Netravati into the East flowing Hemavati (Cauvery basin) to irrigate 33 813 Ha in Hemavati Dam canal. "The cost is rather high due to requirement of lift," says NCIWRDP.

Bedti-Varda The proposed link envisages transfer of water from the west flowing Bedti river to the Tungbhadra river, a tributary of east flowing Krishna, both within Karnataka.

Southern Tributaries of Yamuna

Ken-Betwa This proposed link envisages diversion of water from Ken Basin to Betwa basin. A 73.3 m high dam is proposed on Ken river at Daudhan with gross storage capacity of 2 775 Mm³. The total length of the link canal is 231.45 km. Two powerhouses with 60 MW and 12 MW capacities are also planned.

Kalisindh-Chambal This proposed link envisages transfer of water from Newaj river (a sub-tributary of Kalisindh river) and from Kalisindh river (a tributary of Chambal river) to Chambal river upstream of existing Gandhi Sagar/ Ranapratap Sagar reservoirs for irrigation use. This is not an inter-basin transfer.

¹ BUSINESS LINE 170299

Details of Proposed Links For East Flowing Peninsular Rivers

SN	Name of the link	Connecting Rivers		FSL at		Length	Discharge	Annual Volume Transfer	Enroute Irrigation Vol. Mm ³	Losses
				Head	Tail					
				m	m	Km	M ³ /Sec	Mm ³	Area ha.	Mm ³
1	2	3	4	5	6	7	8	9	10	11
1	Manibhadra to Dowlaiswaram	Mahanadi	Godavari	74	13.81	392	687	11 176 6 500	3 854 4 54 229	822
2	Inchampalli to Nagarjunsagar	Godavari	Krishna	142	182.77	299	1 219	16 426 14 200	1 850 3 19 708	376
3	Ichampalli to Pulichintala	Godavari	Krishna	106.68	69.68	270	263	4 371 -	4 221 6 94 882	150
4	Polavaram to Viajaywada	Godavari	Krishna	40.232	27.965	174	361	4 903 3 305	1 448 1 48 418	150
5	Almatti - Pennar	Krishna	Pennar	510	434.4	564	208.12	1 980 -	1 778 2 34 589	202
6	Srisallam - Pennar	Krishna	Pennar	268.15	156.51	171.3	186	2 310 2 095	-	215
7	Nagarjunsagar - Somasila	Krishna	Pennar	151.67	102.63	394	555	12 146 8 648	3 166 5 60 606	332
8	Somasila - Grand Anicut	Pennar	Cauvery	91.96	59.7	538	616.4	8 565 3 855	3 170 4 91 200	385
9	Kattalai Regulator - Vaigal-Gundar	Cauvery	Vaigai	100.75	78.865	250	174.14 29.88	2 252 -	2 007 3 53 337	136

Note: (1) In col. 9, the upper figure indicates the gross diversion while the lower gives the quantity recharging the recipient river. The difference is accounted for the enroute irrigation and losses.
(2) In col. 10, the upper figures are volume used enroute and the lower figures are area-irrigated enroute.

RISING SCEPTICISM ABOUT RIVER LINK RHETORIC

Civil Society Rejects River Linking proposal

New Delhi: Majority of civil society representatives resent at "A Civil Society Dialogue on the subject of India's proposed Interlinking of Rivers" organised by the WWF Switzerland in association the Delhi-based Development Alternatives felt that the country did not need river linking, rather it needed people centered local water solutions that can solve the real needs of the people. This was the view of the participants ranging from former water secretary to the grass root organizations from diverse regions like Bihar, Andhra Pradesh, Tamil Nadu, Rajasthan, Maharashtra and Delhi.

Most of the participants rejected the setting up of the eight member Special Task Force to monitor interlinking of major rivers within 15 years for claimed benefits like mitigation of droughts, floods and disputes at an estimated cost of Rs 5,60, 000 crore under the chairman ship of Suresh Parbhu.

Contrary to what has appeared in a section of the media there was no progress made at the seminar on 8th February civil society dialogue at India International Center to set up a Peoples Commission to examine the proposed mega-initiative of the Government of India. The 100-odd participants were unanimous in their view that neither the government nor the task force has shared even the basic information like the various pre-feasibility and feasibility studies conducted by the National Water Development Agency for the last 20 years or the Report of the National Commission on Integrated Water Resources Development. In a scenario like this the proposal to set-up an independent commission to assist the government was not only deemed ridiculous but a step towards self-cooption.

When the Ganga is water deficit according to the controversial Indo-Bangladesh water treaty, how can it be shown as water surplus in the new plan, questioned Shri Ramaswamy Iyer, former water resources secretary? He said, all future studies are suspect since govt is not at all transparent about it.

South Asia Network on Dams, Rivers & People representative questioned, "without the availability of basic information, transparency and accountability of the water resources establishment, how can there be a dialogue? No area of the country needs such schemes for their water needs". Shri VB Easwaran of National Wastelands Development Board made it clear that hundreds of examples from across the country have shown that local systems and watershed development can be much better, cheaper and faster way of drought mitigation than river linking proposals. The meeting was informed that Justice B N Kripal, who had given the order on Oct 31, 2002 regarding linking of rivers across the country, has said just few days after his retirement that what was said in the Supreme Court on the subject was merely a suggestion and not an order.

Suresh Prabhu turned up to exploit the civil society space

by making the right kind of noises after having decided to go ahead with project. But it emerged from the seminar that there is no real need for this project. The consensus was that there were better options to the gigantic project. Basant, a farmer from Bihar expressed horror at the attempts of the new "Bhagiraths" like Prabhu and others to ferry water across the nation.

"The political consensus on the issue of interlinking of rivers is a myth. Already states like Assam, Bihar, Kerela, Punjab, Orissa, Goa, W Bengal and Maharashtra have raised objections to it," said Dr Sudhirendra Sharma, director of The Ecological Foundation.

It was feared that this initiative of Prabhu would go the same non-serious way that the govt engaged the civil society on other development issues. The proposal of the govt to start a dialogue after taking a decision does not serve any purpose and the civil society will end up being a rubber stamp. The civil society will do well to use its resources to show that such destructive schemes are not necessary and the alternatives are sustainable and viable.

A presentation by the govt showed that it would conduct a detailed project report on river links like Par-Tapi-Narmada but it did not answer whether people living on the banks of Tapi and Narmada are willing to allow the linking of their river with the heavily mercury contaminated water of Par, a query raised by Toxics Link. In total absence of any credible Post facto assessment of any of the big water resources development projects over the past fifty years, there is no accountability for the water resources establishment in the country.

There is an inherent contradiction and confusion in the govt's stance. The fact that the Prime Minister who in the summer of 2000 talked about harvesting every drop of rain where it falls did not set up any task force on rain water harvesting, rather chose to set one up on the gigantic river linking schemes raises doubts if this govt is really interested in solving country's water problems or is it just working in the interest of contractors - engineers - consultants - bureaucrats - politicians nexus.

(Press Release on Feb 10 2003. Contact: Gopal Krishna: meetgopalkrishna@rediffmail.com)

River Link Plan is impractical: Venkaiah Naidu Rural Development Minister Venkaiah Naidu, while replying to a short debate in Rajya Sabha on drinking water crisis in the country, said that the proposal to link up the major rivers of the country is not practical looking at the geographical situation in the country. He said that without needing such schemes, govt plans to provide drinking water to all the villages by March 2004. (RASHTRIYA SAHARA 170502)

Trade Unions in Maharashtra to campaign Against the River Linking Proposals

Mumbai: Trade unions are better known for taking up issues of their employees' job security and related rights. But with the change in times the same trade unions are now becoming socially conscious. In an unprecedented move, the Service Sector Employees' Coordination Committee, a committee representing several trade unions and social organisations, in its Pani Parishad (Water Council) held in Mumbai on February 12, 2003 adopted a Declaration and pledged to create awareness on the issues of water scarcity and governance through its cadre in various parts of the state of Maharashtra in next couple of months.

The declaration expressed serious concern over the receding supply of water to a large number of townships and villages in the country and the escalating disputes on sharing of river waters between Karnataka and Tamil Nadu and between Punjab, Haryana and Rajasthan. Instead of coordinating village-level activities and building up an integrated plan for tackling the water problem on war footing with pragmatic considerations, supported by experience and constant innovations and activated through employment guarantee schemes, the BJP govt at the Centre has suddenly sought to revive Ganga-Cauvery link which the govt had given up 20 years ago as being absolutely unwise on techno-economic considerations, the declaration noted.

Criticising the interlinking of rivers proposal, the Pani Parishad firmly rejected the concept of treating water as an economic activity for sale in the market. Water must always be considered as national wealth entirely under the control of the whole community. Mr R G Karnik, Convener of the Coordination Committee, reiterated the need for creating a strong public opinion in favour of community-oriented comprehensive programme for enhancing the availability of water (as opposed to the centralised interlinking of rivers proposal) and its equitable distribution and generation of productive employment. Mr Karnik announced the committee's decision of holding similar meetings in Thane, Pune, Nashik, Nagpur, Kolhapur and Aurangabad in the next two months. The Pani Parishad was inaugurated by Shri R R Patil, Minister of Rural Development, Water Supply and Sanitation of the govt of Maharashtra and attended by over 200 participants representing various trade unions and employees' federations.

Dr Sudhirendar Sharma

Govt: Ganga Cauvery Link devoid of flood control benefits On Aug 9, 2000, while answering a question from MPs Shri DVC Shankar Rao and Shri Dilip Kumar Gandhi, Union Minister of state for Water Resources Smt Bijoya Chakravarty said: "However, Dr. K.L.Rao proposed Ganga Cauvery Link which was examined by the Central Water Commission and found to be grossly under estimated. Besides the proposal also required a large block of power and was devoid of my flood control benefits." If that is the case than why is the river link now being pushed?

Kerala's Experience far from happy One of the earliest instances of inter-basin transfers in the peninsular region was from the upper reaches of the Periyar to another river basin in Tamil Nadu across the Western Ghats. This was done by constructing the Mullaperiyar dam more than a century ago. This led to the deterioration of water quality downstream of the river. Salinity intrusion and pollution dispersion problems in the lower reaches of the Periyar arose due to non-availability of sufficient quantity of water for flushing. The safety of the dam structure and inundation of the eco-forest system are also aspects discussed with concern in relation to this scheme for inter-basin transfer of water. An intra-State inter-basin transfer from the Periyar to the Muvattupuzha river for power generation in Kerala has adversely affected the downstream flow in the Periyar river. (THE HINDU 111202)

Agriculture Ministry to press for Rainwater harvesting & Riverlinking Union Agriculture Ministry will press for creation of grid system for major rivers. Union Agriculture Minister said, "Since, interlinking of rivers will need states' consent, I will raise the issue in the forthcoming meeting of National Development Council". The Union minister said that rainwater harvesting was of equal importance and "no amount of irrigation system involving canals and reservoirs can substitute rain water". (THE ECONOMIC TIMES 160902)

Punjab parties oppose National River Grid All party meeting in Punjab has opposed the proposal for the National River Waters Grid and demanded scrapping of all riparian treaties signed by Punjab. It was also decided that the International Human Right Organisation and the BKU would file jointly a petition in the SC in this context. (THE TRIBUNE 150902)

Over 500 ASF Delegates Writes to PM On the 6th Jan 2003, over 510 delegates from over 200 organisations from all over the world attending the Asia Social Forum being held at Hyderabad wrote to the Hon'ble Prime Minister requesting him to withdraw from the proposed Interlinking of Rivers Project and rather focus on more viable options of local water system. Signatories included Medha Patkar (NBA), Rajendra Singh (Rashtriya Jal Biradari), Bela Bhatia (Centre for the Study of Developing Societies), Dr. B.D.Sharma (Bharat Jana Andolan), Ashish Nandy (CSDS), Simantini Dhuru (Film maker), K.R.Datye (SOPPECOM), Smitu Kothari (Lokayan) Anastasia Laitila (Friends of Earth), Dr. Uma Shankari (Neeti Samakhya) Shripad Dharmadhikary (Manthan), Dr Letha (Chalakyud Puzha Samarakshana Samiti), SANDRP, etc. The Prime Minister's response is awaited.

NAPM opposes Riverlink proposals "The National Alliance of People's Movements will oppose the interlinking-rivers project, as we consider it as the stepping stone for the privatization of water. The project is destructive for the nation's economy and environment", said Medha Patkar in a press conference in Bhubaneswar during the 'Desh Bachao-Desh Banao' campaign. The campaign urged the central govt not to push the project. (NAPM PR 270203)

Decommissioning of Dambur Dam A hot election issue

AGARTALA, Feb 13, 2003 (Inter Press Service) Northeastern Tripura's only HEP, the Dambur Dam, has become a major election issue in this insurgency-affected, CPM ruled state. The state's leading tribal party, the Indigenous Nationalist Party of Tripura, has made the scrapping of the dam its main plank and is finding support from mainstream parties like Congress and the BJP, which rules India's central govt.

"Tripura has enough natural gas reserves which can be used to generate power," argues Jahar Saha, a senior Congress leader. "So if the dam goes and the entire tribal landless population, the main recruiting base for the insurgent groups, can be gainfully resettled, it will help bring down the ethnic unrest and pave the way for stable peace in the troubled state," he says.

Surrounded on three sides by Bangladesh, this state of 10,039 sq kms has a history of violent conflict between ethnic Bengali settlers and indigenous people. This has given rise to one of the many insurgencies in northeast. At present, three-quarters of the state's 3 M population are Bengali-speaking settlers whose families mostly arrived in the state after the partition of India in 1947.

In a recent statement, Indian minister for northeastern states Tapan Sikdar said: "If the Dambur dam is decommissioned, it will free up to 46.34 sq kms of prime agrarian zone that has been under water for 30 years now." "The entire tribal landless population of the state can be gainfully resettled there, if the dam is decommissioned," Sikdar told IPS.

A 30 m high gravity dam with 10 MW installed capacity was constructed across the river Gumti about 3.5 km upstream of Tirthamukh in a Tripura district. The dam submerged a valley area of 46.34 sq kms, which was one of the most fertile valley regions in an otherwise hilly state, where arable flatlands suitable for wet rice agriculture makes up a mere 28 % of its total land area.

Official records suggest 2 558 tribal families were ousted from the Gumti project area, but these were families who could produce land deeds and were officially owners of the land they possessed. By unofficial estimates, between 8,000 - 10,000 families or about 60,000 - 70,000 tribes people were displaced. In the tribal societies of the northeast, ownership of land is rarely personal and the system of recording land deeds against individual names is a recent phenomenon.

The outlawed National Liberation Front of Tripura and the All Tripura Tiger Force have periodically attacked Bengali settlers to evict them to restore the majority of the state's indigenous tribals, and say they want independence for tribal areas of the state, which exist in all of Tripura's four districts. Hundreds have died in the

rebel attacks since the tribal insurgency first surfaced in 1992. It is estimated that half of Tripura's 200 000 tribal community support the NLFT.

The ruling Communists, though not opposing the idea directly, appear to be lukewarm about it because they possibly fear the loss of votes among the Bengali fishing community thriving around Dambur. "It's a big project. We simply cannot scrap it in one day. We will have to set up a committee to look into it," Chief Minister Manik Sarkar said recently.

The state govt says that by investing \$12 M it has been able to restore the output to the dam's original installed capacity of 10 MW. Annual running cost of the project is \$600 000. Experts say that the Gumti HEP is producing less than 7 MW even in the peak season when the reservoir is full during monsoon, and the "power output from this project will progressively diminish".

With huge natural gas reserves now discovered in Tripura and major gas thermal power projects in the pipeline, it is a waste of funds to invest in the Gumti HEP, says Sikdar. "If the state can produce three times more power than it now uses, there is a strong case for decommissioning the dam that will free huge fertile tracts of land for resettlement of the landless tribal peasantry of the state," says the INPT leader.

"The fertility of this land is likely to increase after so many years under water. At least 30,000 tribal families, perhaps the whole of its landless population, can be gainfully resettled in this fertile tract. Tripura's food deficit can also be solved," says Tripura's leading economist, Malabika Dasgupta.

Steady encroachments on their land by Bengali settlers was further exacerbated by the submergence of a huge swath of arable lands owned by the tribals in the Raima valley as a result of the commissioning of the Dambur project in south Tripura on Gumti River.

This project not only disturbed the fragile ecology of the Raima valley in the south district of Tripura, but also left a permanent sense of loss in the tribal psyche. All tribal groups, including the Communist-backed Gana Mukti Parishad, fiercely protested the commissioning of the Dambur HEP in 1976.

But the Congress govt, determined to augment Tripura's deficit power supply, ended up increasing the catchment area and dispossessing thousands of tribals of their land.

"Most of those ousted by the Dambur failed to get any rehabilitation grant and were forced to settle in the hills around the project, returning to slash and burn agriculture called 'jhum'. The dam destroyed the once-surplus tribal peasant economy of the state," says INPT President Bijoy Kumar Hrangkhawl, a former insurgent.

Severe Indictment of Khuga Multipurpose Project

The Project

The project envisaged construction of an earthen dam 38 m high across river Khuga at Mata village of Churachandpur district in Manipur to store 90 MCM of water.

The project conceived during late '70s was approved by the Planning Commission in July 1980 at an estimated cost of Rs 150 M (irrigation component), followed by the state govt's administrative approval in Aug 1980. The cost went up to Rs 470 M (irrigation component) in Sept 1989 and further to Rs 1.53 B in 1997 (irrigation component: Rs 1.356 B, water supply Component: Rs 71.3 M; 1.5 MW component: Rs 62.4 M; 250 KW component: Rs 29.6 M). The land acquisition cost in this latest estimate was Rs 94 M.

The construction was started in 1984 with the objective of providing annual irrigation potential of 15000 Ha in two districts of Churachandpur and Bishnupur and 5 MGD drinking water supply to Churachandpur district. The irrigation component contemplated to enhance the agricultural productivity annually in the command area for a value of Rs 37.1 M. The hydro-power component added later in July 1983 and January 1993, aimed to generate 1.5 MW and 250 KW (at canal drop of right intake) of power at an estimated costs of Rs 12.3 M and Rs 16.4 M respectively.

Comptroller and Auditors General's report for Manipur (Civil) for the year ended on March 31, 2000 criticised the tardy construction resulting in heavy shortfalls against almost all items. It observed that despite the passage of 16 years, the project, which was initially scheduled for completion by 1987-'88, was still under construction mainly because of inadequate funding by the government, poor utilisation of allotted funds, poor planning and implementation.

By March 1999 a total expenditure of Rs 1.0766 B was incurred (irrigation: Rs 892.3 M, Water Supply: 61.5 M, Power: Rs 31.8 M). There was cost overrun of Rs 886.1 M occurred under irrigation component.

The water supply component could not be commissioned because of defects in the delivery pipelines. Even after improvements and rectification costing Rs 1.737 M, the system could not be made operational and the department abandoned the defective pipes after incurring an expenditure of Rs. 11.8 M. Pump house costing Rs 1.99 M and pumpsets valued at Rs 10.3 M were submerged (in Sept and Oct 1997 when water level rose upto 821.1 m when the pump house was located at 818 m) due to incorrect flood level for its construction. The vigilance enquiry in the quality of pipe work in May 1997 revealed that there were design defects in the pipeline.

Although, five years have elapsed after the sanction, construction works on the 250 KW could not start because of non-finalisation of works by the department and non-release of funds received from the Central govt in 1994 and 1996. Turbine and generators supplied at a cost of Rs 22.4 M were lying idle in godown for want of completion of civil works.

As per the original project report 1057.05 Ha of land were to be acquired for the project; however, the department had acquired only 691 Ha by March 1999. Of the balance, 58.73 Ha was forestland.

Since 1984 the department had carried out construction works of 25.37 km of canal over an area of 40.27 Ha of forestland in the Dampi Reserve Forest without obtaining the required approval. The Forest department objected to the construction and all works had to be halted.

Corruption

- The expenditure on the project had been inflated by fictitious booking to the extent of Rs 12.4 M.
- A sum of Rs 96.2 M was awaiting recovery from five contractors on six of the closed contracts as on March 1999.
- The department had allowed an undue benefit of Rs 0.99 M to the contractors by issuing departmental excavation machinery against prohibitory orders.
- Physical existence of at least 11 construction works carried out at a cost of Rs 0.738 M appears doubtful as no two or three structures can occupy the same location.

(All figures from CAG report.)

NHPC Indicted by CAG Report of 2002 Comptroller and Auditor General of India in its report 3 of 2002 (PSUs) has said that due to the failure of the NHPC management in keeping critical spares and equipment in working condition, one of the there 180 MW units Chamera I could not produce power even though enough water was available in the river and there was demand in the grid. This happened for 27 days in April-May 1996 and for 77 days in 1999 leading to loss of 61.81 MU of power generation. Thus, the company incurred a loss of revenue amounting to Rs 145.8 MU, besides loss of incentive amounting to Rs 247.7 M.

SAGARMATHA DECLARATION AND PROGRAMME OF ACTION

The following declaration and programme of action was adopted at a very well attended International Consultation on Water Resources Development in South Asia and the World Commission on Dams in Kathmandu (Nepal) on Dec. 8-10, 2002. The Consultation, inaugurated by the Nepal Minister for Water Resources Shri Dipal Gyawali and was addressed among others by Medha Patkar, former Commissioner of the WCD, Jeremy Bird, Coordinator of the Dams & Development Project of UNEP, which has taken the responsibility for following up on the WCD report and people from across Nepal and also from India, Pakistan and Sri Lanka besides those from non south Asia countries. We think this declaration is significant event in the South Asian water resources scene and do no better than reproduce it below.

We, the participants from the countries of South Asia, namely, Nepal, India, Pakistan, Bhutan and Sri Lanka have gathered with our allies and friends, in Kathmandu, Nepal to review the situation of water resource policies and projects relating to water and hydropower, assert our inalienable rights and to ensure people centered development, justice and peace among all communities and peoples in South Asia.

We proclaim the universal truth that Water is Life and for Life, which has been affirmed by many peoples, governments, organisations and networks in various forums.

We strongly assert that the absolute and sovereign rights of peoples and communities to their lands and natural resources, such as water, rivers, wetlands, coastal and marine resources, forest and minerals must be paramount in any debate, discussion and/or negotiations concerning water resources development policies, plans or projects.

Having reviewed and discussed the situation in the South Asian countries, we recognise that many of the existing development policies in the region are undemocratic, anti-people, anti-environment and anti-life, and favour elites and corporate interests, national to global, including the imposition of privatization, deregularisation, economic structural adjustment programmes and globalisation.

We express our deep concerns that the centralised and large river valley projects have resulted in serious conflicts between the peoples and the State, among peoples and between States.

We recognise that South Asia has the second largest number of existing and planned big dams, reservoirs and irrigation channels in the world, which have attained certain benefits whether up to the envisioned targeted levels or not; and that these have also brought untold misery to the people and extensive and irreversible environmental destruction beyond compensation.

We are also concerned that so-called development related planning and interventions, including in the water and hydropower sectors, in the entire extent of the Himalayan region are being conducted haphazardly without a clear and comprehensive regional policy that

encompasses the issues of peoples, human rights, ecology, sustainability, cross-border concerns that involve countries beyond the region, such as China.

We also recognise that the lands and other natural resources of indigenous and tribal peoples, dalits, ethnic and/or national minorities are being targeted and exploited as sources with highest potential for energy generation and water supply through policies and legislations depriving them of their life and livelihood.

We re-affirm the findings, conclusions and recommendations of the World Commission on Dams. We see this as a vindication of the impacts of destructive river valley projects and big dams, and the existence of viable options. We also affirm that the WCD report should be used as a framework for reviewing present water and hydropower policies and planning any future projects in the water and hydropower sector, and also addressing the outstanding social and environmental impacts of existing dams. The report also points out the large gap between realizable and realized benefits from existing infrastructure, which needs to be bridged.

We demand:

A legally enforceable right to information regarding planning, decision making, implementation, operation and decommissioning of all water and energy resource projects.

Clearly defined and legally binding norms of accountability about projection of costs, benefits and impacts of water and energy resource projects.

Capacity building of governments, institutions, Environment Impact Assessment (EIA) agencies and peoples, to take up credible EIAs.

That EIAs should be:

- a) independent, accountable, participatory and incorporating indigenous and local knowledge; and
- b) a legally binding tool in decision making

Local

Recognition and respect of the inalienable and non-negotiable rights of peoples and communities to their land, forest and water resources;

Creation of effective institutional frameworks to ensure meaningful people's participation in planning, execution and monitoring of projects;

National

Moratoria on the construction of large dams till the reparation to the affected populations and problem resolution is achieved in case of the existing dams;

Participatory and credible review of on-going projects to find sustainable and least cost options.

Comprehensive, participatory and credible post-facto evaluation of all existing large dams be mandated periodically and results there from inform future decisions.

Governments;

1. To come forward and involve the people in a democratic, transparent, accountable debate and discussion in planning and decision making of water and hydropower policies, plans and projects;
2. To protect the water resources from privatization, corporatisation and commercialisation for profit; but rather to promote community control;
3. To adopt the decision making framework proposed by the WCD for an approach to development based on the respect for rights, valuing equity and sustainability;
4. To take the path of de-centralised water management & energy planning with maximum use of renewable energy sources to meet the energy needs of peoples and communities equitably;
5. Undertake economic, social, cultural and health impact assessments in addition to EIA of dams and related projects;
6. Undertake country level review of performance of large dams on the lines of the work of the WCD.

Regional/International

Keep water and water services out of the WTO and all other trade negotiations and agreements;

Support or initiate appropriate ways to make water and water services available for all;

All regional and international financial institutions, "donors", investors and corporate bodies to adopt policies, guidelines, programmes and projects consistent with the framework proposed by the WCD;

Regional and international treaties, agreements and other constructive arrangements regarding water resources and supply to be concluded according to existing standards and the WCD framework;

Cooperate and build solidarity with international organisations and NGOs/CSOs in facilitating capacity building, conflict resolution and education;

Full participation and involvement of people of the concerned countries in general, and affected people in particular in any regional or international treaty regarding water resources;

A comprehensive regional Himalayan policy to inform all development related project planning and implementation in the region.

We are collectively determined to take up the following Programme of Action:

- Experience-sharing in decentralized and democratic approaches to water and energy resource development and management in the region;
- Exchange programmes for activists and the affected people for better learning, understanding and cooperation on water, dams and energy issues;
- Initiate inclusive dialogues to resolve on-going dam controversies and promote an open process and framework for future decision-making;
- Undertake impact assessment studies of the past and present controversial projects by applying the WCD criteria and guidelines and suggest alternatives for reforms or de-commissioning of dams if it is beneficial;
- Conduct joint pro-active research to assist informed debate, better decision-making and in launching sustained campaigns for people centered development;
- Organise training and workshops for the implementation of WCD Report and its recommendations as well as for understanding various national, regional and international policy guidelines and standards;
- In view of the numerous instances of adverse trans-boundary impacts of water resource projects in South Asia in general, and along the Indo-Nepal border in particular, document the problems and disseminate the same as a first step towards resolution of the problems.
- Correct the erroneous impression created by many in authority and the media that Nepal is controlling and releasing flood waters to cause floods in India.
- Use as effectively as possible the existing available domestic and international remedies for the protection of the rights and interests of victims;
- Adopt all possible measures towards conflict resolutions on water-related issues from local to national and bi-lateral to multilateral levels; and
- Establish a South Asia network and resource centre on water and energy.

Deteriorating Indus Delta

Zubeida Birwani, Shirkat Gah & Naeem Iqbal, SUNGI Development Foundation

Indus Delta- the region where the sweet water of Indus used to meet with the seawater has been richest in the natural resources of fishing and agriculture in the past. Built up by the discharge of large quantity of silt washed down by the Indus, the ecosystem has been rich in nutrients that provide a nursery and an early feeding ground for many varieties of shrimp and fish.

The River The Indus which flows for about 2 880 kms within Pakistan territory could be considered as the backbone of the country or so to say the economic lifeline of Pakistan. Arising at 5 100 m elevation in the southwest Tibet, crossing from the east to west over to Ladakh in India, it enters Pakistan at Bagh-i-Darband in northwestern Baltistan. 40% of its watershed lies outside of Pakistan.

Indus Delta The Indus delta originally occupied an area of 600 000 Ha consisting of creek, mudflats and forests. In all, there are 17 major creeks making up the 200 kms mouth of the original Delta with the sea. In fact, there are innumerable creeks of Indus in the deltaic region, Manora being the extreme right in the west and Seer creek, the extreme left in the east. Due to the reduced water-flow below Kotri, only Hajamaro and Kharak creeks now receive water from the Indus Delta and there is only one main outlet to the sea that is the Khobar creek. The active Delta is now only 10% of its original area. The creeks of India (Kori creek etc) also share the same ecosystem. The debate on trans-boundary co-operation between Pakistan and India pertaining to the coastal ecosystem management therefore has a great relevance.

The climate of Indus Delta is arid sub-tropical with an average rainfall about 2200 mm, relative humidity of 76%, a mean annual temperature of 29 C and a mean surface water temperature of 21.8 C. Strong monsoon winds blow from the south west during the summer and from the north east during the winter. During the summer, seawater inundates both the active and inactive parts of the delta leaving behind evaporated salt deposits.

Mangroves The Mangroves forest in the Indus Delta is spread over some 280 000 Ha and was once the sixth largest forest of its kind in the world. It provides fuel to approximately 120 000 people, forage to 16 000 camels and other products to 28 570 households. The forest owes its sustenance to nutrient-loaded silt in the estuaries. Mangroves also act as shield against active tidal erosion in the area. They support thousands of botanical, aquatic and wildlife species and provide nursery for most of the 44 commercial fish and shrimps species sustaining their life in the deltaic area. All these

benefits are dependent on the survival of the forest, which in turn needs freshwater flow in the estuaries.

The Pallo (*Clupea llisha*) fish sustaining the livelihood of the fisher folk of the Indus has become extinct, the major crop of red rice in the Indus delta has become the chapter of the past while the production of fish at the Sindh coast has declined by more than 70 %.

The Mangroves in the Indus Delta are predominately *Avicennia marina*. Four out of the original eight recorded species remain as such although *Rhizophora mucronata* has been reintroduced. There has been a significant reduction in mangroves cover (from around 263 000 Ha in 1978 to around 158 500 Ha in 1990) and the distribution of mangroves is patchy, with smaller areas of mangroves around the active delta and more substantial areas in the abandoned delta to the north and the south.

According to the satellite observation made in 1998, the mangrove cover has been reduced to only 160 000 Ha, of which only 50 000 Ha are healthy, whereas another 50 000 Ha of plantation are in the process of dying.

Water Statistics Prior to 1830 AD, the flow of water in the tail end of Indus was recorded as 150 MAF. Such a quantum of water is unprecedented today in whole of the Indus River system. It is around 110 MAF in totality at present. Later on, with construction of the barrages, the water flow in Indus started subsiding by and by leaving less than 10 MAF flowing to the sea as six barrages besides a mega project of Tarbela dam were built on Indus and Mangla Dam on its tributary Jhelum.

The most significant feature about the Indus River is the great variation in its flow levels with peak annual floodwater in summer due to melting of Himalayan snows and glaciers, coupled with the annual monsoon rains, followed by great shrinkage in water flow during the almost rainless winter months. The monsoon which reaches Pakistan is relatively weak and of short duration falling largely in July and August.

And it has become the bone of contention between Sindh and Punjab during current inter-provincial water crisis. So during present water shortage of acute nature being experienced by the Indus River and the consequent endeavours of both the Punjab and Sindh to get as much irrigation supplies as possible for their agriculture or so to say the prosperity for their landlord class of people, the tail end of Indus has completely dried up. With complete stoppage of the fresh sweet water of river to the sea, the ocean has started hitting back. The oceanic encroachment on the Sindh Coast has initiated the process of desertification in the fertile Indus valley destroying the human habitat as well as the flora and fauna of the Indus delta.

Prior to the 1830 AD, the Indus used to fetch 400 MCM of silt in the deltaic region thereby enhancing its territory by 8 000 Ha per annum. The official figure of water flow downstream Kotri barrage in the year 2000 was 0.725 MAF as against of 10 MAF envisaged in the 1991 water accord while as per expert opinion of the IUCN at least 27 MAF of water has to be released to the sea for preservation of the ecology of the tail end of Indus river.

Ecosystem & Wildlife Mangroves ecosystem are considered to be important for many of the commercially caught species along the Pakistan coast. The total fish production of the Sindh coast is estimated to be about 0.35 MT. Within the creeks of Indus Delta, the main catches are the small pelagics, (*Sardinella* spp, anchovies, thryssas and other clupeids). In 1988 the landings from the creeks was estimated to be about 96,410 T, but many other species rely upon the creeks as nursery grounds.

The Indus Delta is also an important destination for migratory birds, including waterfowl and shorebirds, pelicans and flamingos.

Threat to Indus Delta Our commercial pursuits have destroyed the very ecology of river Indus. This has resulted in an environment disaster in the Indus delta where human habitat is being destroyed. The populace is migrating and the very survival of the legendary river Indus is at stake.

Pollution Pollution is a major threat in the Karachi area, affecting mangroves in particular and the sea life in general. Very large volumes of the untreated domestic sewage and industrial effluents flow through nullahs and rivers into the sea. Of the nearly 300 MGD of freshwater consumed by Karachi, more than 70 % of domestic sewage and industrial effluents are dumped untreated into the sea. In addition, much of the solid waste of Karachi ends up in the same nullahs and rivers, which carry sewage into the sea, because of municipal failure both in collection and disposal of solid waste. The port activities at Karachi and nearby Bin Qasim further pollute the sea.

The effects of pollution extend from degradation of breeding areas to poisoned stocks of adult fish. At the extreme, natural habitats can be virtually destroyed as in the surroundings of Baba and Bhit islands. In other ways, too, fisher folk have to bear the burden of pollution – as when they have to venture further offshore to harvest fish driven away by polluted waters.

Dredging is an annual feature in both Karachi and Bin Qasim ports. The resulting turbidity devastates marine life at both dredging and dumping sites. Since dumping is in the open sea, strong wave action necessitates additional subsequent dredging operations.

Oil refineries and terminals are another source of pollution. The recent oil spills by KESC and PSO at Port Qasim have destroyed thousands of hectares of young mangroves planted by Shirkat Gah, IUCN and the Govt.

Recommendations.

- ❑ Water requirement of Indus Delta should be scientifically established and ensured on equal priority with agriculture.
- ❑ The conservation of coastal ecology should be based on base line study of coastal area.
- ❑ Rehabilitation of the fisher folk of the Indus Delta
- ❑ Replanting and rehabilitation of mangrove forest
- ❑ Mangroves of Indus delta should be declared as Ecological Sensitive Protected Zone.
- ❑ A monitory framework and institutional set up be created for mangrove forest.
- ❑ The coastal population of Indus Delta should be considered as the real affectees of all the previously completed irrigation projects including the dams and reservoirs. Special programs should be launched for the economic rehabilitation of the coastal population providing them with compensation for their economic losses along with ensuring an alternative livelihood to them.
- ❑ The federal as well as provincial government should stop draining out agricultural, industrial as well as urban effluents in the Indus Delta.
- ❑ No further cuts in the Indus water flow through mega project especially the big dams and canal systems be allowed.

CRBIP (Pakistan) Affected People complaint to ADB Inspection Panel

The Chashma Right Bank Irrigation Project have had a dreadful impact upon of communities and people in and around the project area. Lives and livelihoods have been damaged and threatened because of project failures in resettlement, compensation, and access to information and consultation. Claims of citizens acknowledged by national law have also been suppressed or ignored. Full information to project affectees and announcement of awards prior to land acquisition are legally binding under the Land Acquisition Act, 1894. These were largely ignored and violated in the implementation process. Similarly, legal and historical rights of local communities to floodwater are also adversely affected by this project. These were formally negotiated between local communities and the British Indian govt at the start of 20th century. These water rights remain part of national laws and protected through land settlements done in the project area. The Bank Inspection Committee is yet to take a final decision on this, but the ADB is already facing scathing criticism on the violation in the CRBIP. (Sungi Development Foundation, Pakistan)

Drought, State and civil society in the Deccan

Tasnim and Vikas (tasneem@sancharnet.in)

Going by meteorological definitions, it is only after an interval of fifteen years that in 2002, India faces a drought. Those figures, with the greatest possible simplification -as is, and perhaps can only be, the nature of bureaucratic understanding- say little. Drought (akal as it is called in many parts, kal being death itself) is a reality that afflicts some part or the other of the countryside -and some part of the populace in almost the whole of the countryside- every year. A homogenizing (or monolithic) stock taking, be it in terms of spatial units or in terms of society as such -or what is only a euphemism, "people"- can be deleterious.

During the last few years since 1999, a period of relatively low rainfall is widely known to have aggravated the misery of the grossly exploited rural working class, the so-called 'poor'. It has also helped highlight the dangers of over-exploitation of ground water and the limits of Major & Medium irrigation projects. The erosion of the legitimacy of these has only been as much as there has been an increase in legitimacy of minor surface irrigation projects. This phenomenon has spanned over a decade, and has concretized in the last 6-7 years. The historical foundations of the logic of minor irrigation has not just been an ally but is the very ground beneath the feet of this discourse. The dismal performance of the M&M projects only help strengthen its case. Two aspects of this development deserve focus.

Firstly, as is to be expected, the state while it has found it hard to turn a deaf year to this discourse has been none too eager to relinquish its big pets -M&M irrigation projects. In Andhra Pradesh, for instance, minor irrigation's allocation from state resources has historically been round about 'ten percent'. A flash of the continuity in proportions is to be found in the Rs 12.99 B World Bank supported irrigation component of the economic restructuring project ostensibly for rehabilitation of "major, medium and minor" irrigation projects. The latter's share is Rs 1.36 B -a nostalgic ten percent. In fact, of more than Rs 30 B that the AP govt has borrowed from international donors for water resources projects, less than Rs 2 B is meant for minor irrigation projects. The belief of the state's shift away from "the big" has therefore no more real content than a chimera. As unreal however is the mythical economic case for M&M irrigation projects- efficiency, economy of scale etc. To take the case of Andhra Pradesh itself, by the end of the eighth plan, while nine times more money had been spent on M&M irrigation schemes; the area covered by these schemes was only 2.5 times that irrigated by tanks. There could not be a greater case for shift of attention towards tanks, options held in much

disdain -as the distribution of money, in its characteristic fashion, clearly reflects.

This shifts our attention to the second aspect, towards what has been the most engrossing preoccupations of the civil society in the last one decade: to advocate alternative water harvesting systems or what is taken by many for only a synonym, "traditional water harvesting systems". The 'traditional' is rubricated. The nostalgia, apparent. While its case for tanks and other smaller systems is economically and environmentally sound, its dismissal of modernity not only betrays an attempt to cover a problematic past, but the extent to which it does not take the 'real' into stock. Minor irrigation systems deserve much more than that.

That having been said, in the last decade or so, the civil society has established for itself, a presence perhaps unprecedented in the Indian context. The discourse on water is an area in which its frenetic presence can be particularly felt. The extent to which principles like the recognition of ground water as a public resource independent of land ownership (though only in words), equitable distribution of water from public resources on per capita basis as also community management of public water resources (again largely in words) have come to occupy spaces in mainstream discourses are not just glistening examples of civil society's success but are also indicators of its political potential. It has engendered changes in state's formal policies, legislations and even manifestoes and common minimum programmes of political parties -new state water policies, acts on participatory irrigation management etc.

Nowhere however is the civil society's imprint to be found more resolutely than in integrated and participatory watershed development. The state's support to the participatory watershed model is akin to an organic development from experiments like in Ralegaon Sidhi, Adgaon, tribal areas of Panchmahals, Mittermari and Jhabua.

But it is in watershed also that the state posed the civil society, its greatest challenge. An example is the Rayalseema Watershed Development Programme, where in the mid 90s, some donors got together to fund watershed development. A year later, the state too started on the same road and with the huge resources that it invested into watershed development in the following years, the former was left with little bargaining power for "advocacy". Watershed development, as is clearly evident in the myriad fly-by-night NGOs -or the mega politically connected contractor NGOs- that it has given birth to, indeed has been co-opted into the state's habitual big games. While this may be a single case, such contest of legitimacy not only determines the very essence of the civil society-state relationship but is also matter of what constitutes civil society's opportunity.

With the state following civil society initiatives, close on its heels and with the quantitative advantage that it has by its very nature, it is important that the latter counterbalance it through equally weighty qualitative differences i.e., become increasingly more radical. This is not just the progressive path that the civil society should take but is the need of its very existence -at least of an honorable existence. Needless to reiterate that this is also the only possible path towards effecting any real change -including, for drought mitigation. The following broad outline of the possible initiatives in the regions of Vidarbha, Marathwada, Telengana and Rayalseema are based on the above premises.

Vidarbha and Marathwada are well recognised as backward regions in Maharashtra. And in this backwardness, history is not a mean factor. Marathwada continues to bear the marks of the Nizam's exploitative rule -oppressive land relations and a development vacuum. A rather inhospitable nature in the forms of hard rocky terrain and low rainfall has been further encumbering. Evidently, the most open contest in this region has been the struggle of the landless/small peasantry in general and the dalits in particular to wriggle out of the oppressive production and social relations. While the state's earlier land reforms package served little purpose, local actors are in no delusion of the future possibility of state-mediated land reforms or the potential of even any such possible reforms. Instead, a bypass (or compromise) has been attempted -encroachment of common lands that have hitherto served as open access resources to the livestock of the haves. With capital investment, most of these uncultivated lands can be turned productive -an opportunity which watershed development, if implemented conscientiously, provides.

On this aspect, Marathwada bears similarity with the Rayalseema region of Andhra Pradesh, an area with similar natural conditions. The Deccan Development Society calls them Dalit watersheds -development of lands belonging to the dalits and the rest of the small and marginal peasantry. The Young India project's federated agricultural labour unions have not only been instrumental in struggles for common land and the implementation of land reform legislations but have also been actively involved in struggles for hike in agricultural labour wages. Many of its partner organisations have used watershed development projects effectively to enhance the productivity of these lands. Tank rehabilitation and innovative ways of ensuring equitable water distribution are other activities that Rayalseema NGOs have been involved in. A cross fertilisation of ideas between the two regions can only add to the fecundity of civil society initiatives.

It is but in parts of Vidarbha and Telengana regions that a glorious tank tradition has left its most significant traces. For instance, in a parched Vidarbha where the average irrigation rate is 12 %, the district of Bhandara

with an irrigation rate of 54 % is virtually an oasis. Tanks make the difference. It needs no more reiteration that the tank systems need all support that the civil society can muster. This is however where there are lessons to be learnt from experiences in western Maharashtra like the pani panchayat model, the Shetmajoor Kashtakari Shetakari Sanghatana and the Ralegaon Sidhi model. As in these cases, the institutions need to be characterised by radical thought and implemented elements that act conjunctively to reinforce a progressive movement. The distribution of water, a resource hitherto either considered common or altogether excluded from arbitrations in the public sphere -such exclusion of the resource having by default served the land owners- provides a golden opportunity for interventions towards equitable resource distribution in the agricultural sector. Considering that water reservoirs are constructed from state investment, there is obviously no reason why their output should not be equitably distributed on per capita or such basis. Arrangement, like the ones that have been in force, act to subsidise the rich - in fact, in proportion to their richness, as water share is made proportional to the land holdings. However, it would be credulous to believe that the state, for all its recent "participation" rhetoric would take it in its spirit.

The AP Farmers Management of Irrigation Act of 1997 purported to be for eliciting "people's participation" in the management of irrigation is a brazen example of the hegemony of landholders over a common resource impounded at public cost. Tenants while allowed are - for want of written proof- in effect, excluded. Washer people, fishing people and a multitude of other users of water are denied any voting rights. The quota of water is of course, in proportion of the land holdings. Similarly, in Maharashtra, while the state government's draft water policy has some positive dements, harsh reality is reflected in the Adarsh Gram Rojgar Yojana -A scheme modelled on Ralegaon Sidhi and declared with much fanfare as a 'radical scheme', which would be 'kept' free of petty politicking. Within a few years, not only did the scheme assume the same beaten track but was also dried off funds, such that the patron, Anna Hazare could only lament, "the scheme has lost its soul". The state's persistent and unscrupulous pursuance of the dominant ideology is also evident in its position on the subject of tribal rights to land and forests, which counts tribal interests as essentially uncouth, exploitative and violative of property rights- as witnessed in eastern Vidarbha.

It is important that the civil society counters the state's pursuance of such retrogressive ideological ends and fiercely criticises developments that harm mass interests. Creating spaces for critical dialogues would be part of such a task.

(From a summary of the report on Drought in Maharashtra and AP, written by the authors for Oxfam)

Development, as if democracy is real

Is there any Democracy in Water Sector? Development and Management of water resources so far has had little to do with democracy. Except in the broad sense that it is supposed to be happening in democratic political set up that we are supposed to have. But then as we all know, the current form of representative democracy have miserably failed to reflect aspirations, needs or wishes of the people.

One can show much evidence to substantiate this contention.

- There is no participation of people in planning, decision-making, implementation or operation of water resources development or management projects.
- Even after the most adverse experience from large dam projects over the years, govts and businesses continue to push large dam projects.
- People (whether affected, benefited or others) have no say in what projects to take up, when to take up, how to take up and who will share the costs and benefits.
- No Just R&R even today. There is not one success story of just R&R even after building some 4000 dams in India and over 45 000 across the world.
- There is not even an attempt to achieve equitable distribution of benefits. Not even an attempt to assure that minimum water needs of the people (drinking water needs, needs for protective irrigation for all farmers) are actually satisfied before luxurious demands of rich or the unjustified demands of industries. In fact there are more drought prone areas in India today than they were say 50 years ago, more annual flood damages, more dry and polluted rivers, more no source villages. Nor is there regional equity in water resources development.
- Even as India's godowns are overflowing with 60 MT of foodgrains, people still die of starvation. There is greater subsidy for every kg of foodgrains exported than those given under PDS or food for work.
- Even as large parts of India face water scarcity and drought, farmers are impoverished as they do not have protective irrigation to save their crops, the country's sugar stocks are all time high, exports are all time high, with the help of huge subsidies and sugar production is expanding at never before rates.
- Even as India's installed power capacity has gone up 210 times up in last fifty years, over 60% of rural households do not have access to electricity for one single bulb. 50% of all power supplied is not paid for, mostly by the rich.
- No Right to Information. The Freedom of Information Act recently passed by the Indian Parliament is largely untested. But we cannot underestimate the manipulation capabilities of the system. What has happened to the mandatory norms of Public Hearing and Environment Impact Assessment of the Large Dams is a case in point.

The Bad News

- Big Dams; Big Hydro Still Ruling the policies and programmes.
- River Linking Plans: one of the most mindless schemes, will take up practically all the water sector resources if allowed to go ahead. No village, no town of this country needs inter basin transfers to satisfy either drinking water needs and most do not it even for protective irrigation.
- Privatisation, Corporatisation, Globalisation: This is all going to further take away the livelihood dependent resources, away from the state and into the private hands.
- Lack of Transparency, Accountability or Participation

- Crumbling of what-has-been-so-far-claimed to be the pillars of Democracy: The Parliament, the Executive, the Judiciary, and the Media, credible opposition that would reflect real needs of people.
- The increasing influence of business (local and global) in governance.
- WTO and global capital dictating the decisions in favour of global capital.
- The World Bank: Increasing emphasis on Big Dams and privatisation, as reflected, e.g. in WRSS.
- The ADB: Increasing emphasis on privatisation of water and power sectors.
- India's National Water Policy 2002: More Dams, More Mega Projects like the Inter Basin Transfer, License to Privatisation.

The Good News

- Power Privatisation has failed. Enron, Maheshwar: Realisation that it is not the generation, but distribution, transmission, accountability, regulation that are problematic.
- Water Privatisation is failing: Manila (Philippines), others.
- Big Dams are Bad: Increasing Evidence, including WCD.
- Pak Mun. Decommissioning beginning in Japan. Demand for decommissioning from India: Kerala, Dumbur Dam in Tripura, Loktak Project in Manipur.
- Small is Big and Possible: Examples are increasing.
- The globalisation of the movement for justice and equity. The Dam affected people of Philippines suing the Japanese Govt and agencies. The Norwegian agencies booked for corruption in Ugandan Dam. The US and European companies being booked for corruption in Lesotho Dam.
- Democratisation of Development is possible: The WCD Decision Making Framework.
- The undying spirit of the people. E.g. the people of the Narmada Valley. There shall be a fight and make no mistake, there shall be light. Sardar Sarovar Dam construction is going on haltingly, at best. Maheshwar: No work. Koel Karo: No work. Arun III scrapped.
- One big source of hope should be the report of the WCD. It became possible only because of the struggle of the people against large dams.

The WCD Salient Points:

- People's voice gets a place in global commission.
- First ever independent assessment of development effectiveness of dams.
- It vindicates the criticism against large dams.
- The report is based on values of equity, efficiency, participatory decision-making, sustainability & accountability.
- It leads to a new framework of decision-making:
 - Needs assessment
 - Prioritisation of needs
 - Options assessment and selection of options, all in an open, transparent way.
 - Norms of participation and accountability from planning, decision making, implementation, and operation.
 - Clearly defined norms for public acceptance, compliance, ascertaining the least cost options, minimum social and environmental costs.
 - Free, Prior and Informed consent of the adivasis and ethnic minorities mandated.
 - Addressing the outstanding social and environmental costs and benefit potential of existing projects.

(Points for the Presentation made at HBF organised session at ASF in January 2003)

WATER POLICY

MP water policy without public debate The Madhya Pradesh govt has formulated water policy although it has not put it before the people the way it should have been done. The govt had released the policy on internet and most of the people have no idea about the policy. The policy says that a lot of subsidy is being given to water cess supplied for irrigation. There should be considerable increase in the water cess but the interest of the small farmers should be taken care of while doing so. The main provisions of the policy include maximum utilisation of water resource by the people of the state, conservation of water should be carried out in such a way that it is effective, making the water resource development projects multipurpose. The priorities in the water policy are drinking water, water supply, and production of hydel power and industrial use. (CENTRAL CHRONICLE 120902)

NE Workshop Emphasises Rain Water Harvesting The participants of two-day workshop on Water Policy held by the Brahmaputra Board laid much stress on rainwater harvesting and capacity building of water related organisations. On the issue of Fluoride contamination of groundwater, the participants suggested rainwater harvesting in those areas and demanded that authorities shall ensure the access to safe drinking water in those areas. The participants also observed that the NE states do not have their water resources department to effectively deal with all water related issues. Participants raised the issue of non-availability of drinking water during the dry season and clean drinking water in the plains in the flood season. This in a so-called water surplus basin! (ASSAM TRIBUNE 040902)

DAMS

Opposition to Bhavani Diversion Project The people of Attappady Valley (Kerala) including tribals, women, children and local people are in a critical situation with the govt of Kerala continuing with the construction of the Bhavani Diversion Project inspite of the MoEF's direction since 290103 to keep the construction of canal through the forest land for the Bhavani River weir at Mukkali 'in abeyance' by describing that it is an example of misuse of Forest Conservation Act 1980. The people are in agitation since the last one month against the Bhavani Diversion Project, which will cut off their only source of perennial water once the river is diverted to Bharatha Puzha basin. The govt continued with the construction after arresting the protesting people. Even though the MoEF has kept the project in abeyance and the Cauvery River Authority has asked the govt of Kerala to stop the work upto the next meeting (6 March, 2003), the govt is going ahead with the canal construction in private land. All the persons who were leading the struggle have been charged on false grounds by the police and they have been forced to go in hiding. Chalakudy Puzha Samarakshan Samity

has demanded the dismissal of the project for protecting the right to water, the right to livelihood and right to resources of the tribals and the local population in the Attappady valley. (CPSS 250203)

Pong dam oustees yet to get land The process of rehabilitation of over 16 000 families displaced due to the Pong dam in the Kangra district four decades ago, is yet far from complete and has now been accelerated by the HP govt, claimed the state Revenue Minister. 1212 families had been allotted land in the Rajasthan canal project areas of Sriganganagar, Bikaner and Jaisalmer during the past two years. 150 more families are yet to get land. (THE TRIBUNE 240902)

Rajasthan to construct dam for blocked rivers' water Rajasthan govt has blocked the water of some rivers, which are flowing towards neighbouring states. Especially the hilly rivers of the southern areas in the state are being blocked by the state. The state irrigation minister has inaugurated Sabarmati and Jogiwad irrigation projects in Udaipur district. The works on various projects for blocking the rivers are going on. The local tribals are raising concern about compensation for their lands, which are going to submerge. The govt has divided the whole Chambal project in two divisions. The minister said that the state govt has identified 171 projects, of which 90 are going to be completed. Apart from them 10 medium, 10 lift irrigation and 246 small irrigation projects would be implemented. The minister said that water would be blocked after construction of Sabarmati dam at the joint of Mansi and Vacal rivers and another dam on Pamri river. (DAINIK BHASKAR 220902)

Ranjit Sagar dam capacity untapped The completion of the Sahpur Kandi dam project, which is essential for the operation of Ranjit Sagar Dam to full capacity, continues to be uncertain. Rs 900 M has been spent on the project till now and property worth more than Rs 2 B in terms of machinery and housing and official accommodation rendered idle after the completion of the dam has been transferred to the Sahpur Kandi dam project. The Punjab govt even now is looking for an option of handing over the project to a private construction company. A joint action committee of the 21 employee unions of Ranjit Sagar Dam has threatened stir in case the project was handed over to a private company. The dam authorities have transferred staff of 1000 to the Sahpur Kandi project. They are without work and a charge on the project to the extent of Rs 120 M a year. The project authorities have sought over Rs 1 B for the current year to start work on the project and are hoping to complete it in four years. The govt has sanctioned Rs 600 M. The central govt so far has released Rs 75 M but the Punjab govt has failed to contribute its matching share.

➤ The workers' unions and the Ranjit Sagar Dam authorities are at loggerheads on account of the handing over of the construction of the Shahpurkandi extension project to a private company. The project site is 11 km downstream from the RSD and 8 km upstream of the Madhopur headworks.

➤ It is estimated that if the RSD were to operate at full capacity to generate 600 MW, that would mean release of 24000 cusecs of water. However, since the water channels required to carry water from downstream of the RSD are inadequate, some of this water would have to be released into Ravi river, going to Pakistan. If the Shahpur Kandi dam is completed water channels in Punjab will need to be restructured to accommodate extra water. Moreover a water channel from Ravi to Jammu Tawi carrying 10000 cusecs to irrigate lands in J&K is part of the project. (THE TRIBUNE 180902, 081002)

Kol dam oustees warn govt The Kol Dam joint "Ousteas Welfare Federation" has warned both Himachal Pradesh and Kol Dam Management of the NTPC to desist from taking possession of their land and houses and from demolishing them before first rehabilitating them. Acquisition officer had issued them notices to vacate their houses or these would be demolished though they had not yet been allotted any alternative plots. (THE TRIBUNE 021002, 051002)

Rehabilitation of Bagalkot The Karnataka govt has decided on a Rs 6.38 B special package for the rehabilitation of the people displaced from the district headquarters of Bagalkot and nearby villages due to the Upper Krishna Project. The govt will spend Rs 4 B on acquisition of property in the town. Besides committing itself to acquiring all structures up to 525 m the Govt will move to acquire all structures up to 523 m of elevation and ensure that the actual backwater line is at least 100 m away from the nearest building. Bagalkot got partially submerged this year after surplus water was released from the Almatti reservoir, when its storage level reached its maximum height of 519.60 m. Thousands of people had to be evacuated due to the inundation. This package is based on the comprehensive report submitted by a 7-member ministerial team that visited Bagalkot in Oct and sought the views of elected representatives and various organisations. Another Rs 1 B will be spent on improving the basic infrastructure of the town, including civic amenities that were battered by the flooding waters. (THE HINDU, THE TIMES OF INDIA & Rediff News 221002)

NEWS FROM THE NARMADA VALLEY

Filmmaker Mansoor takes up Narmada cause

The noted filmmaker of Bollywood Mansoor Khan expressed his anguish for villagers whose houses have been submerged in the Narmada Valley. After visiting the Narmada Valley, he said that he "principally disagreed with the notion of

development" as symbolised by the construction of large dams. He said that the large dams were not the solution to the water crisis in the country. "India is the largest builder of big dams, after the US and China. But we are not the third richest country in the world." If dams were so effective, India would not have any water shortage. (THE TIMES OF INDIA 070902)

Gujarat may have to pay Rs 600 M The funds-starved Gujarat state exchequer may have to fork out an extra Rs 600 M for Maharashtra as the cost of taking the Narmada dam from 95 m to 100 m. A final figure of the amount that Gujarat may have to pay is yet to be arrived at. But state officials say Maharashtra is seeking Rs 250 M as "immediate assistance" from Gujarat as the cost of rehabilitating 1,000 project-affected families of Maharashtra. During official-level talks, Maharashtra officials said that the amount would be required urgently to buy 1 600 to 2 000 Ha of land needed to resettle the PAFs whose land has either gone into submergence or will be submerged once the dam height reaches 100 m and beyond. (THE TIMES OF INDIA 040902)

Preliminary Estimate of the submergence by the SSP in Sept 2002

Village	Families Affected	Submerging				
		Land (Ha)			Houses	Trees
		Total	Titled	W/o Title		
Domkhedi	55	131.20	60.20	71	14	378
Surung	15	58.20	54.20	4	--	60
Sikka	71	144	82.20	61.20	12	177
Bharad	59	202	69	133	4	475
Thuvani	8	18	7.20	10.20	1	20
Keli	7	16.20	8	8.20	8	3
Atthi	14	41	28	12.20	--	4
Danel	8	23.20	5	18.20	8	25
Paula	8	32.20	25	7.20	1	7
Pipalchop	35	121.20	76.20	45	11	61
Mukhadi	9	23.20	22	1.20	--	35

(Based on surveys conducted by NBA. Many more villages are not included. 100902)

Satyagrahis in neck deep Narmada waters The waters have risen to an all time high of 107 m at the SSP dam site and have entered several tribal fields and homes in Maharashtra and MP. Dadla Karbari, Khatri Kaki, Kamla Yadav, Juggi, Hulya Patil, Dedlibai, Medha Patkar, Sitaram Kaka, Khiyali are among a hundred others now standing in tribal houses in Domkhedi, Mah. with the invading waters upto their neck. Kailash, Luharia, Bawa, Pervi, Janki, and others at Jalsindhi, in M.P. are also facing the waters. The water level at dam site on 3rd September was 103.436 m. Hundreds of farms and over 50 houses have been washed out in the swirling Narmada waters, in the Akkalkua and Akrani tehsils (Dist. Nandurbar), in Maharashtra. Almost all the houses in Domkhedi (including the centers of Satyagraha and NBA office) have been submerged.

Moreover there were large-scale destruction in Sikka, Bharad, Pipalchop, Pavla, Mukhdi, Sindhuri, Dhankhedi and Chimalkhedi villages. In one Chimalkhedi village 10 houses, a hundred goats and equal number of bullocks and cows were washed away. In Jalsindhi, Luhariyabhai's house went under water, together with the Satyagraha house. However, the people faced the submergence waters with fortitude and resolve. Medha Patkar and Kamla Yadav have been in the neck-deep submergence water for hours. (NBA PR 030902 & 050902)

Debate on SSP Height "After 110 m, the main need of the dam would be power," said a senior bureaucrat explaining why Gujarat was readily agreeing to pay up huge sums of money to the two other states for rehabilitation. It is estimated that Gujarat could end up paying around Rs 5 B for rehabilitation of oustees in the other two states when the dam height reaches 110 m. Up to 1 450 MW of hydel power can be available only when water falls from the full dam height of 138 m. The Narmada Tribunal award gives 57 % of power to MP, 27 % to Maharashtra and 16 % to Gujarat. "After that there will be no reason for Gujarat to be so pro-active," the official said. But technical experts involved in dam construction strongly contest this thinking. "It is wrong to say that there would be enough water once the dam height reaches 110 m. It is not just flawed thinking but dangerous too," said a senior dam engineer of SSP. "At the current dam height of 95 m, the 1.781 MAF storage is available, barely sufficient to last a few days in case we operate both the IBPTs at full capacity." At 110 m dam height, the storage would be 2.898 MAF. "The post-monsoon inflow of 30 000 cusecs into the reservoir would progressively go down to just 3 000 cusecs by May-end. The two IBPTs at full capacity would just empty out the dam within a mere 50 days! Any deviation from taking the dam height to 138 m and have 7.7 MAF storage, is therefore just uncalled for." In fact, the Narmada tribunal award calls 110 m as the bare minimum water storage level. Beyond that the reservoir's live storage starts. "The award does not permit us to use water below 110 m," said an expert. "The IBPTs, useable at a low dam level, can be used only under emergency situations. They are not provided with in the award. The canal should normally draw water straight from the reservoir, without the two IBPTs." (THE TIMES OF INDIA 070902)

Supreme Court on NBA petition A three-judge bench comprising Chief Justice B N Kirpal, Justice K G Balakrishnan and Justice Arijit Pasayat of the Supreme Court on 9th of Sep disposed off NBA's petition seeking to point out that the Narmada dam height was raised to 95 m without proper rehabilitation of the dam-affected in MP and Maharashtra. Appearing for the petitioner, advocate Prashant Bhushan contended that the GRA had not visited the affected villages and gave the consent for raising the height of the dam from 90 m to

95 m without finding out whether the Affected Families have been properly rehabilitated. (Rediff News 100902)

Adivasis in Narmada valley assert rights over land

Thousands of tribals from the villages on the banks of Narmada (Manibeli Bhadal stretch), affected by SSP and also from villages outside the submergence zone, in Toranmal and Dhadgaon blocks participated in a padyatra held on 13 - 17 Sep against the recent decision of the state and central govts to remove all 'encroachers' from forest areas all over the country. People's organizations and adivasi rights groups across the country have opposed this move by citing another order passed by the court in 1985, making it imperative on the part of the states of Maharashtra and MP to appoint district level committees to look into the cases of old encroachments (prior to 1978) and take steps to regularize them. (NBA PR 240902)

Rs 14 B loan for Omkareshwar The MP govt will receive a loan of Rs 14 B for the Omkareshwar project jointly from a Japanese Bank and govt of India. The Union govt has decided to release its share of fund under Accelerated Irrigation Benefit Programme. The guarantee for the Japanese bank loan has been taken by the Union govt. The govt has also released Rs 200 M for the canals of Bansagar project. (CENTRAL CHRONICAL 210902)

NSP to construct Guide ring dam wall for Harsud

The 1000 MW Indira Sagar Project by the NHDC is scheduled to submerge the entire Harsud town. The authorities claimed that the town can be saved from the dam and its backwaters by a Guide ring dam. NHDC is yet to get the design of the guide dam approved by CWC. NHDC claimed that the power generation from the project will start with the dam height at 238 m, and right now the dam has reached the 215 m. So far only 3100 of the 15 000 project affected families have been rehabilitated. According to the NHDC, the MP govt had approved raising of the dam's height up to 225 m. The state govt had directed to concerned authorities to complete R&R up to the crest level of dam (245.13 m) before June 03. (CENTRAL CHRONICLE 051002, 150902, DAINIK HINDUSTAN090103)

Opposition to Arbitrary Rules on Draw Down Land

Displaced Adivasi and farmer families of 44 villages affected by Tawa Dam on Tawa river, a tributary of the Narmada River declared their opposition to new arbitrary rules of MP Water Resources dept. demanding its immediate withdrawal. According to Kisan Adivasi Sangathan and Samajwadi Jan Parishad these new arbitrary rules spell doom for the displaced adivasis and farmers as it seeks to deprive them of their right to cultivate the Draw Down Land. The voices of opposition were also heard from those displaced by Gandhinagar Dam over river Chambal. (SARVODA PRESS SERVICE 200902)

HYDRO PROJECTS**NHPC'S TEESTA LOW DAM III:
SCRAP THE ILLEGAL PUBLIC HEARING**

A number of organisations, including NEPSON has written to Union Ministry of Environment and Forests that the public hearing that was conducted on Dec 19 2002 for the NHPC's Teesta Low Dam III was violative of legal norms on several counts and should be scrapped. The letters requested the ministry to intervene to postpone the "illegal and farcical Public Hearing and ensure that basic MEF norms are followed. Below we have reproduced some parts of the letters.

- On Nov 14, West Bengal Pollution control board issues the Public hearing notification. The notification carries no mention of the EIA, and says that only the Executive summary (ES) of the DPR will be available for public scrutiny.
- However, till the last week of Nov the Siliguri Regional Office of the WBPCB could not show the ES.
- The ES was not available in Nepali—the major local language—till Dec 6 02.
- The Section 10.4 of the Summary clearly says that the 'environmental impacts.... is being studied'. In other words, the study is not complete, and the EIA has not been finalized till the date of the compilation of the DPR, and the subsequent Public Hearing notification.
- After we challenged the legality of the Public Hearing and the EIA process, the NHPC authorities sent a copy of the EIA to the PCB Siliguri Office on Dec 9, 02, just 10 days before the hearing and 20 days after the notification! The EIA is available only in English.

Scrutiny of the EIA report compels one to believe that important information has been suppressed. In particular, we want to draw attention to the 'Report on the geological and geotechnical investigations' carried out by the Geological Survey of India, Kolkata, as part of the EIA. The report was submitted to the North Bengal University (The EIA conducting agency) in Feb 02. Apparently, NBU submitted the 'complete' EIA report in Aug 02. The GSI report was based on data collected during one full field season (2001-2). Because there was a period of just five months between the submission of this report and preparation of the EIA, a similar or parallel study could not have been conducted within this period. It is clear from the EIA that the GSI report was the sole source of geological data included in it. In this context, how can one explain non-inclusion of a crucial section of the GSI report in the final EIA? The subsection 3.5 of the GSI report deals with the project impacts during the operational phase. The EIA not only excludes this section but goes on to say that there will be 'no land environment impact during the operational phase' of the project.

Apart from this the EIA is full of incomplete/partial data:

Seismicity The EIA admits that the site-specific seismic design parameters are being 'studied' and not yet available. Because the Project area falls within the seismic zone IV, any major construction work in this zone need to have suitable seismic co-efficient incorporated in its design. If design parameters are unavailable, how can the NHPC authorities talk about construction datelines (Executive summary, DPR)?

Reservoir Sedimentation Though the Subsection 2.7 (watershed) mentions that out of 19 watersheds/sub-watersheds in the project area 5 have high and 3 others very high priority status in sediment yield index, and none of the watersheds is safe from the danger of erosion and destabilization, section on sedimentation has no data on cumulative sedimentation in view of known failures of sediment flushing attempts.

The EIA is based on data collected from a study area that extended to 7 kms upstream from the project site. Thus it ignores all watersheds beyond that point.

The EIA says that gross storage in the reservoir will be 18.36 MCM at FRL 208 m and live storage 11.57 MCM. The Hydrological data given in the DPR and EIA do not take into account the possible increase of discharge and ensuing floods caused by glacial melting. This omission poses serious questions on the credibility of hydrological computations in the DPR & EIA.

The EIA ignores the downstream impacts on the pretext that because the project is run-of-the-river, there will be no additional danger of floods downstream. The fact remains that the project will cause impoundment of water on a significant scale on a glacial river, in an area with perennially unstable valley slopes and with watersheds with high sediment yield index. Besides, the construction of the reservoir and continuous storage of water will increase pore pressure on the adjoining slopes, leading to toe erosion and slope destabilization. All these factors will affect the discharge and the sedimentation processes, may lead to the weakening of the barrage structure & cause serious downstream impacts.

Throughout the EIA, there are numerous mentions of Environment Management Plan. EMP is not available for scrutiny. How can we be expected to comment on the project, if the EMP is not available?

The letter concluded "We object to the EIA process on the grounds that it lacks transparency, is illegal and based on self-contradictory, inaccurate, incomplete and partial data. We object to the attempts at suppressing/withholding crucial information in the EIA. We object to the Teesta Low Dam Project Stage III on the grounds that no development project can stand on the bedrocks of falsehood and non-transparency, and demand a stop to the project activities till an impartial, comprehensive and truly participatory EIA process is completed." (NESPON 1202)

NHPC's Chamera Cofferdam washed away 500 m stretch of the coffer dam at Bagga in Chamba district in HP built by the NHPC was washed away by sudden rise in water level of Ravi River after heavy rains in the catchment area. The coffer dam was built for diverting water to another portion of the river via 3 km long tunnel for construction of 300 MW Chamera 2 dam.

➤ R&R plan for 192 families displaced years back by Chamera I and 120 families from Chamera II is likely to be cleared soon. (THE TRIBUNE 080902, 170902)

Nathpa Jhakri dam to be 65.5 m high The Himachal Pradesh govt has given Nathpa Jhakri Power Corp in-principle approval for raising the height of the dam of the Nathpa Jhakri HEP from 60.5 m to 65.5 m. The state would get 86 MW of extra (21.5 MW) power in addition to 12 % of free power as envisaged in the project agreement. In another move, HPSEB, which recently received the TEC for its 2x50 MW Uhl-III HEP, will incur capital expenditure of Rs 600 M spread over four years for the construction of the modified horseshoe shaped 8 477 m long 4.15 m finished diameter head race tunnel. The project is slated for commissioning in March 2007. (Projects Monitor 211002)

Additional funds for Baspa-II The Rs 2.67 B incremental cost of the 300 MW Baspa-II HEP, as per the revised estimate, has been fully tied up, it is claimed. Jaiprakash Hydro-Power Ltd is implementing the project. Jaiprakash Industries will bring in Rs 810 M as equity and banks and the original consortia of creditors will contribute Rs 1.67 B as loans; the balance of Rs 190 M would be accounted as exchange fluctuation. The HEP is now rescheduled for commissioning in July 2003. The management is trying to complete the project by next March. As a result of delayed implementation the cost of the project has gone up from Rs 13.45 B to Rs 16.12 B. (Projects Monitor 161002)

Uhl III work starts The work on the 8.28 km long headrace tunnel of the 100 MW Uhl III has been started. The CEA clearance to the project was given in 1987 for Rs 976.6 M cost, which has gone up five times now. The CM claimed that the PFC has promised to fund the entire project. The first unit of 50 MW is to be commissioned in Dec 2006. (THE TRIBUNE 171002)

Uttaranchal Hydro Policy The new Uttaranchal Hydropower policy has opened the doors for an enhanced private sector participation in generation. The units in the categories of 5 MW, 5-20 MW, 20-25 MW and 25-100 MW were considered ideally suited for the state owing to geographical conditions and govt proposes to enhance the role of private sector in such projects, said the chief secretary. The govt would

continue to grant the mega-hydel project status to all units with capacities over 100 MW. HEPs up to 25 MW had been earmarked for private sector participation only. (THE TRIBUNE 171002, POWER LINE Oct 02)

IFCI-NHPC-MECON tie up Industrial Finance Corp of India has roped in NHPC and Mecon for providing the service of "lender's engineer" to infrastructure projects after IFCI signed MoUs with these organisations recently. "NHPC desires to provide services as lender's engineer for various hydro projects financed by IFCI. The job involves all the services required for the success of the project during financial closure, project implementation and post completion stages", IFCI sources said. The two companies would also participate in projects being developed in the private sector, as well as those by state govts. (BUSINESS LINE 070902)

Powergrid contract for Vishnuprayag Powergrid has secured a contract from the Uttar Pradesh Power Corp for turnkey execution of a 335 km long 400 kV double circuit transmission line from Vishnuprayag to Muzaffarnagar. The estimated project cost and consultancy fees are Rs 2.8 B and Rs 420 M. (THE HINDU 070902)

DAMS IN THE NORTH EAST INDIA

Demand to stop Pagladia dam The Nalbari district committee of All Bodo Students Union has strongly opposed and condemned the ongoing construction of Pagladia dam by the Brahmaputra Board ignoring all the protests of the affected people. The project is submerging thousands of Ha of agricultural land. The committee has urged the Central govt to stop the project. (NE TIMES 261002)

Growing opposition to Tipaimukh dam The Committee Against Tipaimukh Dam, a committee formed by various people's organizations to create mass awareness on the negative impacts of big dams and to mobilise public opinion for resisting the construction of the controversial Tipaimukh High Dam, which is likely to cause displacement of over 40,000 people. The Union power Ministry has continued to pursue the construction of the controversial dam despite the continued opposition from the affected people due to submergence of cultivable land, many important historical and legendary sites (lakes, waterfalls, etc.) and sacred groves with vital cultural and spiritual significance to the communities, destruction of rich biodiversity, etc. which is threatening the peoples' right to life and livelihood. Various representatives from Committee Against Tipaimukh Dam, NWUM, NPMHR, UNC, ANSAM including the ZU, ZWU, ZSUM, ZYF called on the Governor and the CM of Manipur to apprise them about the feelings and stand of the people regarding the construction of the Tipaimukh Dam. The Governor said all have the constitutional rights to

preserve their cultural identity. He said he knows Barak Waterfall and Zeilad Lake are your cultural heritage. The CM, O Ibobi Singh while listening to the peoples concern shared that a project of such magnitude should very must have a wide consultation with the people who are to be adversely affected by the Dam. He also mentioned that the local representatives should be informed so that he can be further briefed in detail about the Dam.

➤ Five Naga organisations of Manipur have petitioned the Centre to shelve the Tipaimukh dam, citing threats to the existence of 18 Zeliangrong Naga-inhabited villages and several sites held sacred by the community. The organisations said in a memorandum to Union power minister, "The Tipaimukh project was not conceived with the interests of the tribal people in mind. We appeal to you to shelve this project once and for all, failing which we will take a more stringent stand." The 1 500 MW project is to be executed in Churachandpur district in Manipur. Manipur and Mizoram have been promised 12 % of the output as royalty, but critics have long been warning that the dangers far outnumber the potential benefits. The Naga leaders claimed that the dam would submerge arable land in 55 villages, directly affecting a 40 000-strong tribal population. The site chosen for the dam on the Tuivai river was geographically under the Taithu fault and prone to intense seismic activity. The organisations are United Naga Council, Manipur; Naga Women's Union, Manipur; Committee against Tipaimukh Dam, Manipur; Naga People's Movement for Human Rights, All Naga Students' Association, Manipur. The Naga organisations said the indigenous tribal population should not be denied the right to information, environmental assessment and participation in any development project that affects their livelihood and dignity. "The dam cannot be allowed to be constructed if it is inevitably going to destroy one section of society. Sustainable development is not possible by forcing some people to sacrifice for others."

➤ Citizens Concern for Dams and Development have demanded that the MoU signed by the Manipur govt and Tipaimukh DPR be made public and till informed public scrutiny of the project is not accomplished, the project should not be taken ahead. CCDD has demanded that the project must follow WCD guidelines. (Manipur Mail & The Imphal Free Press 230902, DAILY TELEGRAPH 211002, CCDD Newsletter *Ruonglevaisuo* 0203)

Myntdu Leiska HEP in high seismic zone The Meghalaya govt is expecting the President of India will lay the foundation stone on Oct 25 of a 84 (2X42) MW Myntdu Leiska HEP envisaging construction of a diversion dam of 59 m height at Leiska, which is junction of three rivers and a 4 km long tunnel. The preliminary investigation was started in 1974 under the Assam SEB. MeSEB carried out the detailed investigation during 1980-95. According to the project

manager, the location of the HEP comes under the high seismic zone V. During construction period, environmental monitoring of water quality is a must, as the pH value of the river water is quite low during the pre-monsoon and post-monsoon period. Mine drainage to the river is the main cause of concern for this project, which is expected to generate 368 MU per annum. Myntdu on the southern slope of Meghalaya is a south flowing river. The project to be completed in five years is estimated to cost about Rs 2.7 B at 1998 price levels with annual escalation at the rate of 6 %. The project will submerge of 80 Ha. (ASSAM TRIBUNE 231002)

Arunachal sells power to North India Arunachal Pradesh has commenced the sale of 50 MW of power to Punjab, Haryana and Delhi at a rate of Rs 1.95 per unit, via the PTC. The contract will yield Rs 650 M to the state Exchequer. It will meet the requirement of the northern states from the 405 MW Ranganadi HEP at Yazali in Subansiri district. Against a quota of 117 MW of power it is authorised to use, the state draws only 20 MW of power. This is the first time that a northeast state is selling power to the north. (Project Monitor 161002)

NE hydroelectric power scenario The Dept of Development of North-Eastern Region have a detailed account of the power scenario in the NE region.

MW

State	HEP Potential	HEP Developed
Arunachal Pradesh	50 328	686
Assam	674	250
Manipur	1 784	105
Nagaland	91	1 574
Mizoram	2 196	Nil
Meghalaya	2 394	185
Sikkim	84	4 286
Tripura	21	15
TOTAL	63 257	1 416

The DONER report said that the HEPs under construction in the region would add 387 MW of power. The projects under construction include the 100 MW Karbi Langpi Project, Dhansiri Project and Kopili II in Assam. The first two projects are in the State sector, while the third one is being executed by the NEEPCO. The other HEPs under construction in the region include Myntdu Project in State sector in Meghalaya, Likim-Ro-III in the State sector in Nagaland, Tuirial Project executed by the NEEPCO in Mizoram and Loktak downstream project executed by the NHPC in Manipur. The report revealed that the HEPs to be executed by the NEEPCO and NHPC, which are in Stages-I and II, would add 22 795 MW of power in the region. The report said that three projects, Kameng and Subansiri (Lower) in Arunachal Pradesh and Tuivai in Mizoram are in State-II of execution. The DONER revealed that during the 10th Plan period, 1 359 MW of power is likely to be added in the NE, out of which

projects to generate 585 MW have been taken up by NEEPCO and NHPC would add 510 MW of power, while the remaining projects are in the State sector. The DONER report further disclosed that the NE States owe huge amounts to the Central sector power units including NHPC, NTPC, NEEPCO, REC, PFC, Damodar Valley Corporation, etc. and the total dues as on January 31, 2002 amounted to Rs 18.79 B. (Projects Monitor 211002)

DAM NEWS: SOUTH ASIA

Pakistan: Building of power units, dams okayed The Executive Committee of National Economic Council approved 22 development projects amounting to Rs 70 B including Rs 52.75 B for HEP and irrigation. The ECNEC gave its green light to the Rs 7.035 B 106 MW Golan Gol HEP in Chitral, which involves a foreign exchange component of Rs 2.638 B.

➤ **Four HEP okayed** The govt has given clearance to four major HEPs worth \$596.6 M to be completed by June 2006. According to the official sources, all the four projects were awaiting clearance by the Planning Commission, which has been given after the removal of some objections by the sponsoring agency of the projects - the WAPDA. The Jinnah HEP (96 MW) would cost \$228.8 M with the Foreign Exchange Component of \$112 M at Jinnah barrage on the Indus river in Punjab. The Allai Khawar HEP (121 MW) on river Allai Khawar, a tributary of Indus River in Kohistan district of the NWFP would cost \$135.6 M with \$52.5 M FEC. The Duber Khawar HEP (130 MW), which had also been cleared by the Planning Commission, would cost \$149 M with FEC of \$62.7 M at river Duber Khawar, which is a tributary of Indus River near Patan in NWFP. The Khan Khawar HEP (72 MW) would cost \$83 M with FEC of \$40.7 M at river Khan Khawar, which is a tributary of Indus River at Swat, NWFP. (Dawn-Pak 030902, 021002 & International Water Power and Dam Construction 161002)

Work on increasing Mangla Dam height starts The project for raising the height of Mangla Dam has been inaugurated by the President. He said, the federal govt has decided to offer Rs 700 to Rs 800 M to the Azad Kashmir govt, but later, the Indus River System Authority will work out a formula for extending royalty to AJK," he said. He said that differences between the Centre and AJK govt have been resolved to increase the height of Mangla Dam by 30 ft - from 1234 f. to 1264 ft, which will make available additional 2.9 MAF of water annually. The project will also provide additional annual power generation of 772 GWb. It will be completed in June 2007. He claimed, "This raising of Mangla Dam project will first be benefiting Punjab, Sindh, NWFP, Balochistan and would then accrue benefits for Azad Kashmir". The president also announced a package for the affected people and assured to implement it in letter and spirit. He regretted

that there was no implementation on a previous package, which was given to the people displaced when it was constructed in 1967. He said Rs 300 000 would be offered to each newly affected person, and Rs 200 000 to the earlier ones. In addition, a 5marla plot will also be given to each person free of cost. At the time of the construction of original Mangla Dam, land on the periphery of the reservoir was acquired up to El. 1210 ft. For the raised Mangla Dam reservoir, additional land up to El. 1250 ft., measuring 6 312 Ha, will be acquired. About 79 % of the land acquisition will be in AJK and the remaining in Punjab. By raising the dam, 44 000 persons will be displaced and about 8 000 houses will be affected. The gross storage capacity of Mangla reservoir has been reduced by about 20 % due to sediments deposition. When completed in 1967, Mangla reservoir had a gross storage capacity of 5.88 MAF, which by now has been reduced to 4.68 MAF. The capacity will be reduced further to 4.50 MAF by the time the raising of the dam is completed in 2007. (SUNGI Development Foundation 011002)

Rs 4.5 B embezzled in WAPDA The Auditor-General of Pakistan has pointed out Rs 4.56 B worth of misappropriation in WAPDA during 1999-2000. In a report, recently taken up by the Public Accounts Committee and reportedly submitted to the president, the AGP has divided these paras into 10 different heads. According to the report, Rs 3.30 B were misappropriated in 18 cases of violation of propriety; Rs 102.72 M in 13 cases of losses; Rs 22.44 M in two cases of overpayment; Rs 6.48 M in a case of accounting error; Rs 226.88 M in eight cases of negligence; Rs 597.19 M in three cases of misappropriation, misuse and theft; Rs 199.15 M in nine cases of recoveries; Rs 39.03 M in six cases of misclassification of tariff; Rs 28.653 M in two cases of non-production of record; and Rs 37.37 M in three cases put under the head of "others". These irregularities speak of non-implementation of internal control resulting in overpayments and non-recoveries. In the presence of a large internal audit organization on which a huge expenditure is incurred, these irregularities should not have occurred," the report said. (The Dawn-Pak 291002)

Bhutan: Tala project cost approved India's Union Cabinet has approved the cost of completion of 1020 MW Tala HEP at Rs 35.80 B including 60% (Rs 21.48 B) as grant and remaining Rs 14.32 B as loan. The project to be commissioned by Sept 2005 would provide 3 962 MU of electricity annually. (Daily Excelsior 190902)

Nepal: MoU on West Seti HEP The PTC of India and the SMEC of Australia have entered into an MoU to develop the 750 MW West Seti HEP in far-western Nepal. The MD of SMEC has submitted a price of US 5.12 cents (Indian Rs 2.45) per unit for West Seti

power, and negotiations are going on between the Indian officials and the Australian developers to decide on the actual price and sign the PPA. The \$1.2 B HEP would be a peaking power station, generating electricity for eight hours a day during peak hours. What makes the project more attractive to India is the fact that it lies very close to the northern Indian states, where peaking power shortfall has been estimated at 2 000 MW.

➤ Australia has become the biggest foreign investor in Nepal, following the signing of a deal for the W Seti HEP. Australia's Snowy Mountains Engineering Corp signed a project agreement with the govt of Nepal, which approved the environmental impact assessment report for the HEP. SMEC, which has been working on the West Seti HEP since 1996, hopes to begin construction in March 2004 and go in to operation in 2008. The project would require relocation of 1 530 households. (Kathmandu Post 280902, REUTERS NEWS SERVICE 091002, POWER LINE Oct 02)

Norway to grant Rs 200 M According to the sources of the Ministry of water Resources the Norwegian Govt has agreed to provide a grant assistant worth Rs 200 M for the reconstruction of the Jhimruk HEP in Nepal. The 12 MW Jhimruk HEP, which was constructed by Butwal Power Company, one of the few profit-making public enterprises, had come to a virtual standstill after the rebels bombed it. The Plant is situated in Pyuthan district of W Nepal, which is one of the highly affected districts. The damage of the Jhimruk Plant, which is the biggest power plant of BPC, has frozen the much-controversial privatisation process of the BPC at the last moment. After a long delay, the govt had decided to sell-off the 30 MW BPC to a consortium led by Intekraft, a Norwegian power developer at Rs 950 M. (Kathmandu Post 280902)

DAM NEWS FROM AROUND THE WORLD

Decommissioning News

US At 125 feet height, Condit Dam on Washington's White Salmon River is poised to be the largest dam removal in the US.

CANADA The most recent River Recovery News is British Columbia Hydro's proposal to dismantle the 19 m high Coursier Dam on Cranberry Creek. (World Rivers Review 1202)

Indonesians sue Japan over aid-funded dam Nearly 3 900 residents of Indonesia's Sumatra Island filed a lawsuit in Tokyo, each seeking 5 M yen (\$42,430) for damages caused by a dam Japan funded with ODA. In the suit, the first of its kind over ODA, the plaintiffs claim they were forcibly resettled after the Kotopanjang Dam was completed in 1997. Among those named as defendants in the suit, brought before the Tokyo District Court, are the Japanese govt and its foreign assistance body, the Japan International Cooperation Agency, the state-run JBIC and Tokyo Electric Power Services Co., an affiliate of Tokyo Electric Power Co., Japan's largest

utility. The dam, located in the middle of the island on the border between Riau and West Sumatra provinces, has also damaged the natural environment in the area, they said, noting elephants and other animals face starvation. The Y 31 B HEP was paid for with a yen-denominated govt loan. The plaintiffs said they have become "developmental refugees" because they have been left without proper living facilities, including clean water, on the land where they were resettled, and with no job opportunities. The plaintiffs are also demanding that the defendants urge the Indonesian govt to remove the dam and restore their living conditions and the natural state. (The Japan Times 060902)

Germany to review river developments after floods

The German govt presented a package of measures aimed at avoiding a repeat of last month's devastating floods. The recommendations include calling a halt to all construction projects designed to improve rivers for shipping traffic until the govt has completed a review of the environmental consequences. The plan also proposes an end to building on flood plains and removing some dykes and flood defences so rivers can swell naturally, removing pressure downstream. Floods swept through eastern and southern Germany last month killing at least 16 people and caused 15 B euros of damage. "Every building of flood defences increases the flood risk for those further downstream. That is why a national effort must give rivers back their natural flood plains in uninhabited areas...", the plan said. The govt recommended reviewing all river projects by early 2003 to assess their environmental consequences including those on the Elbe River that submerged historic Dresden and many other towns last month. (REUTERS NEWS SERVICE 170902)

Syria dam collapse kills at least 20 Over 20 people have died and three villages have submerged due to Zeyzoun Dam burst on the Orentes River north of Hama in Syria. (HRW Sep 02)

Investigation stalls fund for Bujagali HEP The WB postponed action to fund Uganda's 200 MW Bujagali HEP pending investigation of possible corruption. The WB took action at the request of developer AES of the US. AES asked the WB to delay action pending investigation of a report that a former employee of its construction contractor had made a \$ 10 000 payment to a Ugandan govt employee. (HRW Sep 02)

Climate Change: New Excuse for Dams? The latest round of international climate talks, held in Delhi in Oct 2002 had almost as much emphasis on how to adapt to climate change as on how to prevent it. The worsening droughts and floods scientists have warned about are already being experienced, and there can be little doubt that much worse is on the way. Most at risk are people who are directly dependent on ecosystems for their survival – peasants, indigenous people and fisher folk,

as well as those forced by poverty to live in zones at high risk from landslides and floods. These are the people who are least responsible for climate pollution (and thus can do least to prevent it) and who also can least afford the cost of adaptation. It is not overly cynical to foresee that bureaucrats in aid agencies and water ministries will push for the same kinds of projects to adapt to global warming as they have always pushed as responses to floods and droughts. Business-as-usual in water management would mean "adaptation" funds going to big dams, inter-basin transfers, and flood-control embankments. Yet these strategies have proved counterproductive in the past and are largely responsible for the epidemic of water management that now affects almost every part of the globe. More dams and embankments will also compound the stress that climate change will put upon the freshwater ecosystems. (Editorial in World Rivers Review 1202)

Thai floods Floods have killed over 39 people and damaged more than 150 000 houses in Thailand over the August month. Thailand's north and east have been worst hit. (SENTINEL 070902)

Lenders approve five China projects The ADB approved advance action for procurement to develop the 1000 MW Zhanghewan pumped storage project in Jingxing Country. The WB approved a \$ 105 M loan for \$ 222.4 M Hubei HEP, which includes construction of four HEPs totalling 226 MW. (HRW Sep 02)

WATER SECTOR

Future of Water? The country's annual per capita availability of water will dip below the scarcity threshold of 1 700 cubic m over the next two decades, the Union Agriculture Minister said. In six of the country's 20 major river basins, water resources were under high stress and depleting. By 2025, five more basins would become scarce and by 2050, only three basins would remain water sufficient. The irrigation supply would have to grow at least by 5% annually to keep pace with the annual growth rate of over 4% targeted for agriculture in the 10th plan.

➤ India would be a forerunner among the developing countries contributing to 50 % escalation in the demand for water by the first quarter of the century, according to a report by International Food Policy Research Institute and the International Water Management Institute. According to the report, in 1995, 11% of India's rural households had access to piped water. In Business-As-usual scenario this number will climb to 47 % by 2025, but under the water crisis scenario, it would increase to only 13 %. In 1995, India harvested grains from an estimated 37.8 M Ha under irrigation. Irrigated land will reach 47.1 M Ha by 2025. In 2025, India will consume 396 cubic km of water under the business-as-usual

scenario. This is more than double that projections for the US (191 cubic km) and nearly one-fifth of the total global water consumption that year. The Ganges river basin estimated to have consumed 141 cubic km of water in 1995 and is projected to consume 147 cubic km in 2025. In 1995, India had 18 M Ha under irrigation for rice, with an average yield of 2.51 T per Ha. The amount of irrigated land under rice is projected to grow to 22.5 M Ha by 2025, with an annual yield of 3.8 T/Ha. Domestic water use in India is projected to nearly double between 1995 and 2025 from 21 cubic km to 41 cubic km. (THE ECONOMIC TIMES 050902, NEWSTIME 181002)

Murky water politics at WSSD Delegates at WSSD from some 109 countries sought to reiterate their commitment to halve the number of people (1.1 B) without access to drinking water by 2015. The \$55 M Johannesburg Summit, the most expensive of the seven summits since the Rio Summit in 1992, failed to commit any additional funds though water has been the most significant of the five themes at the summit. Studies in 130 countries reveal that current funding in water lies between \$10-25 B, though \$11 B is considered more realistic. To cover half a billion population with access to water in next 13 years, according to the WB, an additional investment of \$380 B will be needed. That would mean an incredible increase of 35 times over the current global spending on water supply and sanitation. The current level of overseas development assistance hovers around \$53 B. The developed countries were neither reminded to stand up to their commitments to contribute 0.7% of gross national income towards development assistance nor they themselves delved on the issue. Had the rich countries adhered to their promised aid budget of \$125 B a year since Rio, the global scenario could have been much different. The manner in which the Earth Summit at Johannesburg was (designed to be) hijacked by businesses, there is growing doubt if the UN can still be the undisputed civic administrator of the planet. Having failed to safeguard the interests of 1.1 B people, who have no access to water, the UN has demonstrated that it has indeed been up on sale itself. Following Johannesburg, it is clear that the UN has become a global event manager. But the summits are what the govts make them. With little exception, govts the world over have lost their pro-poor credibility. Indian report to the WSSD clearly points out towards an emerging water crisis, per capita availability likely to decline to 1 557 cubic m in the next 13 years from the present 1 829 cubic m. Can a govt be expected to represent the woes of a billion, which has itself adopted a Water Policy that favours private sector involvement as a solution? (sudhirendar@vsnl.net)

IRRIGATION OPTONS

Karnataka plans Rs 6.7 B Tanks project Karnataka has launched the WB aided Rs 6.7 B community based Jal Samvardhane Yojane in 26 taluks of 9 districts. The 1st phase will cover 1100 tanks involving a total command area of 72 000 Ha over 6-year period. (THE ECONOMIC TIMES 021002)

Dibrugarh watershed scheme The National Watershed Development Project for Rainfed Areas for Dibrugarh was reviewed recently. The project has been taken up in all the seven blocks of the district, of which four have been given over to an NGO, SCARD. Each of the seven blocks would be given Rs 2.25 M under the revised scheme. (ASSAM TRIBUNE 130902)

Rainwater conservation in Torani The Torani village in Khandawa district of MP was a water scarce village a year ago and water table was deeper than 515 ft. About 456 out of 688 people were migrated for employment every year. Initiated by Rajiv Gandhi Watershed Management Mission, now in the same village the water is available only within 4 to 5 ft depth. The village can now conserve 6.5 inches of rainwater if it rains 7 inches even in a day. The water conservation has been planned so that the rainwater does not flow more than 10 m from where it drops. At present one fourth of the work is completed. (DANIK BHASKAR 030902)

Temple tanks Renovation in TN The people in Tamil Nadu are renovating disused water tanks in temples. The coastal landscape here is dotted with temples, and around 4 000 temples traditionally had water tanks. These also helped recharge groundwater. But over the years many have gone out of use and overflowing mounds of silt and garbage have replaced the water. Following sustained campaigns by NGOs authorities in Chennai have decided to restore around 40 major temple tanks in the city. The NGO groups have taken up the task of rehabilitating over 1000 tanks throughout the state with community participation. (THE TIMES OF INDIA 191002)

NABARD funding for irrigation in HP Nabard funding to minor irrigation schemes in HP under Rural Infrastructure Development Fund have helped in providing irrigation to 15 500 Ha. Of the funding provided by NABARD, 20% has gone for irrigation and 17% to flood control, drinking water supply, etc. Till date NABARD has provided loans totalling Rs 782.4 M for completion of 227 minor irrigation schemes and one medium project, on completion of which 30 000 Ha is to be brought under irrigation. 159 of these schemes have been completed. (THE TRIBUNE 141002)

Hydrams in HP The Central govt has sanctioned Rs 127.10 M under the Swarnjayanti Gram Swarajgar Yojana for the installation of 500 'hydrams' in eight

districts of HP, to be installed by the District Rural Development Agency. A mechanical device invented in Europe 200 years ago, Hydram is based on the concept of hydraulic ram and lifts water without use of fuel or any other energy. A hydram operates through water hammering caused by the sudden blocking of the flow of water in the inlet pipe resulting in the formation of pressure, which lifts water with an added force through the delivery pipe. The operational and maintenance cost of the hydrams compared to the electric pumpset is very low. Per Ha investment by the IPH Dept on irrigation comes to Rs 110 000 while average investment in case of hydrams is only Rs 30 000. A hydram normally irrigates an area of 5-15 Ha. The state govt has started a Rs 27.50 M project to install 100 hydrams for irrigation in various parts of Shimla district, being installed by 'Himurja'. (THE TRIBUNE 160902, Daily Excelsior 270902)

HP adjudged best under watershed projects Himachal Pradesh has been adjudged the best state by WB for its performance in the development of forest, agriculture, horticulture and soil conservation activities under integrated watershed development projects, CM said. The Rs 1.71 B Integrated Watershed Development Project (Hills-II) Kandi was started in July 1999 and would be completed by March 2005. The project aimed at multi sectoral approach in 93 850 Ha of the adopted areas by evolving watershed treatment technologies and participatory approaches in 32 sub-watersheds of Markanda in Sirmaur district, Ghaggar and Sirsa in Solan district, Swan in Una district and Chakki in Kangra and Chamba districts. (Daily Excelsior 200902)

Unique water harvesting technique in AP village The Kunchavaram tribal village in Andhra Pradesh has developed through community rainwater water harvesting. Situated 130 km from Gulbarga along the AP-Karnataka border, the Lambada tribal village in the extreme arid zone gets good agricultural yields with changed cropping patterns. Desilting of tanks and recharging of ground water through water harvesting techniques have helped. Similar was the success 35 km away in the drought-prone Chincholi village, where about 100 families were now reaping the benefits of rainwater harvesting. Each household has been storing 30 KL of water each year through roof water harvesting. The cost comes to Rs 10 000 to store 10 KL of rainwater. Each family contributed Rs 6 000, the rest was borne by the NGOs. They used locally available Shahbad stones for constructing underground storage tanks. The experts observed that billions had been spent on mega irrigation and flood control schemes in the country, only to leave the country high and dry with no attention paid to community-based micro water projects. (Daily Excelsior 211002)

IRRIGATION

Maharashtra Irrigation bonds (again) downgraded

The rating agency CRISIL has downgraded the ratings of the seven bond programmes worth Rs 21.34 B of the Maharashtra Krishna Valley Development Corp and two bond issues worth Rs 3.08 B of Vidarbha Irrigation Development Corp from 'BB+(So)' to 'D (So)' making it the worst-ever indictment of the state govt's sagging financial conditions. Rating BB+ indicates "inadequate safety" while D indicates the rated instrument is in default or is expected to default on maturity and that the bonds of these corps are of non-investment grade. (INDIAN EXPRESS & BUSINESS STANDARD 171002)

HUDCO Sinks Cash in Defaulting TIDC Housing and Urban Development Corporation invested Rs. 1.75 B in the first week of October '02, in the cash strapped and defaulting Maharashtra govt undertaking, Tapi Industrial Development Corp. This when the controversy is still afresh over MTNL's Rs. 2.5 B investment in another defaulting PSU, Maharashtra Krishna Valley Development Corp. The HUDCO sources said that this was happening under political pressure, overruling HUDCO professionals. HUDCO clarified that "the bond issue are to be utilised to enhance the availability of irrigation and drinking water supply to various towns in the four districts of North Maharashtra". TIDC has been formed under TIDC Act, 1997. (THE ECONOMIC TIMES 101002, 121002)

Sriramsagar flood canal remains non-starter The Sriramsagar flood canal has shown little progress for two decades. On completion of the canal, 0.1 M Ha in the 20 mandals of Karimnagar, Warangal and Nalgonda districts were to be brought under irrigation. This was to be the model project for diverting surplus Godavari waters from Sriramnagar project. It was estimated that 25 TMC of additional quantity of water would be available at Basara on Godavari. The Sriramsagar project was receiving water from here. A quantity of 55 TMC of water was going waste from 112 TMC capacity project owing to siltation. (NEWSTIME 291002)

Nagarjunasagar farmers to be paid for losses Major irrigation minister of Andhra Pradesh admitted that the govt had miscalculated the availability of water in the Nagarjunasagar reservoir prior to releasing water for irrigation. This plunged the farmers — who had taken up sowing in about 20 000 Ha following the govt's assurance — into a crisis. The govt has decided to compensate farmers under the project who undertook sowing after September 1 and has asked officials to prepare distributory committee-wise details of crop transplantation to work out modalities for compensation. (THE TIMES OF INDIA 250902)

Polavaram water utilisation not optimum The Polavaram project to utilise another 400 tmc of the Godavari water has remained a non-starter. The state

has been availing 500 tmc out of total 1 495 tmc of its share from Godavari. The proposal for linking of Krishna with the Godavari was also pending for long. It was proposed to divert 80 tmc water of Krishna to bring 0.5 M Ha of land under irrigation. As per the proposed plan, water would be allowed to enter the river between Prakasam barrage and Pulichintala project. It was proposed to extend the right canal up to 174 km as part of the Polavaram project. The canal was intended to pump 80 tmc of water into the Krishna. (NEWSTIME 041102)

Barmer lift project a white elephant The draft plan for the Barmer lift canal project was prepared in 1994 by the Rajasthan govt but it was never implemented. According to the draft, Barmer town and about 518 villages of Barmer and Jaisalmer districts had been proposed to benefit from the project. It was proposed to take water from Indira Gandhi canal by a 176.2 km long canal from Mohangadh to Barmer. The initial cost of the project was estimated at Rs 5.90 B in 1994. The revised estimate of the project is Rs 9.50 B at present. The state govt has sanctioned Rs 4.25 B. Now technical sanction would take another year. At least three more years would take for implementation. (RAJASTHAN PATRIKA 240902)

Haryana: Rampant Theft of canal water Haryana's canal systems have virtually collapsed due to an estimated four lakh cases of theft of water by farmers annually, though only a quarter of these were reflected in the files. As a result tail ends all over the state remained dry although there is adequate water at the channel heads. Some 158 out of the 295 channels in the Bhakra Water Services Circle I, Hisar and Yamuna Water Services Circle, Bhiwani were running short at the tails and 107 were completely dry in July. There is shortage of at least 20% in ground staff strength. According to Agricultural engineers, with better management of canal water, the state could raise farm production by at least 25% with the existing resources. The merger of drainage and irrigation wind has contributed a great deal towards the collapse of the system. The bureaucrats amassing the powers of the engineers right upto Engineer in Chief level is also responsible for the situation.

➤ During a heated debate in the Haryana assembly, the govt stated that water allowance in the Yamuna and Bhakra command in the state was 2.4 cusecs per thousand acres, though it was different in some channels. Mr Raghuver Kdian said that a report of the estimates committee of the assembly had also stated that the water meant for the southern districts was being diverted to Sirsa and Hisar. (THE TRIBUNE 030902, 080902, 090902, 100902)

Netravati water sought for Kolar, 7 more districts The demand has again started for the implementation of the Paramashivaiah panel report, which had

suggested a plan to bring Netravati water to eight districts, including Kolar. A forum has been formed under the banner 'Jalavahini' to muster support for the project. Forum sources claimed that the implementation of Paramashivaiah report would go a long way in providing sufficient water to Kolar, Tmukur, Chitradurga, Bangalore Rural, Hassan, Davanagere and Bellary. The water table in the district has gone down to a depth of over 700-800 feet. Paramashivaiah had recommended that the excess 2000 tmcft water from Netravati, which "is being allowed" to join the ocean, could be tapped to provide both water for drinking and irrigation in eight districts. The project, which can be implemented at a cost of Rs 120 B, could also help power generation. Besides, the proposal, if implemented, can provide an additional 12 tmcft drinking water to Bangalore. The govt had allocated over Rs 60 M for survey of the proposal, and 28 companies have submitted their tender for survey work. However the govt has not initiated any further steps in this direction. (THE TIMES OF INDIA 251002)

Dismal performance of CADP The Planning Commission has put the figure of amount needed for completing 159 major, 251 medium and 89 small ongoing irrigation schemes at 630 B to bring about 10 M Ha additional land under irrigation. Completion of only the major projects would require Rs 450 B. The financial resource allocation to irrigation sector has been reduced by 8% from the earlier 23% to 15% share in the public finance. The commission has expressed its displeasure over the performance of Command Area Development Programme, which has failed to bring 85.4 M Ha land under the programme, even after its implementation for 25 years. The Commission agrees that for poverty alleviation, it is more useful to take up small irrigation projects. The commission also feels, rather strangely, that it is necessary that the govt fix up norms for involvement of private sector in irrigation. The commission feels that it is important that states are encouraged to make necessary changes in irrigation acts, groundwater acts and also pass dam safety acts. The commission agrees that while aim has been to achieve irrigation efficiency of 55-60%, the achievement is 35-40% and there is need to set up working group to increase irrigation efficiency. Pointing out the differences in figures between the agriculture and the water resources ministry, the commission has suggested concerted effort at the cabinet level to bring all water resources related administration under one ministry and forming inter-ministerial coordination committee for national water resources development. (RASHTRIYA SAHARA 040902)

Rajasthan Irrigation Some 80 newly constituted water consumer committees have started work under the Rajasthan Water Sector Restructuring Project. The Irrigation dept has taken sanction of Rs 340.17 M from the state govt and the WB for 36 new irrigation works in 34 schemes. (DAINIK BHASKAR 071002)

Goa plans to augment reservoirs Every summer means water scarcity, increased salinity and receding ground water levels. Currently, water is supplied by seven bases -- Opa, Assonora, Sanquelim, Salaulim, Canacona, Dabose, Chandel and Madei, with a total installed capacity of 314 MLD. The largest is the Salaulim water supply scheme with a supply capacity of 160 MLD of water, covering South Goa. This is not enough for the growing population. The State govt has announced some reforms with a proposed investment of around Rs 3.44 B to augment the current installed capacity of regional water supply allocation to 749 MLD in a couple of years, as per the Tenth Plan. The State proposes to take up augmentation of all the reservoirs:

- Opa: from 75 MLD to 113 MLD. Estimated cost Rs 833.30 M. Caters to Ponda and Tiswad talukas.
- Assonora: from 42 MLD to 152 MLD, after Tillari irrigation canals are constructed at a cost of Rs 760 M. Caters to Bardez taluka.
- Sanquelim: from 12 MLD to 62 MLD. Estimated cost Rs 350 M. Caters to Bicholim region.
- Salaulim: from 16 MLD to 380 MLD. Caters to Sanguem, Quepem, Salcete and Mormugoa regions.
- Canacona: from 5 MLD to 10 MLD. Investment of Rs 40 M. Caters to Canacona region.
- Dabose: from 5 MLD to 15 MLD. To cost Rs 152.1 M. Supplies Sattari taluka.
- Chandel: Augmented to 15 MLD. Supplies Pernem taluka. New project to be implemented in view of proposed airport at Mopa and IT Park.
- Madei: Investment Rs 750 M. Caters to parts of Bicholim, Ponda and Sattari, aims to improve service level in the adjoining villages.

Apart from these water supply schemes, a couple of schemes have been proposed to augment the distribution and storage capacity at Sanguem, Salcete, Mormugoa, Vasco, Sarzora and Salaulim with an investment of around Rs 250 M. (THE TIMES OF INDIA 291002)

Nabard subsidy for W Bengal Nabard has released for W Bengal an advance subsidy of Rs 50.5 M under the On Farm Water Management scheme out of Nabard's commitment of Rs 101.3 M under the scheme for the year 2002-3 for the state. The scheme would be implemented in 10 districts, namely Coochbihar, Jalpaiguri, North Dinajpur, South Dinajpur, Malda, Purulia, Bankura, Birbhum, Midnapore East and Midnapore West. Nabard is planning installation of 498 dugwells, 1835 shallow tubewells, 5162 lift irrigation points and 5802 pumps. (THE TRIBUNE 090902)

Centre asks Karnataka to honour CRA decision The Union govt has asked Karnataka to honour the decision of the Cauvery River Authority of Sept 8 that directed release of the 0.8 tmc feet (9 000 cusecs) of water to TN at Mettur. Tension is prevailing across the two states after suicide of a farmer in Karnataka opposing release of water to TN. (BUSINESS LINE 210902)

A DEBATE ON PIM

Little pani, less panchayat In Orissa's 'model' pani panchayats (PP-a World Bank scheme) powerful landlords & contractors are in control of what was once a public resource. It's privatisation of water through the back door with the use of a term that gives a democratic veneer to what is an arbitrary process, and one that is consciously depriving small farmers of access to water.

Welcome to the Aunli Irrigation Project in Angul district. Four "Water Users Associations" cover eight villages. They are held up as the "model" pani panchayats. Astonishingly, officials of the WB seem to have been directly involved in organising at the village level. The YSC, a local NGO, pioneered the bank's entry into the area. The YSC's links with the project came to end in 1998. The canal system of the Aunli project was handed to the WUA. This, says an official document, was done on the WB's orders. The way water is "distributed" by this panchayat means that poor farmers will get it only every alternate year during the rabi season. There are seven canals serving the eight villages in the Aunli belt. "There is less flow in the rabi season," say Balakrishna and Manas. "So one year, we operate four canals on one side of Aunli. In the next year, these four are kept idle and we operate the other three." "But there is no fairness in it at all. Some big farmers have captured the whole thing".

Those who control Aunli's water cannot claim to represent any interests but their own. Any farmer with land in any of these zones can become a member by paying Rs 10. For the majority of farmers with two acres or less, this means they can be members in their villages. The structure favours the landlords in more ways. They all have multiple votes in the PP. By paying Rs 40 big landlord can be a member of all the PP. There are some 1700 farmers in the area. Just a few of these, each with over 40 Ha are in command. Aunli's water has steadily moved into their control.

The chairmen and the 11 members – all unelected – decide the schedule of irrigation. The collector is the chairman of district PP. The govt gave Rs 35 per Ha towards maintenance while the real cost of maintenance could be Rs 750 per Ha. That's apart from the water charges that the revenue dept collects, which would soon touch Rs 250 per Ha against Rs 100 now. Officials say the WB wanted a charge of Rs 400 per Ha.

There has certainly been some prosperity, almost all of which is cornered by the large landlords & contractors. On the ground, there is sharp distress. Orissa CM's stand on water is quite positive: "We are not for water privatisation. We want to hand over control to the community. To the farmers themselves. I also favour smaller localised irrigation systems, not big dams". Those are good intentions and quite worthy of support.

But not quite the way things are working out on ground. "Community control" is now a cover for private control.

Expense will be borne by the Public. A few big landlords will make profit. With the huge costs being passed on to them, many small farmers will be bankrupt in the near future. As the small farmers lose control over this vital resource, they will be unable to hold on to their lands. (THE HINDU 150902, 220902)

RESPONSE On two counts . . . We would beg to differ. First of all, our close acquaintance with the irrigation scene, at least in Maharashtra, very clearly shows that water from large projects has always been in control of powerful landlords and contractors. It is an illusion that it is not so. Control by a bureaucracy that is hand in glove with the rich and the powerful is only another form of control. Second, we also need to take into account that in Orissa the so-called PPs have been created by law, so to speak, from above. There is ample evidence of situations in which, however imperfect, WUAs that have been built from below have made some difference.

Maharashtra Experience After helping form the pioneering WUA on the Mula Minor 7, we helped form a federation; a WUA in Usmanabad that committed 15% of its water for the women and the landless and which unfortunately due to our weaknesses we were not able to utilise; a movement in the Chikotra valley that demands formation of WUAs not tied to command and water allocation according to population and not according to landholding; a similar movement for equitable water access for the Atpadi portion of the Tembu lift scheme that is also considering combining energy & water management; a group of WUAs in Ozar in which a WUA has brought wells under its purview, has built checkdams in the command and has set an example in integrated management of groundwater & surface irrigation and has exposed corruption and cornering of water by colluding officials & landlords.

Distinguish between privatisation and user control

Here we need to make a distinction between water rights and management being transferred from the state to collective entities of the users and that of being transferred to profit seeking enterprises. The WB and most international players conflate both these processes under the rubric of privatisation. However, we would say that we need to clearly distinguish between the two; only the latter should properly be called privatisation. In our opinion, while we need to move towards user control, nothing can be as harmful as the direct privatisation. The conflation of the two terms, at its best serves to sow confusion, and at its worst, is but a cunning device to cloak the advocacy of the latter in the advocacy of the former. (Edited response from K. J. Joy, Seema Kulkarni, Suhas Paranjape, for SOPPECOM on DNRM discussion Group on 191002)

GROUND WATER

Rajasthan As per a study by the state govt, the groundwater table in about 87% of the total area of the state has alarmingly gone down between 1998 and 2001.

Groundwater situation in Rajasthan

No of blocks	1998	2001
Safe	137	49
Semi critical	34	21
critical	26	80
Over-exploited	41	86
Total	238	236

The study said, the deficient rainfall during the past few years has aggravated the problem of drinking water. Of the 32 districts in the State, 18 have recorded 60% less than normal rainfall, while the remaining districts have recorded only 20% to 59% rainfall. 19 of these blocks have been reported to be fluoride affected. More over, as many as 18 609 villages in the State are facing the fluoride problems and 16 344 are facing the problem of brackish water. A total of 27 000 villages are facing the problem of potable water. The problem was stated to be alarming in Barmer, Siwana, Mandal, Parbatsar, Jaitaran, Pali, Ajmer, Rajsamand and Fatehsagar where water was being supplied once in 72 hours. It has become essential to provide water in eight urban areas and 172 villages in Pali district through railway transportation from this month. The Jawai dam in Pali district, Mega dam in Bhilwara, Rajsamand lake, Pichola & Fateh Sagar lake in Udaipur and Ramgarh dam in Jaipur district have become almost dry. The state govt has decided to take up 10 000 works for rejuvenation of conventional sources and sanctioned Rs 500 M for the same. (THE HINDU 030902)

Haryana The scientists of the CCS Agricultural University, Hisar have suggested that the govt should treat ground water as a state resource and pass legislation in this regard. 50% cultivable area of the state comprising Mohindergarh, Bhiwani, Hisar Gurgaoan districts and also parts of Sirsa district which depend on canal irrigation, are faced with the problem of rise in the ground water table and are facing the problem of saline and brackish ground water. Remaining areas comprising Karnal, Panipat, Kaithal, Kurukshetra and Yamunanagar districts are faced with the problem of falling water table due to over exploitation. Out of total 3.9 M Ha net cultivable area available at the time of creation of Haryana in 1966, the irrigated area has increased from 1.3 M Ha to 2.6 M Ha. (THE INDIAN EXPRESS 200902)

LAKES, TANKS, WETLANDS, GLACIERS....

Chilika Lake bags Ramsar Award Chilika Lake in Orissa has been chosen for this year's Ramsar Conservation Award for "the outstanding work in the

field of restoration and wise use of wetlands involving the local communities". (THE HINDU 130902)

Deeper Beel: a neglected lake in Assam Deeper Beel is the one of the neglected natural lakes near Guwahati city. Although Deeper Beel was declared a wild life sanctuary in 1989, the area was never developed for making it an actual wild life sanctuary and remained a sanctuary only in the official records. Surprisingly, the status of sanctuary was withdrawn this year on the ground that it would create problems for the fisherman living in the area who are solely depending on this lake for their livelihood. Other reason was that it is too near the airport. But due to public outcry, the state forest dept had to declare the lake again as the wild life sanctuary. The total area of the Deeper Beel at present has been reduced to just about five square km from a larger area earlier. (SENTINEL 280902)

Bangalore tanks The Bangalore's bane – Ulsoor, Bayrasandra, Sankey and Yedyur tanks – are set to regain their past glory under 'Kere Siri', a tank rejuvenation programme undertaken by the Bangalore Mahanagar Palike. These tanks, which are gradually turning in to black holes due to contamination and neglect, will be salvaged over the next 12 months at a total cost of Rs 250 M. (DECCAN HERALD 181002)

Gujarat HC for Ahmedabad's lakes The Gujarat HC has directed the state govt authorities, which had actively contributed to the destruction of the city's waterbodies, to protect and recharge them. However, the restriction on building activity around lakes, which has brought builders to their knees, has been lifted. The judgement was delivered in August on a group of PIL demanding revival of the city's lakes. The restriction imposed on April 2001, which prohibited all construction within 500 m of lakes smaller than 5 000 sq m and 1 km of the bigger waterbodies. (DOWN TO EARTH 300902)

Hill area ecological development funds diverted The Special central assistance meant for the ecological preservation of the hill areas have been diverted for other uses like salary payments, according to a report by the Union Ministry of Environment and Forests. The funds were meant for preparation of an action plan for sustainable mountain development, including micro hydel projects, rainwater harvesting, water conservation and renewable energy development. The ministry had also suggested certain restriction in the Himalayan hill areas including development of tourist resorts, commercial complexes and institutional buildings be located in areas with surplus water and electricity, environment impact assessment for construction of roads more than 5 km in length, making rooftop water harvesting mandatory in urban areas, etc. (BUSINESS LINE 230902)

Disaster Management Plans The Delhi High Court has given eight weeks to the National Committee on Disaster Management to formulate agenda for its first meeting and prepare recommendations for disaster management. The committee headed by the Prime Minister has not met since its constitution over a year ago. The court has also directed the Union Govt to file the status report regarding the recommendations made earlier by a high power committee on disaster management planning. At least three of the seven recommendations of the committee need not to go to National Committee and the govt ought to furnish details of implementation thereof. The High Court was responding to a PIL. (The Hindu 240902)

Impacts of Climate Change A study by Delhi University's Geography Dept in Kullu Vally of HP (selected because it forms a transient zone between lower and greater Himalayas), revealed that as a result of the unplanned change in land-use, "67 % of the 1 500 major glaciers in the Himalayas are receding and this will impact the mountains" and consequently the urban areas. The climate variability, which includes extreme weather events, poses a serious threat to India, which faces the challenge of ensuring food and nutritional security to a fast growing population. These are the excerpts from the book "Climate variability, extreme events and Agricultural Productivity in Mountain Regions" by S Sen Roy and R B Singh. (THE HINDU 081002, THE HINDUSTAN TIMES 211002)

RURAL WATER SUPPLY

WB sells cleanliness to Kerala One of the outcomes of the recently concluded World Summit on Sustainable Development was the public-private partnership project "Washing Hands" launched by the WB, the London School of Hygiene and Tropical Medicine, USAID, UNICEF, WHO and soap companies. The project talks of "saving lives" through reducing diarrhoeal diseases by half, by doubling hand washing by selling soap. Kerala has been chosen as the state to implement the

"Washing Hands" project in India even though Kerala has the highest hygiene standards, lowest diarrhoeal deaths, highest awareness on prevention of diarrhoeal diseases, lowest childhood mortality, highest female literacy. Kerala has the highest access to safe water. (Vandana Shiva, vshiva@vsnl.com)

3 000 Haryana villages without adequate water The Haryana CM admitted that of the over 7 000 villages, over 3 000 do not have adequate drinking water facilities. (THE TRIBUNE 010902)

Fund for rural water scheme The Punjab CM has released Rs 70.40 M to make the collapsed rural water supply schemes functional in the Malwa belt. There are about 200 such schemes. The Public Health Minister said that there were 615 canal-based rural water supply schemes catering to the needs of 1288 villages and out of these over 200 were required to be made functional. (THE TRIBUNE 190902)

AP Rural Water scheme The rural water supply dept has chalked out a major plan with an outlay of Rs 600 M. The scheme would be experimentally implemented in Chittoor, Nalgonda, Guntur and Khammam districts along with Krishna. (DECCAN HERALD 160902)

Plan MP The govt has prepared a Rs 1.32 B plan for providing drinking water in 27 drought-hit districts. The plan includes a provision for Rs 847.5 M for developing new sources of water. (Projects Monitor 181002)

Swajal in Uttaranchal The WB assisted UP Rural water Supply and Environmental Sanitation Project is claimed to be a community driven water supply and sanitation programme that is being implemented in over 1000 villages in Uttaranchal. Many doubts persist about the claims, though. In fact many see it as an attempt to introduce private water supply in rural areas through the backdoor. (DECCAN HERALD 271002, Presentation by the concerned villages in Delhi)

You are wrong, Mr Prime Minister

The United Nations has proclaimed the Year 2003 as the International Year of Freshwater. While launching the year at Vigyan Bhawan on Feb 5, 2003, what the Prime Minister said included the following: "Civilizations have prospered on the banks of rivers. Many important cities of the world also have derived their sustenance from rivers. Today, however, it is rivers that are in need of sustenance... We must work for augmentation and optimal utilization of the existing water resources. We have to harness the latest scientific and technological developments in water conservation and recycling. At the same time, we also have to adopt many of our time-tested traditional methods of water harvesting and management... In recent weeks, I have come across some critical comments that in pursuing the ambitious river-linking project, we are neglecting the imperative of promoting small, village-level water conservation projects. This is not true". (Press Information Bureau 050203)

Unfortunately, Mr Prime Minister, you are wrong. In May 2000 you announced a scheme for Rain Water Harvesting, declaring that every drop of water where it falls will be harvested. That day you declared that Rs 20 B will be spend annually on that. We are yet to see what happened to that scheme. Your govt has not done assessment of potential of rainwater harvesting from a single river basin or sub basin of India. On what basis then can you talk about river linking? Had you set up a task for assessing and implementing rainwater harvesting across India, your words would have had some credibility. For now they have none.

PUBLICATIONS AVAILABLE WITH SANDRP

1. *Say no to profit over water: A Dossier on Water Privatisation*, SANDRP, 2003, pp 84, Rs 50/-
2. *Vishwa Bandh Ayog per Nagarik Margadarshika* (HINDI), SANDRP, 2002, pp 63, Rs 30/-
3. *Power Finance, Financial Institutions in India's Hydropower Sector*, By Peter Bosshard, Published in India by SANDRP, March 2002, pp 132, Rs. 100/-
4. *Bade Bandh, Bharat ka Anubhav* Hindi Translation of WCD India Country study, By R Rangachari, Nirmal Sengupta, Ramaswamy Iyer, Pranab Banerji & Shekhar Singh, SANDRP, 2001, pp 268, Rs. 100/-.
5. *The Drought, the State and the People: An Experience in Gujarat* SANDRP Dossier on Gujarat Drought 2000, Edited by Sanjay Sangvai, pp 90, Rs. 75/-.
6. *Report of the Daud Committee on Sardar Sarovar Displaced, Govt. of Maharashtra*, SANDRP a co-publisher, pp 54, Rs. 30/-.
7. *Dam Vs Drinking Water: Exploring the Supreme Court Narmada Judgement*, L C Jain, Parisar Publication 2001, p 131, Rs 75/-
8. *Proceedings of the Consultation on the Report of the World Commission on Dams, Ranchi 7-8 August, 2001*, Edited by DK Mishra, Barh Mukti Abhiyan, Oct. 2001, Rs. 40/-.
9. *The River and Life: People's struggle in the Narmada Valley* By Sanjay Sangvai, Earthcare books, June 2002, pp 240, Rs 180/-.
10. *Large Dams in India: Environmental, Social & Economic Impacts* By S Singh and P Banerji, 2002, IIPA, pp 338, Rs 500/-
11. *Tehri Environment and Rehabilitation: Towards Failure and Devastation*, Published by MATU, pp44, Rs 25/-; Hindi: Rs 20/-
12. *Bharat mein Bade Bandh ka Lekha jokha* (Hindi) summary of WCD India Country Study, Manthan, pp18, Rs 5/-
13. *Water: Private, Limited* by Shripad Dharmadhikary, Manthan, pp 54, Rs 20/-
14. *ECOLOGIST ASIA SPECIAL ISSUE ON DAMS IN NORTH EAST INDIA*, Jan-Mar 2003, pp. 96, Rs 50/-
15. Seminar Special issue on Floods, June 1999, pp. 90 Rs 15/-

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URBAN WATER SUPPLY

Study on wastewater recycle The Andhra Pradesh govt has entered into an agreement with the USA govt through US Trade and Development Agency for a feasibility study on waste water recycling in Hyderabad. The US agency is providing \$465 000 grant for this study to be completed by June 2004. An evaluation of wastewater treatment, recycle and reuse in the local river basin will be undertaken. (NEWSTIME 170902)

Yamuna Pollution and Delhi Though the pollution level of Yamuna river has risen, the Delhi Jal Board conducts only 18 out of 33 tests prescribed by the BIS for drinking water. The DJB does not have proper facilities to check the presence of many harmful chemicals in the water. Analysis of water lifted from the consumer end is mostly limited to testing of only residual chlorine, clarity and appearance.

➤ Water supplied in 170 govt schools in Delhi were found to have fluoride levels higher than the permissible limit of 1.5 ppm. (THE HINDUSTAN TIMES 060902, 090902)

Survey to bring Narmada water to Bhopal The Union Govt sanctioned an amount of Rs 10 M to NHDC to survey for bringing Narmada water to Bhopal from Shahganj. NHDC would conduct the survey through satellite imaging and submit the report by the year-end. The Mayor of the city is claiming that it would be a costly affair and that better option would be to bring Narmada water from Mardanpur near Rehti. (CENTRAL CHRONICLE 051002, THE FREE PREEES JOURNAL 061002)

Krishna waters to Hyderabad Andhra Pradesh has launched an ambitious project to 'long haul' the waters of the Krishna River to Hyderabad. Naidu is the fourth CM to lay the foundation stone for the Rs 8.75 B project

at Saheb nagar Kalan. This project was also once launched in 1988, in early 1990s and also in 1994.

➤ **Tender Finalised** Rs 4 B Tender to lay 90 MGD pipeline for supply of Krishna water to Hyderabad city was finalised on September 1st. In all six bidders will be selected. In the first phase, 45 MGD of water would be drawn from the said source. (NEWSTIME 010902, THE FREE PRESS JOURNAL 031102)

Consumers to pay for upgrading water lines The Bangalore Water Supply and Sewerage Board will make it mandatory for domestic water consumers to switch from the existing GI water pipes to medium-density polyethylene pipes to reduce wastage and contamination of water. The Board will replace nearly 370 000 existing domestic connections in the city in a phased manner. The BWSSB will replace its main distribution lines free but consumers will have to pay for individual water lines. The cost is Rs 1 500 per connection if the water meter is within 7 m from the distribution lines; for lines beyond 7 m, the fee is Rs 2 500. (THE TIMES OF INDIA 290902)

WATER PRIVATISATION**OPENING THE FLOODGATES
EUROPEAN COMMISSION ASKS FOR OPENING UP
OF INDIA'S SERVICE ECONOMY**

Leaked Requests Under The WTO's General Agreement on Trade in Services Negotiations Show EC Demands for Opening Up of India's Water, Energy & other Sectors

The European Commission, acting on behalf of the 15 countries of the European Union, has asked for sweeping, extensive and practically unconditional opening up of India's service economy to EC companies, firms, agencies and individuals. In its "requests" made to the Govt of India under the ongoing negotiations for the expansion of the World Trade Organisation's General Agreement on Trade in Services, the EC has demanded virtually unlimited and unconditional access to service sectors like urban water supply, sewage and waste water service; energy distribution services including oil, gas and electricity; retail sale of fuel oil, bottled gas and wood; construction of dams, bridges, buildings etc.; and many others.

IN PARLIAMENT While answering a question by Lok Sabha MP Shri Suresh Ramrao Jadhav on 181102 Union Minister of State for Water Resources Smt Bijoya Chakravarty implied that the Union Govt does not know anything about it. The exact question and answer is reproduced below.

QUESTION: Will the Minister of WATER RESOURCES be pleased to state:

- (a) whether river water in some parts of the country has been privatized;
- (b) if so, the details thereof;
- (c) the criteria laid down in this regard;
- (d) whether the interest of the farmers has been protected; and
- (e) if so, the details thereof?

ANSWER: THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SMT. BIJOYA CHAKRAVARTY): (a) to (e) Water being a State subject, planning, execution and management of water resources projects is taken up by the State Governments themselves. As such, the information for answering the question is being collected from the State Governments.

Make the Process Transparent What is shocking is that this process that will have a far -reaching and vast impact on millions of our people is being conducted in complete secrecy. It is only the leaks of the EC demands that have allowed us to get a feel of what is at stake. It is therefore imperative that

- GOI make public ALL the requests it has received so far from all countries
- GOI make public its own requests to other countries
- Institute a credible and independent review of implications of any such steps in a transparent way before considering any of the requests
- Carry out an extensive and informed public debate and discussion on this, including in the media, parliament, state assemblies, panchayats
- The public debate should also include public hearings where the common citizens can participate, apart from stakeholder consultations, media discussions, seminars and so on

- Refuse outright the opening up of crucial and sensitive sectors like water, energy, tourism etc.
- Protect and safeguard adequately the powers and role of local bodies in the planning and development of resources like water.
(polarisinstitute.org/gats/main.html, Manthan PR 260203)

Private sector in Maharashtra Irrigation The Maharashtra cabinet approved the proposal to invite private sector funding of incomplete and new irrigation projects. So far the State has a irrigation potential of 4 M Ha and hopes to bring 3.6 M Ha of land under irrigation at a total cost of Rs 250 B, said the CM. He said that the govt is unable to undertake new irrigation projects or even complete unfinished works due to paucity of funds. He said that projects to be completed on BOT basis will allow private entrepreneurs to have powers of irrigation management and recovery of water charges. Nearly 85 B was needed to complete work at KVDC. The cabinet has decided to amend the Maharashtra Irrigation Act 1976. (THE ECONOMIC TIMES, THE FREE PRESS JOURNAL 261002)

10th Plan on Privatisation The Planning Commissions seems to be the latest recruit in the army of privatisation. The 10th Plan document on page 871 of Volume 2, Chapter 8.1 on *Irrigation, Flood Control and Command Area Development* says, "It is high time that the water sector also took appropriate steps to attract private sector investments as it may no longer be possible for State Govts to fund all water resources development projects".
(<http://planningcommission.nic.in> accessed on 190203)

NAPM AGAINST SHIVNATH RIVER PRIVATIZATION

The organizations from various parts of India joined hands with the villagers in Chhattisgarh state to intensify the fight against privatization of the Shivnath river and demanded that the Chief Minister should cancel the deal and refrain from further such attempts to hand over the people's resources to private interests. On the 20th day of the nationwide campaign by the activists of the National Alliance of People's Movements, a large meeting at Mohlai village affected by the dam on the Shivnath River, on Feb 15, the organizations and the people resolved to fight against the encroachment on the people's rights and life by the private owner. (NAPM PR 170203)

Anna Hazare slams river privatisation plan THIRUVANANTHAPURAM: Prominent Gandhian Anna Hazare expressed concern over privatisation of rivers and said "people are true owners of water resources." Turning rivers over to private interests to set up projects would not solve drinking water problem and it could be tackled only through watershed development and management with people's participation, Hazare told a press meet here. (THE TIMES OF INDIA-Thiruvananthapuram 090203)

Centre clears tax sops for private water firms The Union cabinet approved exemption of certain excise and custom duties for private companies willing to set up water treatment plants for purification and desalination. This was decided at a meeting of CCEA chaired by the PM. Concession would also be given on pipes required for supplying raw water to the treatment plants and from the plant to storage facilities. (DECCAN HERALD 010902)

Urban water privatisation Divorced from reality “The urban water privatisation projects are simply not financially viable,” says V Satyanarayana, Infrastructure finance advisor with the Indo-US Financial Institute Reforms and Expansion Projects, a USAID funded body under the Union Ministry of Urban Development. It is obvious the privatisation protagonist forgot to take into consideration the myriad complexities of the India Water management system that are deeply embedded in the country’s society, politics and economy.

Naseer Munjee, Deputy Managing Director of IDFC in Mumbai, says, “Water is an economic service, not a social obligation. So tariff has to be hiked if required.”

Prof A V Vaidyanathan, Water Expert with Madras Institute of development Studies in Chennai, says, “It is not correct to describe water as a commodity. It is a public utility which can be priced, but within certain socio-economic parameters.”

Jairam Ramesh, secretary of the economic affairs dept in Congress party, says, “Water is the public domain and any commercial enforcement on it is bound to be tough to impose.”

Privatisation of water to spawn a steep tariff hike

City	Current Tariff (Rs/Kl)	Likely extra burden (Rs/Kl)
Hyderabad	6.00	4.00
Kolkata	3.00	7.00
Surat	2.00	8.00
Tirpur	5.00	5.00
New Delhi	.35	9.65
Mumbai	4.00	6.00
Bangalore	6.50	3.50

(DOWN TO EARTH 150902)

QUOTES

According to CAG report even after spending Rs 20 B on DPAP over the last 20 years, the drought prone area has gone up from 55.3 M Ha to 74.6 M Ha. There is no doubt that to hide these failures the govt is now trying to attract the attention of the country towards River Linking and happily they have put the cost estimate at Rs 5 600 B. Thousands of contractors, bureaucrats and politicians must be flooded with the dripping saliva seeing the figure, but will the poor in drought prone areas get any water?

L.C. Jain in OUTLOOK (Hindi) 030303

“Repairing old Dams shall be prioritised along with attempt to renovate and equip them with modern techniques to avoid the mishaps so that existing infrastructure could be exploited to the hilt”. (It’s to be noted that last August, Jamunia Dam in Hoshangabad district burst out causing havoc to surrounding villages.)

Digvijay Singh, Chief Minister, Madhya Pradesh (CENTRAL CHRONICLE 160902)

“Efforts need to be concentrated on the quick completion of ongoing projects, especially the old ones, and proper maintenance of the created infrastructure... cost effective options like rejuvenation of traditional water harvesting structures, groundwater development, development/ restoration of surface minor irrigation systems, rainwater harvesting in urban areas and watershed development should be taken up simultaneously. These options are less costly in terms of cost per ha of development as compared to dams and do not involve other problems like rehabilitation of displaced persons, submergence of forestland, land acquisition, long gestation period etc.

10th Five-Year Plan, Vol. 2, pp. 971-2

“People’s empowerment is the key... the would be beneficiaries must have a say, in formulation, in the programmes... this is the way we have to go... It is logical for a democracy to move in this direction of devolution and citizen participation.”

Planning Commission Vice Chair KC Pant on the eve of the meeting to approve the draft 10th five year plan (THE TIMES OF INDIA 051002)

Alwar is no utopia. It is a desperately poor region with deplorable govt services and infrastructure, high levels of illiteracy and an appalling level of oppression for the majority of women. But if there is to be an answer to the acute water problems of India- and the world – I am convinced it lies with the rainwater harvesters and forest protectors of the Aravalli hills.

Patrick McCully in *Harvesting Rain, Transforming Lives* in World Rivers Review (Dec 2002)

FLOODS

Natural catastrophes to cost insurers \$ 70 B Natural catastrophes, vast majority of which have been weather-related have cost countries and communities an estimated \$ 56 B during January to September, the preliminary study showed. The final bills, the experts expected could touch \$70 B. Between July and August, floods and mudslides triggered by record rainfall killed 1 300 people in Bangladesh, Nepal and parts of India including Assam, Bihar and West Bengal. Tens of thousands of villages were flooded and hundred of thousands of houses destroyed. And the price tag of the economic losses was estimated at \$80 M. According to Munich Re report there have been over 526 major natural disasters already this year in the world. The highest was in Asia (195), followed by America (149), Europe (99) and Africa (38). The report claimed over 9 400 people died the world over and vast majority of which (8 000) were killed in Asia. The report estimated that 42 % of the fatalities, 66 % of the economic losses and 64 % of the insured losses were due to floods. (THE HINDU 301002, ASSAM TRIBUNE 021102)

Flood control projects in Assam The Central Govt has launched flood-prone river projects to take up schemes to control floods and erosion having inter-state ramification and the State Soil Conservation Dept has already started implementing such projects in the Barak Valley in Assam. About Rs 150 M will be spent in implementing Assam's part of the Project and process of soil survey for the project has started. The project is aimed at checking the problem of soil erosion and to develop the land for sustainable production. The dept has prepared two other projects to be implemented with non-lapsable pool of central funds. These projects are Rs 98.5 M project to control soil erosion in Guwahati city and a Rs 18 M project for land protection around Patkai hills. The SCD is also preparing four other flood-prone river projects to be submitted to the Central Govt for approval. These projects are – Jiadhal project in Dhemaji district, Dirkong project in Lakhimpur district, Jia Bharali Project in Sonitpur district and Dudhnoi project in Goalpara district. (ASSAM TRIBUNE 170902)

“Flood control” increases flood problems in Bihar While Bihar accounts for nearly one fifth of the flood prone area of the country, over 73% (CHECK) of the geographical area is perennially under water, according to a study. Bihar supports a population of 82.88 M within a geographical area of 9.42 M Ha. Of it 6.9 M Ha is flood prone and 941 000 Ha is perpetually waterlogged. This year, with around 350 deaths reported due to the floods in the state where 17 M people have been affected in 21 districts. As a parts of its long term strategy for flood management, the state, in its report to the Centre, suggested construction of dams and reservoirs in Nepal including Kosi high dam at Barhakshetra, Bagmati multipurpose project at

Noonthore, Kamla Reservoir Project at Chisapani, diversion of flow of Adhwara group of rivers and inter-basin transfer of water from surplus to deficit upstream areas. In the plan period, the 3454 km long embankments have been constructed by the state in 50 years. Rs 13.27 B have been spent on them in the name of flood control. After spending the huge amount the flood prone area in the state have increased from 2.5 M Ha to 6.88 M Ha. (THE FREE PRESS JOURNAL 170902 & DAINIK HINDUSTAN 200902)

Floods in Nepal A two-day regional consultation on poverty and floods has been concluded in Nepal. Nearly five dozen experts, officials, academicians and community workers participated in the meet and passed their recommendations to the Third World Water Forum, to be held in Japan in March 2003. In Nepal, floods and landslides are considered as the second largest killer after epidemics. On average, the disasters claim the lives of between 250-300 people every year. According to data from the Home Ministry of Nepal, a series of natural landslides and floods left a total of 444 people dead, 39 missing, and 108 injured this year. Well over 55 000 families were affected by the disasters that struck in this year's monsoon. Worldwide, flood-related disasters have claimed the lives of over 390 000 people in the last ten years, out of which between 40% to 50% came from Asia, according to figures of Japan International Cooperation Agency. Experts say dykes and embankments do not always help solve flood and inundation problems. The best solution, they argue, lies in planting trees or developing appropriate vegetation along the riverbanks and the catchments. The govt of Nepal established the Dept of Water-Induced Disaster Control two years ago. The dept is currently working together with the Govt of India to take some flood control measures such as building embankments along the banks of the Bagmati in southern Rautahat and Sarlahi districts. The govt has allocated Rs 330 M for Dept in 2002-3, and, the Indian water resources officials agreed to provide Rs 300 M for the Bagmati embankment project. (KATHMANDU POST 191002)

POLLUTION

Bhopal in Troubled waters The People's Science Institute, Dehra Dun, has found high level of mercury in groundwater resources near the former Union Carbide factory. It has warned people living in the vicinity from drinking that water, as it is hazardous to health. According to a recent report by PSI, Dehradun for Bhopal Gas Peedit Mahila Udyog Sangathan, the contamination of water by mercury is spreading further away from the factory site. The levels of mercury in water were found to be 2 to 24 mg/l against permissible limit of 1 mg/l. The seepage is found to increase dramatically following the monsoon, with levels of mercury going up to as much as 70 mg/l in some cases. The BGPMUS has threatened to file

a PIL in the Supreme Court seeking directive to the MP govt and Bhopal Municipal Corporation.

➤ A report from the Citizen's Environmental Laboratory, National Toxic Campaign Fund, Boston – of 1990 states: "High level of most toxic materials were found in the samples from the waste storage area. One of the most toxic, dichlorobenzene, was also found in the community's drinking water." The govt's own PHE report of 1996 is as damning: "Ordinarily, Chemical Oxygen Demand is zero in groundwater but in the areas tested, COD ranged from 45 - 98 mg/l". while the WHO limits for safe drinking water are 6 mg/l. A detailed study by Shrishti released in 2002, observed, Results of the survey clearly indicate mobility of toxic chemicals from the emanating source, the UCIL factory to the adjoining residential areas. Another very significant aspect is that the human breast milk showed maximum concentration for Volatile Organic Compounds and a higher concentration of the pesticides HCH. (THE HINDU 290902, THE TIMES OF INDIA 300902, INDIAN EXPRESS 271002)

MP under Arsenic threat About 30 000 people in 30 villages and towns in MP are directly exposed to Arsenic poisoning and over 200 000 are 'at risk', reports experts from the Dept of Engineering Chemistry, Bhilai Institute of Technology, indicating that the affected area could be very large. (THE INDIAN EXPRESS 220902)

A plant that soaks Arsenic A Haryana based geneticist and his colleagues at the University of Georgia have successfully sewn in genes from a common bacterium, giving the mustard the ability to not just withstand but to also soak up arsenic. This study has been published in the Journal *Nature Biotechnology*. It is the first step in a long-term plan to create crops that could clean arsenic from the Gangetic soil and water. (INDIAN EXPRESS 131002)

Damodar pollution The River Damodar (541 km long) originates from the Khamerpet hills (1068 m), near the trijunction of Palamau, Ranchi, and Hazaribag districts of Jharkhand. It flows through the cities of Ramgarh, Dhanbad, Asansol, Durgapur, Bardwan and Howrah before ultimately joining the lower Ganga (Hooghly estuary) at Shayampur, 55 km downstream of Howrah. The river is fed by a number of tributaries, the principal ones being Jamunia, Bokaro, Konar, Safi, Bhera, Nalkari and Barakar. The catchment area of the basin is about 23 170 km of this, three-fourth of the basin lies in Jharkhand and the rest in W Bengal. The 82 % of the rainfall occurs during the monsoon. Damodar basin is an important coal bearing area and at least seven coalfields are located in this region. The basin is a repository of approximately 46 % of the Indian coal reserves. Due to heavy industrialisation over the last four decades the river has become highly polluted. Industry discharge of uncontrolled and untreated industrial wastewater, often containing highly toxic

metals is the major source of pollution. Mine water and runoff through overburden material of open cast mines also contribute. Huge amount of overburden materials have been dumped on the banks of the river and its tributaries, which finally get spread in the rivers especially in the rains. These activities have resulted in the visible deterioration of the quality of the river water. The large scale mining operations going on in this region have also adversely affected ground water table in many areas with the result that yield of water from the wells of adjoining villages has drastically reduced. Further, effluents discharged from the mine sites have also seriously polluted the ground water of the area. Heavy metals like manganese, chromium, lead, arsenic, mercury, fluoride, cadmium, and copper are also found in the sediments and water of Damodar River and its tributary like the Safi River. Permian coal of this area contains all these toxic elements in considerable amount. Presence of lead is 300 ppm in the coals of North Karanpura coalfield. The Damodar sediments are deficient in calcium and magnesium and rich in potassium concentration. Titanium and iron are the dominant heavy metals followed by manganese, zinc, copper, chromium, lead, arsenic, and mercury. Other heavy metal like strontium shows more or less uniform concentration throughout the basin. Average concentration of strontium in the sediments of the river is 130 ppm. Silica is also high (28 ppm) in the sediments of Damodar River and its tributary. Arsenic in the water ranges from 0.001 to 0.06 mg/l, mercury ranges from 0.0002 to 0.004 mg/l, fluoride ranges from 1 to 3 mg/l. (Daily Excelsior 161002)

ISSUES ABOUT RIVERS

After 7 B & 15 years, Ganga unfit for bathing

According to the latest govt report, the pollution level of river Ganga is worse in some places than it was when the Ganga Action Plan was started in 1985. The Dissolved Oxygen level in Ganga has decreased upstream of Kanpur where in 1986, the DO level was 7.2 mg/l, in 2001 it has decreased to 6.8 mg/l (the minimum prescribed level is 5 mg/l). The Biological Oxygen Demand levels could not reach upto prescribed limit at Rishikesh, Haridwar, Allahabad (upstream) and Varanasi (upstream). The BOD levels, in fact were higher than 1986 levels in Ganga waters at Rishikesh and Haridwar.

➤ **SC notice for inaction on Ganga** Anguished at unabated pollution of Ganga and its tributaries, the SC has issued notices to eight states and their 122 municipalities, asking them to explain why they have not erected and maintained oxidation ponds to treat the wastewater. The states are Bihar, Jharkhand, Haryana, MP, Rajasthan, UP, Uttaranchal and W Bengal. The order was passed on an application sent by the CPCB. CPCB counsel sought a direction to the respondents to maintain oxidation ponds for the treatment of sewage as envisaged under the Ganga Action Plan, on which

Rs 4 B has already been spent. In Aug 1993 the court had ordered them to install effluent treatment plants to the satisfaction of the state pollution control boards within three months. (RASHTRIYA SAHARA 050902, THE TIMES OF INDIA 081002)

India, Japan accord on GAP India and Japan have signed an agreement to study the water quality of river Ganga for the second phase of the Ganga action plan and prepare a master plan to control pollution. Japan will take up the two-year study with logistics and data support of India. The main objectives of the 'Development study on water quality management plan for Ganga river' is to formulate feasibility studies for the high priority projects identified in the master plan focussing on Kanpur, Allahabad, Varanasi and Lucknow. The River Action Plans were undertaken based on the surveys conducted by CPCB, which identified 27 grossly polluted stretches of major rivers of the country. A strange part of this accord is that the tender for a consultant and the study team would be floated in JAPAN! (BUSINESS LINE & ASSAM TRIBUNE 041002)

Plans to cleanse Musi The Hyderabad metropolitan water supply and sewerage board has drawn out plans to restore Musi River to its pristine glory. Plans have been made for diverting pollution sources of the river and installing five sewerage treatment plants by 2005. The dept had submitted a detailed project report to the Union govt. The cost as per the report was Rs 3.44 B, of which 70% would come as grant from the Centre. The balance would have to be raised by the board from its beneficiaries and by enhancing the sewerage cess. (NEWSTIME 120902)

Sand business affected by Bisalpur dam Due to the Bisalpur dam in Tonk district of Rajasthan the quality & quantity of sand available in the river has been seriously affected. Being good for the building construction, the small grain sand of the river was very popular in the area before construction of the Bisalpur dam. But after construction of the dam the small grain sand has almost disappeared from the river. The remaining sand in the river is not good for the building construction. The local people are concerned that the remaining large grain sand would also disappear in some years. (RAJASTHAN PATRIKA 200902)

FISHERIES

Fishing for trouble due to gigantic dams When the gigantic dam diverts water in to irrigation canals, it reduces the flows downstream. The flow, dwindled to a trickle, plays ecological havoc with aquatic life below the dam. The Sardar Sarovar Dam in Gujarat likewise will destroy the flourishing Narmada-Hilsa fishery. Planners and dam engineers often bypass these ecological hazards and go ahead for immediate

economic gains. Rivers also are abused unabashedly: Pollution chokes them, embankments separate them from land. Is it an act of wisdom to clamp a seal on our lifelines when such callous act is sure to occasion a whole disaster. (NEWSTIME 171002)

Decline in Fish Species in Brahmaputra Some of the finest fish species that used to be found abundantly in Brahmaputra River may be on their way to be extinct, said scientists affiliated with the Central Inland Fisheries Institute. The institute has found a sharp decline in the number of several fish species like *Labeo Rohita*, *Catla Catla* and *Cirrhinus Mrigala* in the river in the past few years. (THE INDIAN EXPRESS 010902)

INLAND WATERWAYS

Karnataka plans 7 inland waterways The Karnataka govt has made a proposal to the Centre for developing seven inland waterways of about 150 - 175 kms on various rivers, including the backwaters of the Krishna, at a cost of Rs 51 M. The Minister of the State for Ports and Fisheries said each of the project would cover a distance of about 20 - 25 kms which could be used for both cargo and passenger traffic. The Centre, which earlier provided a grant of 50 % for such projects, had now increased it to 90 %. The projects include services between Kodibag and Kadra on the Kali river of Uttara Kannada district; from Honnavar to Gerusoppa on the Sharavathy river in Uttara Kannada district; from Kundapur riverine port to other places situated on the banks of group of five rivers forming Gangoli in Udupi district; from Malpe port to other places on the banks of Udavar river in Udupi district; from Mangalore old riverine port to other places on the banks of Gurupur and Netravathi rivers in Dakshina Kannada district; from Anandagiri to Beeramballi in backwaters of Kabini reservoir in Heggadadevanakote taluk; and connecting several places in backwaters of Krishna river in Almati. (DECCAN HERALD 241002)

FOODGRAINS MANAGEMENT

Starvation and malnutrition deaths: Maharashtra The Pune based Tribal Research and Training Institute has confirmed that 69 % of the deaths of children in Thane district were due to malnutrition. It was found that the extent of malnutrition was 92 %.

➤ **Rajasthan** Starvation has been identified as the main reason for the death of 20 persons including 12 children in two blocks of Baran district in Rajasthan in a span of one month, according to a report prepared in alliance with Sankalp and Bharat Gyan Vigyan. The report has concluded that the PDS in the region is dysfunctional.

➤ **Orissa** The Centre virtually admitted that the starvation deaths among the very poor in Raigada and Keonjhar districts of Orissa could be due to forced starvation on account of poverty. The special four-

member team, dispatched to Raigada and Keonjhar districts to probe the cause behind the deaths and to review the function of the PDS, found a "major shortcoming" of worrying proportions. A number of very poor under Antyodaya category were routinely forced to mortgage their ration cards to local moneylenders. (THE ECONOMIC TIMES 091002, THE TIMES OF INDIA 241002)

Food scarcity to haunt the poor even in 2030 "World Agriculture: Towards 2015-30", a study by the UN Food and Agriculture Organisation predicts that while unmistakable gains will indeed have been made by the year 2030, a large number of food poor people will still remain, largely in the perennially impoverished sub Saharan Africa. The report underscores the importance of open and fair access to developed markets for developing countries' produce as a very important means of alleviating food scarcity through indirect, income enhancing means, that is, through the gains from the trade. (THE ECONOMIC TIMES 240902)

Kharif grain output may be lowest in 13 years Initial official estimates of the likely crop production in the erratic monsoon – affected kharif season show a drastic 20.7 MT or 18.57% drop in the foodgrain output from 111.51 MT last kharif. The paddy crop alone will account for an output loss of 13.4 MT, or 16.81% and is expected to yield 66 MT. (THE ECONOMIC TIMES, BUSINESS STANDARD 250902)

Paddy MSP hike as drought package The Commission for Agricultural & Prices has recommended a Rs 0.2 per kg increase in the MSP of paddy to be procured during the kharif marketing season be paid as a one-time bonus. CACP has also called for a rollback of fertiliser prices to pre budget levels and a complete interest waiver on all farm loans for a one-year period. If implemented, the entire package is expected to cost around Rs 70 B. The CACP in its report submitted earlier on the price policy for Kharif 2002-3 had recommended a freeze in the MSP of paddy at last year's level of Rs 5.3 and 5.6 per kg for common and Grade 'A' varieties. (BUSINESS LINE 260902)

Study on corruption in PDS According to a study by Oxfam India, subsidised grain meant for the poor in drought affected Rajasthan is being diverted by a system marked by corruption and inactive monitoring. The study focused on the availability of grain, kerosene & other items under PDS. There are separate prices for those above and below the poverty line and for the 'antyodaya' category. The beneficiaries of the PDS are mostly daily wagers who don't have the money to buy their monthly allocations at one go. The depot holders mark in the ration cards showing that they have taken the full quota. Oxfam has recommended that people should be allowed to buy their monthly allocation in 2-3 installments; have a fixed date of the month when the grain arrives in the shop; and strengthened vigilance to

stop the diversion of subsidised food. (THE TIMES OF INDIA 210902)

Scam in crop purchase in Assam The CBI has filed a case against four ex-officials of Tribal Cooperative Development Federation and a private company for Rs 5 M scam in the purchase of the kharif crops in Assam. The officials had given contract to a private company named Mek Enterprises for purchasing kharif crops in 1990-1 in the tribal areas of the state. The company had sold less quantity of crops to TRIFED then pre-scheduled quantity, while the amount had already been paid to company for the predetermined quantity. Moreover the right for giving contract was of FCI and TRIFED had only a monitoring role. The company had purchased crops from farmers at less than govt scheduled rate and sold to TRIFED at more than the govt rate. (RASHTRIYA SAHARA 081002)

Drought Relief from Punjab to Rajasthan The Punjab govt has sent 50 000 T of wheat and adequate fodder for cattle and 1 000 cusecs of water for limited period to Rajasthan. Most of the extra water being supplied was for drinking purpose and a small portion for the bajra crop. (THE TRIBUNE 271002)

Regional Rice Export Strategy? Thailand has invited India, Pakistan, Vietnam and China to formulate a regional rice export strategy so that these countries stop undercutting prices. They account for 70% of world's rice exports this year. (THE ECONOMIC TIMES 240902)

AGRICULTURE

2002 all-India drought year The India Meteorological Dept has acknowledged that the year 2002 has been the first all-India drought year since 1987, while noting that the behaviour of the 2002 monsoon was "intriguing". In IMD's end of the season report, the dept noted that the aggregate rainfall received by the country as whole during this year's monsoon season at 735.9 mm was 19.35% below the historical long period average of 912.5 mm for this period. 29 % of the area in the country recorded drought conditions, with rainfall deficiency exceeding 25%. 10% of the area in the country is under severe drought conditions experiencing over 50% rainfall deficiency, which included E Rajasthan (60%) and W Rajasthan (71%), two of the 36 sub-divisions. The area under moderate drought covered 10 sub-divisions including: Haryana, Chandigarh & Delhi (36%), Coastal AP (26%), Rayalseema (33%), N Interior Karnataka (31%), S Interior Karnataka (44%), Coastal Karnataka (30%), TN (45%), Kerala (35%), and Lakshadweep (45%). According to the IMD, the country is said to experience a drought year when the overall deficiency is more than 10 % of the LPA and more than 20 % of its area is affected by drought conditions. While admitting that

2002 was among the four major droughts of the century, IMD said that the drought in 2002 was mainly due to rainfall deficiency of 49% in July, which was "worst in the history of recorded observations".

Rainfall deficiency during drought years

Year	June	July	Aug	Sept	June-Sept
1972	-27	-31	-14	-24	-24
1979	-15	-16	-19	-28	-19
1987	-22	-29	-4	-25	-19
2002	+4	-49	-4	-10	-19

(% Departure from long period average)

➤ The storage in water resources of Chhatisgarh is quite low at 53.93% of its capacity. (THE HINDU 180902, BUSINESS LINE 051002)

AP bans paddy cultivation during Rabi Andhra Pradesh has decided to "ban" paddy crop during the Rabi season and will send a message that if the farmers go ahead with paddy, they will be doing so at their own risk. The CM instructed the agriculture dept officials not to provide any type of assistance to farmers if they raised paddy. Such farmers would not get seeds from AP Seeds Development Corp and additional power supply needed to raise paddy. And there would be no water release into canals and no other form of input subsidies. (DECCAN CHRONICLE 241002)

Changing constituents of Agriculture GDP The share of livestock products in the agricultural GDP has risen from 16% in the early 1970s to over 26% now. In case of fisheries the share has gone up from 1.7% to 3.1%. (BUSINESS STANDARD 191002)

Assocham for contract farming The Associated Chamber of Commerce and Industry of India has suggested promotion of contract farming. The agro and food processing sector ranks fifth in terms of its contribution to India's GDP and employs around 18 % of the country's industrial force. Exports from the sector have gone up from Rs 28.21 B in 1991-2 to an estimated Rs 107.7 B in 2000-1. (THE HINDU 121002)

Kerala plans paddy-fish rotational farming The state fisheries dept is to launch rotational farming between paddy and fish in Kottayam and Alappuzha districts, said the Minister for Fisheries and Tourism. The idea of programme called 'Oru Nellum Oru Meenum', is to take up fish farming so that paddy cultivation is also enhanced. The focus would be on farming freshwater prawns. (BUSINESS LINE 261002)

Agriculture diversification in Punjab The CM's committee on agricultural policy has suggested the setting up of a ministry for diversification. The report aims at need based production through scientific farming practices; drastically cutting down the financial losses incurred by the Centre on procurement and

distribution of foodgrains, reducing responsibilities of state on handling, transport and storage; freeing farmers, who are caught in the vicious circle of wheat-paddy rotation; and helping Punjab save precious subsoil water, improve soil health and save on electricity. The report deals with diversification of at least 1 M Ha each under wheat and paddy to cut down production by 8.04 MT foodgrains (4.69 MT wheat and 3.35 MT rice) per year. The cost of handling, transportation, storage etc of 8 MT foodgrains is Rs 90 B per year. When exporting this or selling to below poverty line population, the loss to the govt is Rs 50 B. The diversification can be achieved by providing a subsidy of Rs 12.8 B (centre to give the amount to state) to farmers to in stead grow pulses or oilseeds or crops of their choice. (THE TRIBUNE 301002)

Farmgate: Impact of Agri-subsidies in the North on poor farmers in the South According to a latest report by Action Aid "Rich countries are paying more than \$ 300 B a year in subsidies to their agricultural sectors, six times more than the total amount of aid to developing countries." Govt subsidies to farmers in Western countries are damaging the livelihoods of farmers in developing countries. The report titled "Farmgate: The developmental impact of agricultural subsidies", says the subsidies have led to overproduction and dumping -- exporting at prices below the cost of production -- which is throwing small farmers in developing countries out of business. But the subsidies have failed to prevent small UK farmers going out of business. The richest 20 % of UK farm holdings receive 80 % of the subsidies. Each tonne of UK [and EU] wheat sold on international markets is sold at 41 % below the cost of production, against 33 % in 1997. The EU has historically ensured that returns to its wheat farmers are artificially high by using a combination of market price support - including through intervention buying and export subsidies - and direct payments. The report includes studies from Bangladesh, Indonesia, Kenya, Nigeria, Pakistan and Swaziland to show the effect of subsidies. Subsidised wheat coming into Bangladesh as food aid is also having a negative effect on local farmers. The Washington-based International Food Policy Research Institute says the food aid helped undercut prices for local wheat producers, acting as a disincentive for them to be more self-reliant and grow their own crops. EU subsidies to the sugar sector are also causing problems, eradicating the competitive advantage of sugar-producing developing countries. Swaziland, for example, produces sugar at less than half the cost of EU countries, and yet is unable to compete with the EU imports that increasingly dominate its market. (FINANCIAL TIMES-London 240902)

SUGAR

Sugar scam in Maharashtra The Maharashtra govt had confirmed that about 0.228 MT of sugar was illegally diverted in the state. While the Shiv Sena MLC in the state claimed about 0.3 MT of sugar has been illegally diverted by a cartel of exporters and sugar factory directors to make use of the price difference between the export and domestic markets. He alleged that this cartel has made about Rs 800 M illegally and the diversion was done without the sanction of the authorities concerned and no central excise duty was paid which resulted in a huge revenue loss to the govt. The commissioner of sugar has also confirmed the scam. The export price was Rs 10 500 per T, while the local rate was Rs 13 000 per T. He said the farmers, who were members of the cooperative sugar factories, were deprived of their dues.

➤ **HC indicts ministers** The Maharashtra HC has passed a judgement that several cooperative sugar factories belonging to the ministers have been indicted for the alleged export sugar scam worth Rs 800 M. According to a preliminary inquiry from the custom and central excise dept, 19 cooperative sugar factories in the state have sold export sugar in the local market flouting all legal provisions. (THE TIMES OF INDIA 070902, 271002)

Maharashtra helps sugar units to get loans 47 sick sugar cooperative units of Maharashtra owned by political leaders were given fresh govt guarantees to enable them to get bank loans to the tune of Rs 850 M. According to the official sources, the state govt guarantees totalling over Rs 18 B given to sugar and spinning cooperatives over the years were being declared as bad debts by the lending institutions. The money would have to be repaid by the state govt. Two other controversial cooperative sugar units from Osmanabad district —Terna and Tulja Bhavani, managed by minister for energy and a prominent political leader— were also given counter guarantees of Rs 110 M and Rs 40 M respectively. Over 20 sugar and spinning cooperatives had defaulted on payment of Rs 7.37 B taken from the IDBI and the IFCI. With the state having guaranteed the payment of these loans, in case of default by the cooperatives, the two financial institutions had asked the govt to settle their bills. (THE TIMES OF INDIA 101002)

UP sugar mills face financial crisis? According to the UP sugar mills association, the sugar mills are reeling under massive losses accumulated during 2001-2. On a total production of 5.25 MT in the last season the losses are expected to be over Rs 14 B. 18 factories have already closed down in UP in the last three years. The state govt has advertised twice for the sale of 11 factories it owns but there are no takers. (THE HINDUSTAN TIMES 211002)

POWER OPTIONS

SANDRP

Vegetable oil to run trains! The Indian railway is planning to use vegetable oils, which are unfit for consumption as fuel in rail locomotives. Germany, Italy, France and Australia are already using consumable vegetable oils for their rail locomotives. India would be the first country, where non-consumable vegetable oils will be used. Indian Railway is giving wastelands to the Indian Oil Corp near small railway stations for the production of related vegetation. The Rural Development Ministry will also help in this scheme. In the beginning 160 trains would be run on vegetable oil from 2010. (RASHTRIYA SAHARA 280902)

Wind power scenario in the world The total wind energy installed worldwide stands at 25 824 MW. Over the last year alone, the world added about 7 000 MW wind capacity, a growth of almost 40 %. Germany alone added over 2 600 MW. The US increased its capacity by about 1 700 MW.

World Leaders in Wind Power

SN	Country	Capacity (MW)
1	Germany	9 500
2	USA	4 251
3	Spain	3 712
4	Denmark	2 456
5	India	1 628
6	Italy	697
7	UK	485
8	Netherlands	483
9	China	399
10	Japan	300
11	Sweden	280
12	Greece	272
13	Portugal	127
14	Ireland	125

(INDIAN EXPRESS 041002)

The wind power scenario in India

State wise wind power installed capacity in India

SN	State	On 310301	On 310302
1	Andhra Pradesh	91.9	92.6
2	Gujarat	166.9	166.9
3	Karnataka	44.6	68.6
4	Kerala	2.0	2.0
5	Madhya Pradesh	22.6	22.6
6	Maharashtra	189.8	399.2
7	Rajasthan	7.3	16.1
8	Tamil Nadu	812.6	857.5
9	West Bengal	0.5	1.1
10	Others	1.6	1.6
	Total (All India)	1339.8	1628.2

Source: MNES

Though India has potential of about 60 000 MW of wind energy generation, the industry has been growing at

only about 150-175 MW per annum. This is primarily due to the lack of clear policy at the centre and frequently changing state-level policies. Maharashtra accounts for 1 990 MW of technical potential, while AP, Gujarat, Karnataka, MP, TN are all high wind power potential states. The industry says that one bottle neck in faster growth is lack of long term secured PPA for 20 years or more with firm purchase price with annual WPI related escalation. (INDIAN EXPRESS 041002)

Jharia mine fire may yield power Even as efforts are on to get the Jharia township in Jharkhand evacuated due to the raging underground mine fire, a team of Central Mining Research Institute scientists has come up with the idea that the underground heat be tapped for power generation. The scientists have claimed that 2 MW of power can be produced by tapping the heat in a 500 sq m area. The cost of a thermal power station of 1 MW capacity, including the running cost, will be around Rs 3.5 crore. At present, about 17 sq km area of the Jharia coalfield is under fire. A vast coal reserve of the Jharia coalfield is being reduced to ashes due to underground the mine fire caused by unscientific mining. They have proposed to utilise the waste heat by drilling holes and laying out steel tubes within fiery seams (coal layers), and then sending water through to get steam at the other end. The utilisation of waste heat in producing power will not only help in controlling the expansion of fire, it will also help reduce subsidence, threatening the railway tracks and buildings. (THE TIMES OF INDIA 191002)

SMALL HYDRO

First community micro hydro in Uttaranchal The Society for Promotion of Wastelands Development in Uttaranchal has developed first community owned micro hydro project at village Malari. A 50 KW plant has been stalled in the Bhotiya village Malari, situated at 35 km from the Indo-Tibet border. An institution for managing the power plant, Urja Kalyan Samiti Malari was formed and boys selected by the Samiti were trained in installing, operating and managing the Micro-hydro plant. The SPWD has contributed Rs 1.6 M for the project while Village community has contributed a total of Rs 1.106 M in terms of material, labour and cash. The Samiti has also set up a tariff mechanism to ensure that the monthly collection will take care of operators' salaries, maintenance expenditure as well as enhancing the maintenance fund. The total project cost is merely 2.7 M whereas a similar project by the Uttaranchal Govt costs 10-12.5 M and will not create any institution, will not impart training to village operators and will not establish any maintenance fund. (spwddd@hotmail.com 221002)

Kerala MoU with Chinese firm for small hydro Kerala has signed two MoUs with a Chinese company, the International Network Small Hydro Power, for the manufacture of equipment for small hydel projects

including where gradient is just 3 m. The preliminary investment in the projects by the Chinese side is estimated at \$2.9 M. The UNIDO, the Chinese Govt and other key organisations in the sector have jointly established the INSHP, a world leader in SHPs. China was having nearly 50 000 SHPs generating over 28 000 MW. (THE HINDU 070902)

Small HEPs by Him Urja Him Urja is exploring for partners to set up two small HEPs with an installed capacity of 10 MW and 12 MW on the Nan-dakini River. The projects involve a combined investment of Rs 1 B. (POWER LINE 0902)

Small HEPs in India (as in Dec 01)

SN	State	Installed Capacity (MW)
1.	Haryana	48.30
2.	H P	91.84
3.	J&K	93.24
4.	Punjab	102.20
5.	U P & Uttaranchal	73.40
6.	Maharashtra	200.30
7.	A P	145.90
8.	MP & Chhattisgarh	39.16
9.	Karnataka	156.90
10.	Kerala	69.52
11.	Tamil Nadu	73.90
12.	Bihar & Jharkhand	48.95
13.	West Bengal	89.28
14.	NE States	152.75
15.	Others	37.73
	Total	1 423.37

(POWER LINE 0902)

Nepal Micro Hydro Projects Since micro hydel projects were initiated in Nepal in 1962, 1.25 M individuals from 229 857 houses (around 6% of the rural population) in 62 districts have benefited from micro hydro. On an average, 80-100 W electricity is required to electrify a single house. According to Alternative Energy Promotion Centre, till 1999 about 400 KW of electricity per year used to be generated from micro hydro. Since then, as a result of additional assistance from the Danish Govt, 900 KW of electricity is being generated every year. Around 13.521 MW of electricity has been produced as of the end of last fiscal year (July 15, 2002). Govt plans to produce 10 MW of electricity from Micro Hydro in the tenth five-year plan. In comparison to mega hydro projects, micro hydro set up has less environmental impacts, uses local technology, and its low cost makes such project feasible in remote areas where access to the central grid is difficult because of harsh topography. Micro hydro plants are handed over to the community for effective implementation. (Gorakhapatra-Nepal 271002)

POWER 'REFORMS'

Power tariffs highest in Delhi, Assam Consumers in Kerala and AP have witnessed the highest increase in power tariffs over the past 10 years, with average consumer retail tariffs shooting 410% and 360% respectively in the two states between 1990-1 and 2001-2. The average hike in consumer tariffs across all states was about 220% during the 10-year period. The highest average retail tariffs are at present being paid by consumers in Assam and Delhi, where average tariffs amount to Rs 5.89 and Rs 4.70 per unit in 2001-2, as per the Planning Commission. The Arunachal Pradesh SEB charges an average tariff of Rs 8 per unit and Manipur SEB Rs 5.81 per unit. (BUSINESS STANDARD 100902)

18 SEBs flunk viability test 18 SEBs have failed their first comprehensive financial viability test. In a rating exercise undertaken by CRISIL and ICRA (for the Union Power Ministry), 18 of 27 SEBs have scored less than 50 on a scale of 100. A score of 50 was considered as passing mark. Andhra Pradesh is the only state to have passed with 75% marks. The utilities in Bihar and Assam got 10 points each. Karnataka, Haryana, Rajasthan, Maharashtra, Delhi and Gujarat (51) have crossed the 50% marks. (BUSINESS STANDARD 190902)

Tariff up by 8-11% in Punjab The Punjab State Electricity Regulatory Commission's tariff order affected a 8-11% hike across the board for all categories of consumers. The commission withdrew the provision of "free" power available to agriculture for operation of tubewells since Feb. 1997, and slashed "free" electricity to the schedule castes to 50 units per month with a connected loads up to 300 watts against, 1 000 watts earlier. The enhanced retail tariff will fetch the PSEB additional Rs 14.60 B including a subsidy of Rs 9 B. The commission has calculated that the cost of power supply is Rs 3.11 per unit. (THE TRIBUNE 070902)

ADB funds for Assam Assam SEB has launched power reforms that would be partly financed by ADB. The bank would give a loan of Rs 12 B for undertaking modernisation of the substation level infrastructure. It will release the first tranche of Rs 6 B next year. ASEB requires additional power generation capacity of at least 100 MW on the basis of the current demand for electricity. The state electricity board currently produces about 470 MW. The northeast is considered a power-surplus region. (Projects Monitor 211002)

POWER GENERATION

The Games Planners Play India's power sector statistics are an enigma, says the editorial of one of the leading pink papers, Business Standard. During the 8th plan (1992-7) govt planned for adding 30 538 MW of fresh generation capacity. What was achieved was just

54% of target, that is 16 422 MW. The 9th plan (1997-2002) had target of achieving even higher generation capacity of 40 245 MW. And the achievement was even lower at 47%: 190 15 MW. One would expect that the power situation in 2002 would worsen. In actual fact, the power situation has improved! While the energy shortage and peak deficit in 1997 were 11.5% and 18% respectively, the same had gone *down* to 7.5% and 12.6% by March 2002. For one, the capacity utilisation of thermal plants improved from 64.7% in 1997 to 69.9% in 2002. Secondly, better national grid allowed for transfer of power from surplus to deficit regions. The editorial concludes: "When it comes to providing money for the power programme, priority should therefore be given to projects that focus on improving efficiency norms and getting more out of existing capacities." Will the planners listen? If 10th plan is any guide, there is little hope. (BUSINESS STANDARD 250203)

Scam in Uttaranchal According to an affidavit filed by a resident of Hardwar, UPCL officials are guilty of causing huge financial losses of Rs 3.3 B to the Corp. during 2001-2. Three of the state's six electricity divisions received 962.63 MU of power in 2001-2. But UPCL records indicate that the consumers received only 268.58 MU. That leaves a huge hole of 694 MU worth Rs 2.61 B. While power worth Rs 1.8 B was allegedly sold illegally, UPCL records put the figure at only Rs 213.8 M. The state govt has ordered an enquiry and explanations have been sought from UPCL officials. (THE HINDUSTAN TIMES 200902)

Plan for 10 000 MW power by 2008 The Himachal Pradesh CM claimed that the Govt had formulated a plan to harness 10 000 MW power by 2008 to yield an annual income of Rs 20 B. He said in the last 50 years 3 828 MW of electricity was generated in the State and out of this only 288 MW could be generated by the state electricity board whereas the present govt had succeeded in starting work on HEPs of 8 000 MW. These projects were likely to go in production in next 6-7 years. Out of these 2 228 MW would start generating by the next year out of which the state would be getting 250 MW. (Daily Excelsior 171002)

Tenth Plan Allocation for HEPs The Ministry of Power has decided to allocate Rs 142 B, i.e. about 60% of its Rs 250 B outlay for the tenth five-year plan to the NHPC. (POWER LINE Oct 02)

Nuclear energy at greater risk Currently Nuclear energy contributes about 3 % of the total power produced in the country. In the last 30 years about 2720 MW of nuclear power capacity have been created through 14 power plants, often at huge cost overruns. The govt plans to add 2000 MW in the next five years from the six additional plants. The risk remains high because radiation leak from even a small accident can endanger people's lives across a generation. On the

one side a country like Germany has decided not to opt for new nuclear reactors and progressively close down old ones by 2020. On the other side India is envisaging a capacity of 10 700 MW by 2011 and 20 000 MW by 2020. (EPW 140902 & POWER LINE Oct 02)

POWER FINANCE NEWS

PFC plans The PFC plans to tap domestic and international markets to assist power reforms and targets to fund Rs 435 B to the SEBs and power utilities during the 10th Plan. The PFC, which in consultation with the Union Power Ministry, initiated setting up of India power fund with the size of Rs 250 B, is considering investing 20 % of the total on power sector during the tenth plan. The PFC had increased its assistance to power utilities during 2001-2 with disbursement touching Rs 51.50 B, a growth of 60 %, and sanctioned Rs 85.06 B, a 10 % increase over the previous year. It posted a net profit of Rs 7.78 B during 2001-2, a 29 % growth over the previous year. (Daily Excelsior 011002)

Loan to NHPC for Teesta The NHPC has signed an 18.24 B yen (Rs 7.04 B) term loan with the Deutsche Bank. Nippon Export and Investment Corp. of the Japanese govt under its overseas-unioned loan insurance programme supports the 16-year loan. The loan carries guarantee from the govt of India, to be utilised to finance the equipment procurement, construction and commissioning costs of a 510 MW Teesta V HEP in Sikkim. (THE ECONOMIC TIMES 191002)

State to issue bonds in favour of central utilities At a meeting between the finance ministry, the SEBs and the RBI, it was decided that more than three months old dues by the SEBs to the central utilities would be directly debited to the states' accounts held with the RBI. It was also decided that the state govts would issue bonds totalling Rs 290 B through the RBI in favour of the central utilities. (POWER LINE 0902)

ENRON SAGA

Indian FIs reject offer to restart DPC Led by IDBI, Indian lenders have rejected the latest offer from General Electric and Bechtel to complete and restart the Dabhol Power Plant. The govt announced that NTPC has been persuaded to run the 740 MW phase I plant on management fee basis.

➤ **Notices to officials** The Kurudkar Commission of enquiry has given Maharashtra govt and over 30 state and central officials notices to signed statements giving information about their roles in sanctioning of the PPAs of the DPC project. (BUSINESS STANDARD, INDIAN EXPRESS 020902 & THE HINDUSTAN TIMES 270902)

Fishermen drag DPC to court The Bombay high court has issued a showcause notice to the Dabhol Power Corp asking why a winding up petition against it should

not be admitted. 48 fishermen, who were affected by construction of the Enron project and have not received any compensation promised by the DPC, have filed the petition. The DPC had promised the 48 fishermen Rs 30 000 each for displacing them from their places of fishing when the Enron project and a jetty was constructed in Guhagar. The petition filed by the fishermen alleged that the DPC had been unable to pay its debts and was liable to be wound up. It pointed out that the fishermen have no remedy to obtain the compensation which compelled them to seek winding up of the DPC. (THE TIMES OF INDIA 291002)

GOVERNANCE

Targeting Tribal People The Union Ministry of Environment and Forests known for its unwillingness to settle the large number of disputes over tribal land, has now found a speedy way to clear 1.25 M Ha of forestland. It is removing 10 M tribal people from their natural habitats. A circular issued by Ministry in May and recommendations sent by its Centrally Empowered Committee to the Supreme Court reveal a *modus operandi* that includes forcible eviction of the helpless tribal population, which has been denied the right to go on appeal on the decision. The circular sees all tribal people living in any type of forestland as 'encroachers'. It seeks to reverse the MoEF's unimplemented but comprehensive programme of Sept 1990, which was based on the 29th Report of the Scheduled Castes and Scheduled Tribes Commission. (FRONTLINE 251002)

33% of 455 projects behind schedule Taking note of the fact that as many as 151 out of 455 Central Sector projects are delayed, the Ministry of Statistics and Programme Implementation has warned that it would fix accountability and responsibility in cases of time and cost overruns. The Ministry monitors the Central Sector Projects over Rs 200 M, spanning all the ministries, all over India. There are 455 such projects with investment ranging from Rs 0.2-10 B. Of these, 159 reported time overruns (2-136 months) and 221 cost overruns of 69.4%. In power sector, of the 38 projects, 13 had cost overruns and 15 had time overruns (4-157 months). The cost for 499 central projects were estimated to Rs 1691.63 B, but the estimated costs have gone up to Rs 2100.44 B (BUSINESS STANDARD 020902, THE TRIBUNE 180902, RASHTRIYA SAHARA 051002)

Gujarat has lowest returns According to a study "Dynamics of development in Gujarat" by economist Archana Dholakia, "Gujarat ranks highest in per capita subsidy (Rs 1 402), followed by Punjab (Rs 1 117) but lowest in the cost recovery rate from its services". With the economic sector alone accounting for Rs 859 per capita subsidy, Gujarat's 2.21% CRR is "just pathetic and unjustified", when the all-India average is 10%! On irrigation & power, Gujarat spends over 60% of its fiscal economic resources. (THE TIMES OF INDIA 030902)

DOCUMENT**PRESIDENT'S ADDRESS TO PARLIAMENT**

The President of India, Dr. A.P.J. Abdul Kalam, addressed the joint session of Parliament on Feb 17, 2003. Following are relevant paras from the President's address:

17. A Task Force on Drought under the chairmanship of the Deputy Prime Minister has been constituted. So far more than Rs. 1,000 crore have been released to the States under the National Calamity Contingency Fund, in addition to over Rs. 1,400 crore as the share of the Central Government to the Calamity Relief Fund of the States. Nearly 50 lakh tonnes of foodgrains worth nearly Rs. 5,000 crore have been allocated to the drought-affected States to generate relief employment through the Food for Work programme under the Sampoorna Grameen Rozgar Yojana.

18. The Nation has been searching for a lasting solution to the recurring problem of droughts and floods, which have been taking a huge human and economic toll. Networking of our river systems to transfer water from the surplus basins to the areas of deficit has engaged people's attention for many decades. The Government has set up a Task Force to prepare a practical blueprint for this project, without compromising environmental safety and the interest of displaced people. This initiative will bring significant benefits in drinking water, irrigation, power generation, inland navigation, and tourism. I must emphasize that this mega project does not negate the need for promoting small and micro programmes for water conservation at local levels. The two are mutually complementary.

19. The National Water Resources Council has adopted a new National Water Policy emphasizing integrated water resources development and management for optimal and sustainable utilization of available surface and ground water. The Centre has launched a Fast Track Programme for the completion of those major and medium irrigation schemes that can be completed in one year. Subsequent to the approval by the Narmada Control Authority, the dam height was raised, and this has mitigated the problem of drinking water and irrigation in arid areas of Saurashtra and North Gujarat. [Comment: The President is clearly ill informed about this. No water from SSP has reached Kutch-Saurashtra areas!]

20. The Swajaldhara programme, launched in Dec, has scaled up the rural drinking water supply initiative to cover the entire country. It is a community-led, participatory programme to be implemented by the community and the Gram Panchayats. The community contributes 10 % upfront towards capital investment; and 90 % is matched by the Centre. I am happy to inform you that the programme's message "Dus kadam

aap chale, nabbe kadam hum challenge" has evoked excellent response from all parts of the country. A new initiative called "Hariyali" has been launched to promote integrated development of watershed programmes through Panchayati Raj Institutions. Considering the acute and growing water scarcity, in rural and urban India, it is high time we launched water conservation and efficient water use as a people's movement.

22. The policy of procurement at the Minimum Support Price, while ensuring remunerative prices for wheat and rice farmers in surplus States, has resulted in huge stocks of rice and wheat with the public agencies. As a response to this, the govt has been encouraging exports of food grains. The wide-ranging recommendations on long-term food management made by the High Level Committee are being examined. There is an urgent need to review the current policies, which have impeded crop diversification and led to unsustainable food subsidies, and to ensure crop neutral support to our farmers without excessive procurement.

24. The sugar industry has lately faced serious difficulties, constraining the capacity of sugar factories to make timely payment to sugarcane farmers. Several steps have been initiated to protect the interests of sugarcane growers, while ensuring viability of sugar mills... The cold storage scheme is working well and has created an additional capacity of 2.8 MT. A new scheme of construction, renovation, and expansion of rural godowns called Grameen Bhandaran Yojana has been launched. This scheme will help prevent distress sales by small and marginal farmers.

25. Ensuring food security for the poor through a strengthened PDS remains a major commitment of the govt. The Antyodaya Anna Yojana, under which one crore poorest of the poor households are entitled to wheat at Rs. 2 a kilo and rice at Rs. 3 a kilo, is a proof of this commitment. The Centre hopes that State govts would speedily remove the remaining obstacles in the smooth functioning of the PDS.

35. The good news is that power sector reforms are slowly, but surely, showing positive results. Till now 18 States have signed the Memorandum of Agreement under the Accelerated Power Development and Reform Programme. Privatization of power distribution in Delhi has already led to improved supply. State Electricity Regulatory Commissions have been set up in 21 States. A comprehensive Electricity Bill is before Parliament for approval... The Bureau of Energy Efficiency has been established. I am happy to announce that the plan to achieve 30 % energy savings in govt buildings has well and truly begun in Rashtrapati Bhavan and in the PMO.

WE AWAIT YOUR RESPONSES

We are a voluntary organisation working in Water Management on sustainable & equitable basis in drought prone area of Maharashtra. We publish a bi-monthly in Marathi known as *Pani Panchayat, Pani Patrika*. We really appreciate the information published in DRP. We would like to publish the extracts of information and articles published by you translated in Marathi in our bi-monthly, indicating the source of it.

Smt K V Salunke, Managing Trustee,
Gram Gaurav Pratisthan, Pune

DRP is doing a unique work. On behalf of the Ganga Scientific and Technical Council, the Ganga Laboratory, BHU, I appreciate the DRP for the national service.

Dr U K Choudhary, Coordinator,
Ganga Laboratory, Varanasi

DRP is indeed a welcome step. I hope you will continue disseminate useful information so that people are empowered to influence and take water policy and its priorities in the best interest of primary stakeholders.

K G Vyas, Jabalpur

I and certainly find the DRP very informative and interesting. I can imagine the amount of work you have to do to put it in succinct readable form. Let me complement you and your team for the valuable work.

Prof H M Desarda, Aurangabad

The DRP is a very useful magazine for us to access various authentic information related to Dam, Displacement, Irrigation, Water Privatisation etc. We look forward to getting the issues regularly.

Brhmananda Swain,
Sahabhagi Vikash Abhiyan, Bhubaneswar

Your effort to bring out such an informative publication like DRP is greatly appreciated. The issue on sand mining from rivers of Kerala, its impacts on environment could be included in the forthcoming issue.

Dr K N Remani, Centre for Water Resources Development & Management, Kozhikode

DRP is an extraordinary achievement. Actual situation of water, land and people are not good now a days in our country. So it is necessary to show the actual position of environment. The DRP is very useful in this.

Gopinath Kalbhor, Khandwa

MUSINGS ON WATER POLICY

Coverage (DRP Dec 02) on controls on water resources was apt and current. We are heading for more complex situations after National Water Policy-2002 and the political rhetoric in favour of linking Rivers. Article 3.2 of the NWP-2002 regards inter-basin transfer as one of the 'non-conventional methods of utilisation of water'!

I would very much go with the arguments of DRP that River linking is not a reasonable idea. The NWP-2002 (articles 3.2, and 3.4) too pre-supposes that one water basin has surplus water resources to feed another water basin. This is built mostly on assumptions rather than proven data on specific cases. Often, the so-called water deficient basin is politically stronger to demand more than its natural share. Flood prone regions may welcome transfer of excess water to another river basin but results often defy this simple arithmetic (e.g., 2001 flood in Mahanadi basin, Chhattisgarh). No measure of 'inter-basin transfer' is likely to bring about assured and satisfying changes in the arid and semi-arid regions. Again, months with surplus and deficient water would most likely create similar water demands in both sides of the interconnected basins opening possibilities of more manmade floods or droughts.

Groundwater can neither be separated from the total water resources system nor can it be argued convincingly that it is 'another' water, the way it is presented in legal and policy documents. The water resources ministry may be under such delusion since

the implied technology is different and compartments have already been built with huge establishments and their individual power bases handling surface and ground water with distinct individuality.

Rather than Centre acquiring more authority on nation's water there is need to empower the communities to handle water resources. Again, sustainable water resources management demands involvement of all users. The policy situation on water will improve only when information system on water is based on actual data and its more pertinent analysis & the whole process is open to public scrutiny.

Mystified handling of water resources in the country and the envisaged threats, among other things, are caused by an alarming mix of professional inadequacies ably masked in compartmentalized positions of the relevant agencies including administrative and planning machineries of the State, universities and academic institutions. The truth is that the database and available information on water resources in the country are inadequate and not credible as they are not open to public scrutiny. There is high level of manoeuvring and power play on harnessing and distribution of surface water by State agencies; there is too much encroachment on the system of ground water by affluent people having land and money to buy.

Dilip Fouzdar, Delhi

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