Dams, Rivers & People

UPDATE ON RELATED ISSUES

SANDRP **VOL 2-ISSUE 2-3-4** **MAR-APRIL-MAY 2004**

INDEX

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ABOUT Dams, Rivers & People

We apologise for the gap in bringing out this issue of DRP. The *DRP* is available both in electronic and printed versions. The *DRP* issues 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. You can also send the payment by money order to our Delhi address.

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Jaikwadi: the Large Dam that failed to deliver

In a recent booklet published jointly by Jiakwadi Project Affected People's Organisation and Nisarga Mitra Mandal, Vijay Diwan argues that Jaikwadi Dam has proved to be a great debacle. The author details inherent flaws that made the Dam fail, brings forth the anguish of people upon unkept promises and urges govts of Maharashtra and India to accept the project's failure and decommission it. In a synoptic review, Himanshu Upadhyaya revisits the case.

Jaikwadi Irrigation Project, a large Dam over the river Godavari built near Paithan in Maharashtra has everything big about it as far as it's physical dimensions go. An extremely long Dam wall of 10.2 kms, a vast submergence area of 33980 Ha, an initial promise to irrigate the command area of 0.271 M Ha and capacity to hold 2909 MCM water. How has it performed during last twenty-seven years? The recent booklet under review raises these questions and tells the tale of a failed Dam and fake promises, of anguished communities from upstream and downstream, of their struggles and demands.

The author analyses how the initial promise appeared unreal even at a very early stage after part completion of Left Bank canal. It was noticed that the waters wouldn't reach beyond Majalgaon. This made it imperative to reduce the length of Canal (from the planned 148 to 84 km) and reduce the command area to 0.142 Ha. However, the Dam has never been able to irrigate the revised command area during the past 27 years of its existence. It is pointed out that only in 1990-1 it irrigated around 65000 Ha. Generally the project has not succeeded in irrigating more than 55000 Ha.

Submerging 34 000 Ha of black fertile land and irrigating at best 55000 Ha. Can this be identified as a positive outcome? The author introduces Dr Shivaji Sangle's work on the Economic Impacts of Jaikwadi Dam (Reader in Economics, Dr B A M University, he has submitted his PhD thesis on this issue). Sangle worked out that the 'Internal Rate of Return' of the project was 0.73 while it should be over 1.0 to make the project economically viable. Confronted with such a critical analysis, technocrats have contemplated number of *indirect* benefits; fabricating justification for the project such as, without this project the city of Aurangabad and industrial areas at Jalna and Aurangabad would have been deprived of water supply.

Official papers show that only 2% of the total live storage (116 MCM) is reserved for the urban water supply and actually only 1% (52 MCM) water is drawn by the city and industrial areas. Dewan asks: "Did they need a large dam for that? Couldn't that very well have been achieved by building a smaller dam, or a few Kolhapur type bunds on the river Godavari instead of a Dam of such colossal proportions?" The author argues against the feasibility of 12 MW HEP through pump storage powerhouse. While the system was supposed to provide the peak-hour power, in actuality it generates only 5 MW during the peak hours and consumes about 8 MW for the reverse pumping during the slack hours. For last two years, the power generation has come to a stand still for want of sufficient water in the reservoir.

Next are the tales of socio-economic exploitation of the displaced. The compensation given to the affected was at paltry rates of Rs 1750 - Rs 2750 per Ha. A few wealthy and politically strong farmers went to the court for higher compensation. The court ordered payment of compensation at Rs 5350 per Ha to them. However, the govt went into appeal in the High Court and when the High Court upheld the decision, the govt took the matter to the Supreme Court. The Supreme Court while confirming the decision of lower courts ordered state govt to pay Rs 15000 per Ha as compensation including the interest. However, this decision didn't help many poor farmers who could not afford to go to the courts. Resettlement process was quite unplanned. In one instance, farmers settled at Paithan were made to buy lands some 100 kms away from their houses. For many of them to go there and cultivate their land was simply unthinkable and those who did however go there had to confront the hostility from the original landowners. At some places the titles were not transferred to the official authorities for many years.

While in the initial years, it was possible to cultivate the exposed land by upstream farmers; in 1996 the entire Nath Sagar reservoir area of 34000 Ha was notified as a Bird Sanctuary. The displaced farmers who were cultivating the exposed silted lands were prohibited from doing so. Even in downstream, there is a strong discontent amongst the Ambad & Ghan Sawangi areas over extreme waterlogging and salinisation of their lands. A series of large and medium dams were planned upstream of Jaikwadi during the last two decades. Dams like Gangapur, Mula, Bam Bahuli and Mukane on Godavari and its tributaries have left Jaikwadi with very little chance of getting water storage beyond 15-20% of total live storage capacity.

The booklet ends with the text of the charter of demands put forth in Jan '02 and the resolution urging for Decommissioning of the Dam passed at the 2nd international meeting of Dam affected people & allies.

Himanshu Upadhyaya

(The booklet, priced at Rs 10. It is available from Nisarg Mitra Mandal, 120 Shastri Nagar, Aurangabad 431 001)

Interlinking Rivers: Food for thought

By Ravi Kuchimanchi, L.S. Aravinda, aid@vsnl.net, Association for India's Development, www.aidindia.org

Primary reason given for the need to inter-link India's rivers is the projection that the population is expected to reach 1.63 B in 2051, 60% over the 1.03 B in 2001. Per-capita water usage for drinking and industrial purposes is a small fraction of the water needed to grow the food we consume. Production of food-grains for the additional 600 M people would need a transfer of water from the northern water surplus states to the southern water deficit states. So the central govt and the Task Force on ILR would have us believe.

While India's population continues to increase, where will these additional people live? Four states in India have nearly attained replacement level fertility that halts and eventually reverses population growth. These are all the southern states: Tamil Nadu, Andhra Pradesh, Karnataka and Kerala. According to projections[1] made at the instance of the Planning Commission by Dr. K. Srinivasan, Executive Director, *Population Foundation of India* and President, *Indian Association for the Study of Population*, the combined population of these southern States will increase by 28 M (13%) from 222 M in 2001 to 250 M in 2051, while the rest of India will grow by 572 M. In fact by 2051 the population of water-surplus states will more than double, increasing from 166 M to 436 M for Uttar Pradesh (150% increase). More than half, and up to two-thirds of the increase in India's population in the next fifty years will happen in just the two states of UP and Bihar. The balance increase will predominantly be in Madhya Pradesh again a state with ample water resources and Rajasthan, which is the only water-deficient state that will register a strong population growth. Does it then make any sense to envisage a grand scheme to transfer waters from UP and Bihar to states like Tamil Nadu (62 M in 2001 to 67 M in 2051) and Andhra Pradesh (76 M to 83 M) through linking the rivers? Even as waters start flowing from North to South if ILR were to take place, the population will be exploding in the North while it will stop and in fact be shrinking in the South. Our govt would have exhausted time, energy and money on linking rivers rather than on developing the water basins within the states.

While one can joke that the water will be transferred from UP and Bihar to other states through the link canals, while food-grains will be brought back to Bihar and UP to feed the increased population living there through the road network, this would make no sense. 70% of our livelihoods are agriculture-based. An increased population is also an increased work-force for the agriculture sector. However if the growth in agriculture production happens in other states what will the additional 300-400 M people of UP and Bihar do for their livelihoods in 2051? They will not have the purchasing power for food-grains coming from the River-Road network.

As per the Economic Survey[2] of 1999-2000, the annual total food grain output in the latter half of 1990's for the states of Bihar and Andhra Pradesh was roughly the same, about 13.5 MT. The population was also approximately the same at about 75 M. On an average Bihar and Andhra Pradesh produced about 180 Kg per Bihari or Andhrite annually. While Bihar's population will double by 2051, AP's population will hardly grow. Thus Bihar's production of food-grains needs to double. Bihar is water surplus and doesn't need interlinking of India's rivers. It however needs to manage its water internally and improve productivity.

It is indeed fortunate that by and large the population growth will be in water-surplus states but can food-grain production in these States increase? The rice yield/Ha of the southern states in the irrigated ecology is reasonable at 4460 Kg/Ha for Tamil Nadu and 3767 Kg/Ha for Andhra Pradesh. But in the same 1990's period, rice yields for irrigated regions of N UP and Bihar were only 2870 Kg/Ha and 1811 Kg/Ha respectively and those for E UP were 1881 Kg/Ha. As per the work[3] of Professor E.A Siddiq, *Directorate of Rice Research, Hyderabad*, there is ample scope to increase yields of rice in India to 5000-6000 Kg/Ha. Indeed the Agricultural Policy[4] of Uttar Pradesh, 1999 with the vision of making UP the granary of India aims to harvest 70 MT of total food-grains in 2007 as against 42 MT in 1997. Thus there is both water availability and the possibility to more than double the productivity in states where India's population will increase dramatically.

The problem of feeding India's population of 1.63 B in 2051 can be solved only by increasing the food-grain yields in water surplus states to match the population increase there and by sustaining the current level of yields with marginal increase each year in the S states. The strategy of linking rivers and transferring water from water surplus northern to water deficient southern states thus appears to be irrelevant to feeding the additional 600 M. What is rather required is intra-basin and intra-state water and land management and an improved productivity. Even in the state of Rajasthan the work of Tarun Bharat Sangh has shown how water resources can be locally revived and managed. Several learned scientists and activists have critiqued the ILR proposals from the economic and environmental point of view and found it untenable. Purely from an analysis of the projected population increase and finding that it is strongly correlated to States with ample water resources and food-grain yield levels that can double we come to the same conclusion.

Punjab: Turning into land of dark zones- Need of people's movement for water conservation

By Umendra Dutt, KHETI VIRASAT

Punjab- the name itself is explanatory and stands for abundance of water. It is the land of water heritage of Guru Nanak Dev and Bhai Kanhiya. The people of Punjab are ardent follower of great *piau* tradition of "Bhai Kanhiya" i.e. Serving water to humanity without any discrimination of caste, creed, religion, & sect. It has the glorious tradition of preserving water rights form the era of Shri Guru Nanak Dev. The Panja Sahib symbolise that, the water is for all and the water is fundamental, natural and basic right of every living creature on the Earth. But, it is really ironic that the land, which is named after the five rivers, is endangered to become the land without water that is-"Be-Aab".

The present situation of water resources in Punjab is highly critical. The present Punjab is now the land of mainly two rivers only i.e. Sutlej and Beas. The Himalayan glaciers are melting; the overall water flow is decreasing, causing great ecological-imbalance in the region. The loss of massive forest cover in Shivaliks has resulted in drying up of several sub-rivers, natural streams and revaluates making the foothills of Punjab a water scarce area. As a result the ground water availability in Punjab has reduced. At present Jayanti, Budk, and Siswan, the three major tributaries of river Sutlej flowing through the District Ropar have vanished. Same is the fate of 'Patiala ki Roh' and several other streams originating from Shivaliks.

The 'Kali Bein River' has lost her character as a river. The "Kali Bein" originates from two Bawries adjoining "Tarkiana-Naryanpur" wetlands, and has religious, spiritual and social significance for the people of Punjab, as Guru Nanak Dev took a holy dip in the river "Kali Bein" at Sultanpur Lodhi. But we turned it into an open sewerage only. Thanks to Sant Balbir Singh of Sinchewal who took a Kar-sewa to revive this holy river.

But several other rivers- revaluates are not so lucky. The Buddha Nallah, another major tributary of river Sutlej is the most contaminated stream at Ludhiana. We can count several streams in this class namely – Chitti Bein, Charan Ganga and others. The rivers -Tangri and Ghaggar which were once perennial now can be seen as dead rivers after monsoon. In Monsoon they play havoc creating floods and devastation.

Another alarming situation in Punjab is destruction of wetlands, natural reservoirs and ponds. Wetlands plays major role in recharging ground water and sustaining required moisture in soil and surface. But Punjab is about to lose her wetlands not only due to wrong planning but also due to criminal negligence and greedy deeds of mankind. Punjab has already lost several wetlands. The great Bhupindra Sagar Lake in Sangrur district, which was once known as favorite hunting spot of Maharaja Bhupindra Singh of Patiala, once spread over an area of 1280 Ha is no more now. Few of destroyed wetlands are: Chhangli Chhamb – 1000 Ha, Chhangli Tabo-140 Ha, Chhamb Gurditwala Ferozpur-100 Ha, Sangeri Mansa-41 Ha, Sharmkot Gurdaspur-12 Ha, Gaunspur Chhamb Hoshiarpur-100 Ha, Jandwal Chhamb Hoshiarpur-100 Ha, Rahon De Chhamb Jallandhar 300 Ha. "Tarkiana" wetland near Dasuha is no more on ground, remains only on papers. Other wetlands such as Jasterwal, Khanuwan, Lobana (near Nabha), Mand Bharthala, Rababsar and Bareta are the worst victims of man-made disaster and ignorance. The Lobana wetland is almost dead though govt considers it a wetland on papers; it is losing area to encroachments.

Several major reservoirs such as Sitasar (Sunam), Ajj Sarovar (Kharar), Mullanpur GaribDass, Gharian, Pandusar (Dasuha), RajeTal, Bopa Rai Kalan, Kahangarh, Chamunda Devi, Thand Kasel, Attariwala, Batala, Gurdaspur, Bhagna, Fethgarh Churrien, Chmiari, Preet Nagar, Ramsar, Lakshmansar (Amritsar) are in condition of distress. Several among these have marvelous architectural design. Most of these ponds are in Amritsar district. One can see the tradition of constructing ponds in Punjab through the windows of Ghats of these majestic monuments. The former princely city of Sangrur once had four major reservoirs on four corners of town, but the man made decisions killed all four tanks. The princely town of Nabha has also lost its famous HattiKhanna Talab along with several other ponds. The remains of puckka ghats with beautiful construction are the evidence of the rich native tradition of Ponds. But this great glory of conserving water is the thing of forgotten past. Today nobody is aware about it and no body wants to care about it. It is sad and unfortunate its own people put this great pond system on death in Punjab.

Only four decades back one could have easily found three to five and even more ponds in every village of Punjab. But courtesy to the modernized development the majority of them are dead. The remaining village ponds are also dying day by day. The encroachments and dumping of garbage are the major threats to these water bodies. The Nature is now giving warning to us as over 80% of Punjab is either turned into Dark Zone or Grey Zone.

Out of seventeen districts of Punjab the ground water balance in seven districts is in negative. That means these districts are exploiting more water then annual net recharge. The Jalandhar district is one of the worst affected as all ten blocks are in dark zone. Same is the fate of Kapurthala (all five blocks are dark), Moga (all

four blocks are dark), Sangrur (all thirteen are dark), Fatehgarh Sahib (all five are dark zone).

In Amritsar district, fourteen blocks are dark zones and other two are gray. In Patiala Eight out of nine and in Ludhiana Ten out of eleven blocks are dark zones. Moreover the ground water table in the past 20 years recorded a dangerous decline from 15-20 feet to 150-200 feet. The ruthless overexploitation of this precious resource had led us to this situation. Is it the gift of green revolution? In 1967 Punjab had around 55,000 tube wells where as today this figure has crosses 1 M. The exploration of ground water has increased by 20 times in last three decades.

This is only half dark side of the fact. The white zone area of Bathinda, Mansa, Mukatsar, Faridkot and some parts of Ferozpur has problem of salinity and Chloride. Where as Nawanshahar and Hoshiarpur districts have problem of selenium contamination. Several other areas are affected with surfacing of Nitrates in ground water. The nickel and chromium is already reported in Ludhiana and Mandi Gobindgarh.

So, Punjab is heading two ways. Either there will be NO WATER or there will be CONTAMINATED and POSOINIOUS water and both ways lead towards turning Punjab into Be-Aab.

There is urgent need to build a strong peoples movement for water conservation. We need to realize the gravity of situation today, tomorrow may be too late.

Kheti Virasat has done three sample/pilot survey regarding water bodies. The First covered village ponds in eight districts of Punjab (both for Kacha and Packka). The second survey was on the Wetlands of Punjab and third one for natural streams and rivulets of Punjab

Findings of Pilot Survey on Ponds

Ponds of Amritsar and Gurdaspur The Amritsar And Gurdaspur districts have several old water harvesting structures & traditional water bodies, spread in various villages. One can easily find very beautiful tradition of "packka" ponds. These structures are 200-500 years old. Few of their ruins are still visible & are charming in their architect and construction. Same magnificent architect can be seen in the ponds of Batala and Fatehgarh Churian of Gurdaspur District.

Ropar and Hoshiarpur In Ropar District an old pond of Mulanpur village is an example of utility of traditional water bodies. Only 50 years back the people used its water for drinking, bathing and cooking. But today Mulanpur Pond is only a dumping ground of waste garbage. Two more wonderful and magnificent large ponds one in Kharar and second in village Grangan are also testimony of water wisdom. In Hoshiarpur district the great pond of Dassuha town, famous pond of Baba Lakho Ji & two more ponds near village Nangal add a new chapter in the Punjab's tradition of ponds.

DDP on Bonn Renewable meeting It is accepted that hydro has a role in coping with future energy needs. Currently it supplies about 20% of the global electricity, although in a number of countries the hydro amounts to over 90% of total national electricity generation. At the end of 2001, small hydro operating capacity amounted to 25 GW, compared with 690 GW of large hydro. The increase in energy production during the period 1996-2000 was about 3 and 2 % respectively for large and small hydro, indicating that hydro will remain dominated by large schemes provided this trend remains unchanged. This might be the situation since there is no significant comparative reduction in energy costs anticipated for this source of energy, independent of the size. Furthermore, these future costs might continue to compare advantageously with those of other renewable alternatives. Although hydro use currently represents a relevant 16 % of the total use of renewable resources, seen in perspective, the hydro potential is a tiny fraction of the total technical potential of the global renewable resource base. Other renewable energy sources are growing much more rapidly than hydropower and, although such potential will take time to develop, it is clear that these other energy options will increasingly be included in the decision making process.

ALLAIN DUHANGAN CAMPAIGN: AN UPDATE People from areas to be affected by the proposed 192 MW Allain Duhangan HEP in Kulu District in Himachal Pradesh, to be funded by the IFC (private sector arm of the World Bank), wrote a letter to the World Bank President on May 21 2004, making it clear that the existing ESIA (Environment and Social Impact Assessment) of the project is totally inadequate and have listed 42 reasons to substantiate their case. They have demanded that first the ESIA should be made complete in all respects, then a Hindi translation of the fresh ESIA shouldbe made available to the local people, and only a month or more thereafter should there be a public hearing. A critique of the ESIA by SANDRP was sent to the IFC, the project developers and the ESIA consultants (ERM limited) over six months ago and a response to that is still awaited, as acknowledged by Independent Panel. A team from Kalpavriksha, after a meeting in Jagatsukh also made it clear that the ESIA suffers from fundamental inadequacies. The letter from the affected people made it clear that til the demands of affected people are satisfied, any work or decisions on the project will be in violation of the World Bank norms and people will have no option but to fight against such decisions. The authorities have agreed that the company needs to get fresh NOC from the affected villages, nailing the lies of the project developers and their supporters.

Rivers for Life! The Rasi Salai Declaration

Over 300 people from 62 countries throughout the world, peoples affected by dams, fighters against destructive dams, and activists for sustainable and equitable water and energy management, have met in Rasi Salai, Thailand from 28 November to 4th December 2003. Water for life, not for death! The call made at the First International Meeting of People Affected by Dams, held in Curitiba, Brazil, 1997, has been realised in Rasi Salai, Thailand. The dam-affected people of Thailand offer to all people an example of determination and struggle to preserve lives, rivers, territories, culture, and identities. Affected and threatened peoples and allies have exercised decisive participation in decision-making processes, and in determining own futures. Since Curitiba, people have made significant progress in their struggles. In the valleys, mobilisation and direct action of affected people have challenged the dam industry, govts, and financial institutions. The international movement against destructive dams has shown its ability to challenge the industry in the technical, political and moral spheres. The WCD process is a key achievement of the last six years. The WCD report is strongly critical of large dams. While their report does not question the fundamental flaws of the neo-liberal development model, the WCD's recommendations constitute a framework for democratic, transparent and accountable decision-making processes. People denounce the fallacy that hydropower and large dams are essential to slow global warming and adapt to its impacts.

Demands

- We affirm the principles and demands of the Curitiba Declaration of 1997;
- We oppose the construction of all socially and environmentally destructive dams. We oppose the construction of any dam, which has not been approved by the affected peoples after an informed and participatory decision-making process, and that does not meet community-prioritized needs;
- We demand full respect for indigenous peoples' knowledge, customary resource management and territories and their collective rights to self-determination and free, prior and informed consent in water and energy planning and decision-making;
- Gender equity must be upheld in all water and energy policies, programmes and projects;
- There must be a halt to the use of all forms of violence, intimidation and military intervention against peoples affected and threatened by dams and organisations opposing dams;
- Reparations must be made through negotiations to the millions who have suffered because of dams, including through the provision of funds, adequate land, housing and social infrastructure. Dam funders and developers and those who profit from dams should bear the cost of reparations;
- Actions, including decommissioning, must be taken to restore ecosystems and livelihoods damaged by dams and to safeguard riverine ecological diversity;
- We reject privatisation of the power and water sectors. We demand democratic, accountable and effective public control and appropriate regulation of electricity and water utilities;
- Govts, funding institutions, export credit agencies and corps must comply with the recommendations of the WCD, in particular those on public acceptance and informed consent, reparations and existing dams, ecosystems and needs and options assessments. These recommendations should be incorporated into national policies and laws and regional initiatives;
- Govts must ensure investments in research and application of just and sustainable energy technologies and water management. Govts must implement policies which discourage waste and over consumption and guarantee equitable distribution of wealth;
- The construction of inter-basin transfer schemes and other water mega projects must halt;
- The international carbon market must be eliminated;
- Waterways for navigation should follow the principle "adapt the boat to the river, not the river to the boat."

Commitment:

- Intensifying our struggles and campaigns against destructive dams and for reparations and river and watershed restoration;
- Working to implement worldwide sustainable and appropriate methods of water and energy management such as rainwater harvesting and community-managed renewable energy schemes;
- Continuous renewal and vitalization of diverse water knowledge and traditions through practical learning especially for our children and youth;
- Intensifying exchanges between activists and movements working on dams, water and energy, including through reciprocal visits of affected peoples from different countries;
- Strengthening our movements by joining with others struggling against the neo-liberal development model and for global social and ecological justice;
- Celebrate each year the International Day of Action Against Dams & for Rivers, Water and Life (March 14).
- We call upon the dam-affected peoples' movements and their allies and other social movements and NGOs to coordinate common actions on March 14, 2004, which protest the World Bank, in solidarity with the protests against the World Bank and IMF on their 60th anniversary.

Our struggle against destructive dams and the current model of water and energy management is also a struggle against a social order dominated by the imperative to maximize profits, and is a struggle based on equity and solidarity. (From E-mail)

RIVER LINK NEWS

HOW THE OPPOSITION IS MOUNTING

New Govt at Centre decides to review ILR The New Govt that has been formed following the parliamentary elections in May 2004 has decided to review the proposals to link India's rivers. Many of the constituents of the new ruling alliance have said they do not see the need of such schemes or that they do not find it to be viable. The Common Minimum Programme of the new govt also says that the feasibility of the ILR will be reviewed. The Address of the President to the Joint session of new Parliament and the address of the Prime Minister to the nation in June '04 made no reference to the ILR proposals. All this is indeed a welcome sign. However, it is yet to be seen how the new alliance copes with possible pressure from partners from Tamil Nadu, some of whom are likely to feel compelled to push such proposals. The new govt will also have to be ready with a response to the Supreme Court, as the SC has been monitoring the progress of the proposals.

Balh valley bears brunt of Beas Sutlej Link The Beas Sutlej Link has diverted 4716 MCM of Beas water in to the Sutlej by construction of Pandoh dam. The water has been taken to the Sutlej through a 38 km water conductor system comprising two tunnels and a reservoir. As a result, the river goes dry during the winter causing degradation downstream of Pandoh. The link has a 900 MW Dehar HEP. However, the residents of Himachal Pradesh are intrigued by the fact that their state is not a partner in the project built on its land and financed up to 90% by the Central Govt. They hold the Centre responsible for this gross injustice, as the state at that time was a union territory. Those uprooted by the project were not rehabilitated properly for decades and many were still languishing in far-off areas like Rajasthan. The BSL project hit Mandi district the most. Its sprawling Balh valley, the granary of the district, is fast converting in to a "variable desert" by the ejection of the silt from the open hydel channel and reservoir over the past 26 years. (THE TRIBUNE 291203)

Brahmaputra will dry up downstream The Brahmaputra Board, which is one of the agencies dealing with the hydrology of the Brahmaputra basin, said that the river linking project would dry up the river Brahmaputra in the downstream. The Board, in its expert comment to the NWDA, which later had asked for it, said that about 94.12% of the water of the Brahmaputra has been planned to be diverted from its natural course by linking it up with the Ganga, the Teesta, and the Manas. The Board had pointed out that a detailed and an in-depth study of hydrological data of the basin, collected on every ten-day-basis, was necessary before deciding to link the rivers so as to avert any adverse effect during the winter season. "The task force on inter-linking of the rivers has not yet conducted any field study and its impact on environment before going to implement the Rs 5000 B project, to be completed by 2017," the Board said. After inter-linking of the Brahmaputra, its downstream from Jogighopa in Goalpara district would be affected considerably, an adverse environmental impact of which would fall on India, Bangladesh and Myanmar. Meanwhile, experts have questioned the relevance of the project in view of the finding that 20 years hence, there would be no glaciers left in the Himalayas due to global warming. In a letter to the National Institute of Hydrology here, associate professor of Physics at the Rutgers University, USA, Sunil Somalwar said that if the glaciers in the Himalayas are lost, not all the dams all over the world would substitute the loss. (SENTINEL 140104)

UP CM objects to Ken Betwa link The Chief Minister of Uttar Pradesh wrote twice to the PM, raising serious reservations on the Ken-Betwa river link proposal. He has sought amendments to the proposed Ken-Betwa link between UP and MP in the Bundelkhand region, saying that the planning deprived some of the areas of irrigation and power generation from ongoing projects. He disputed the water flows in Ken as shown by the NWDA in its feasibility report. He said the areas being irrigated in parts of Lalitpur and Jhanshi would be deprived after the link canal was constructed. According to him, the State's share of water from the proposed Gangau dam has been reduced by nearly 40% under the proposed link, which will affect the farmers of Banda and Hamirpur. (THE HINDU 230204)

TRS opposes Krishna – Godavari Link Telangana Rashtra Samiti President has said that the decision on the Krishna - Godavari link would not benefit the state's farming community. If the link was considered, the state will lose 600 tmcft and Karnataka & Maharashtra would benefit more than AP. (DECCAN CHRONICLE 261103)

Kerala reiterates opposition The Kerala Water Resources minister Jacob said that water continued to be a state subject under the Constitution. Neither the Centre nor its agencies had the right to interfere in the matter or use its influence to force a decision. He stressed that almost all the rivers in the state originated from the W Ghats and followed a course through dense forests for a considerable distance before reaching the plains. Damming them either at the originating point or across the hills downstream would only play havoc with Kerala's typical profile and the ecology at large, apart from leading to destruction of a large number of flora and fauna. The state govt was not favorably disposed to even consider the Pampa-Achankovil-Vaippar link. Jacob said that the NWDA's proposal is nothing but a proposal for export of water from Kerala to Tamil Nadu

and we cannot agree to this inter-basin transfer. He said, "Pamba and Achenkovil rivers are not inter-state rivers and as such nobody has any legal right to seek water diversion." Though the state has 44 rivers, Jacob said none of them qualify as major rivers. Jacob said a study conducted by Kerala had revealed the present inter-linking plan would lead to severe water shortage in the Vembanad wetlands. The proposed 508 MW power plant planned with the inter-linking proposal was flawed, he said, noting it would use up more power than what was generated to pump back the water into the reservoir during off-peak hours. "If the project is implemented, 2,004 Ha of land in Kerala, including forestland would be submerged. About 12 drinking water schemes that function with water from these rivers and cultivation in 37,000 Ha will be affected," he said. (BUISNESS LINE 071103, THE TIMES OF INDIA 240304)

Assam Gan Parishad opposes RL plans The AGP has strongly opposed the ILR project and warned that the Centre should stop considering only the natural resources of the NE as national properties and the problems as national liabilities. In a memorandum to the President and the PM, the AGP said that the Centre should take the people of the country into confidence and take the opinion of the experts before finalising the modalities of implementing the project. The task force constituted for the purpose should first explore other possibilities of ensuring availability of water to the water deficit regions rather than hurriedly jumping into the concept of river linking as the only option. The impact on the environment of the regions to be affected by the project should be studied carefully before taking the final decision. (THE ASSAM TRIBUNE 031103)

SC: Nov 10, 2003 The Supreme Court has directed the Centre 10 to furnish details about the Action Plan-II on the inter-linking of rivers. The two Judge bench comprising Jst Y K Sabharwal and Jst S B Sinha, gave six week. The Centre said under the AP-II, two committees had been set up under K V Kamath to examine the feasibility and the costs as various states had expressed their reservations on it.

- **Jan 6 2004** The Supreme Court asked the Centre to submit a status report by April 23. The Bench, comprising Jst Y K Sabharwal and Jst A R Lakshmanan, gave this direction after the Attorney General, submitted that a feasibility report regarding the peninsular component would be ready by March this year. The Court issued the direction after perusing a fresh progress report placed before the Bench. The report said for the "Himalayan Component" regarding 14 links, the issue needed to be discussed with Nepal and Bhutan and feasibility report about two segments out of 16 of the "Peninsular component" were under process. It said report regarding inter-linking of Ken-Betwa rivers and Parbati-Kalisindh-Chambal was expected to be finalised soon as UP had sought certain clarifications. (THE TRIBUNE, THE HINDU 111103 & 070104)

Damanganga-Sabarmati link Gujarat sought the co-operation of the Maharashtra to link river Damanganga, with Sabarmati River in Gujarat. Modi claimed once the link will help the entire western region develop farming. (BUSINESS STANDARD 151203)

ILR won't solve Malwa's water problem The proposed ILR scheme is unfavorable for Malwa zone of Madhya Pradesh. This suggestion came in a book by Mukesh Chouhan, of Narmada Control Authority. The book, *"Blue Water Plan for Malwa Region*", suggested that if the present proposal was implemented in Malwa, rivers would face pollution due to water scarcity and flora and fauna of near by area would be on great risk. The book suggested that the alternate project might increase the irrigated area in Malwa region from existing 5.2% to 26%. The book says that Malwa would receive 2767 MCM water from the proposed River Grid project, while at present total requirement of this region is 4366 MCM. (*JANSATTA* 110104)

Parbati-Kalisindh-Chambal link proposal The govts of Madhya Pradesh and Rajasthan have agreed in principle to the Parvati-Kalisindh-Chambal link. A MoU is yet to be signed. The previous MP Govt had earlier rejected the Kalisindh-Chambal linkage saying it was not economically viable on account of its low benefit-cost ratio. However, when the modified project, including the diversion of surplus water from Parvati River, came up, the Uma Bharti Govt approved it on priority. MP Water Resources Minister said that the state govt had already given its approval for the linkage and submitted the same to the National Task Force on Inter-Linking of Rivers. Rajasthan's Water Resources Minister said his govt has no reservations on the project. The NWDA has estimated the project to cost Rs 30.8 B. It is claimed that the Parvati-Kalisindh-Chambal linkage will help in additional irrigation of 118 860 Ha (93 649 Ha in MP and 25 211 Ha in Rajasthan) over. The link envisages diversion of surplus waters of Parvati, Newaj (a tributary of Kalisindh) and Kalisindh rivers for irrigation through link canal and to the reservoir built across Chambal River either at Gandhi Sagar dam or Rana Pratap Sagar dam. The link will make available water to the Ujjain, Shajapur, Dhar and adjoining tehsils of Ratlam district. The benefit-cost ratio of Parvati-Kalisindh-Chambal link has been estimated to be about 1.39 and the IRR at 11%. The link project comprises of three dams - Patanpur across river Parvati, Mohanpura across Newaj and Kundaliya across Kalisindh River. It also proposes as barrage across Ahu River and about five tunnels of link canals. The project has two alternatives for diverting water from Kundaliya reservoir to either Rana Pratap Sagar or Gandhi Sagar dam. The link canal from Patanpur to Rana Pratap Sagar would be about 243.62 kms while that between Kundaliya and Gandhi Sagar dams would be about 226.63 kms. The project on completion is

claimed to irrigate and provide drinking water to Rajgarh, Guna, Shajapur, Mandsaur, Morena, Bhind in Madhya Pradesh and Jhalawar, Kota and Chhittorgarh in Rajasthan. (HINDUSTAN TIMES 060204)

Another river-linking scheme A Group of engineers and experts presented a parallel concept for the linking of rivers in the country, as National Waterways Project. Termed as a Ganga-Kumari, the project envisages three waterways – the Himalayan (4500 km long and connecting the tributaries of Ganga and Brahmaputra), Central (5750 km long and connecting the Southern tributaries of Ganga with Mahanadi, Narmada and Tapti) and the Southern waterway (4650 km long, connecting Godavari, Krishna, Cauvery and West-flowing rivers. According to the chairman, National Waterways Development Council (NAWAD), A C Kamraj, the proposal was under Govt consideration. He added that the parallel concept would avoid sequential links. “Therefore actual inter-linking will not take place,” he said. The Himalayan waterway will involve the waterway canals to be linked at a contour level of 500 msl, while the Central and Southern waterways will be linked at a contour level of 300 msl. Kamraj also claimed that the NWP was the only proposal, which will enable two way transfer of water. He also claimed that the NWP did not involve pumping of water. With regard to implementation time and cost, he claimed that the project would require 10 years to be completed. The project cost estimated to be Rs 5350 B and project would generate 60000 MW. He also claimed that the project does not involve the construction of huge dams. (THE NEW INDIAN EXPRESS 260104)

CIVIL SOCIETY RESPONSE

Experts caution Internationally renowned scientists and Advisor to the Ministry of Science & Technology Dr B D Acharya has laid stress on an in-depth study of ecological and environmental effects of the proposed inter-linking of rivers in India and said, "the proposal seemed to be a short-term vision of the politicians." Dr Acharya, along with other eminent scientists, who include Professor Emeritus at the Indian Statistical Institute, Kolkata, Prof. D Dutta Mazumdar, Council of Institute of Advanced Study in Science and Technology chairman Prof K M Pathak, former Guwahati University Vice-Chancellor Prof N K Chaudhury, Institute of Advanced Study in Science and Technology director Prof N.N. Das, Professor Emeritus of Guwahati University Prof Jyoti Medhi, said that the Centre should conduct a stimulation and modeling study of interlinking of rivers by using Cybernetics and System Analysis, a modern discipline of science. Saying that the study is a better option before inter-linking the rivers, Dr Acharya stated that some of the parties were trying to make political gains out of the issue. Pointing out that glaciers in the Himalayas are melting due to global warming, he said before implementing the mega project, these factors also needed to be considered. (SENTINEL 010204)

WSF called river-linking Catastrophic Civil Society groups at WSF pledge to challenge each of the 30 links in every river basin by mobilizing people. Never before the conscientious citizens of India have been presented with the greatest ecological challenge by the ruling elite than the proposed inter-linking of rivers. ``If past record of large water projects is any indication, there is every reason to believe that the project will fail on all accounts,'' commented Ramaswamy Iyer, former Secretary to the MoWR. River linking proposal constitutes Millennium's greatest folly and the proponents of the project are living in fool's paradise wearing blinkers to avoid questions about contradictions and confrontations inherent in the project. ``Lets in one voice encourage a buoyant govt to discourage inter-linking, said Dr Sudhirendar Sharma, a water expert. The fact that the geomorphology of the country, its rivers, the forests and the mountains, is being altered without getting the majority nod from the parliament is indication enough that the proposal is not only unparliamentary but in effect undemocratic too. "In the days ahead a historic engagement programme with districts and panchayats is being initiated to inform the citizens about the impending disaster of Inter Linking of Rivers," says Medha Patkar of NAPM. The days of bigger the better are over. The baseless and hyperbolic govt claims to irrigate some 35 M Ha of farmland and produce 34 000 MW of hydroelectricity, provide drinking water to 101 districts and five metros have been cogently debunked. Instead, if the rainfall in any region is merely 50 cm per year, even then all the water requirements can be met by local rainwater harvesting techniques but govt loves lunatic mega projects. (Email: gopal@toxicslink.org)

Experts criticize river link plan "The Inter linking of rivers is not the only panacea for the water problem of India nor the project may stand as it is," said Mr. Suresh Prabhu, the chairman of the Task Force on ILR, in a debate held in Pune on Feb 11, 2004. The National Alliance of People’s Movements has organized a such debate with the Task Force on ‘Drought and Water Problem: Inter Linking Rivers – Is it real Solution?’, in Pune. It was a part of the programmes of the Birth Centenary of veteran Socialist leader S M Joshi. Apart from Mr Prabhu, the TF Secretary Mr C C Patel and Mr Gopal Krishnan, pertinent issues were raised by Ramaswami Iyer, former Secretary of Union water Resources Ministry, Mr. Biksham Gujja of Wildlife Fund of Hyderabad, Maj. Gen. (Retd) Sudhir Vombatkere, a structural engineer from Mysore, Vijay Paranjapye, an economist and water-planning expert from Pune and Medha Patkar of NAPM. Despite the repeated requests, neither Mr Prabhu nor his officials could give a concrete time frame when these pre-feasibility studies would be made available. The experts refused to buy Suresh

Prabhu's argument that the reports cannot be made public without the consents of the state govts, to whom the reports have been submitted. While admitting that linking of rivers alone would not put an end to water shortage in the country, Prabhu said the govt had decided to adopt a holistic approach. Former Union water resource secretary, Iyer said that he has some reservations about river linking. He said the project had not evolved through the regular planning process. Though the task force maintains the project will benefit scarcity-hit areas, details of the availability of the surplus water have not been worked out. "On what basis do Govt claims the project will generate 35000 MW of power? Have you ascertained what the water requirement of drought prone areas," Iyer questioned. Medha Patkar pointing out that although the DPR was still not ready, the govt had announced plans for executing the Ken – Betwa link. Giving a detailed analysis of the proposed Ken-Betwa and Perambilkulam links that would be immediately undertaken by the TF, she pointed that instead of intra-basin water planning, the govt is more keen on inter-basin water transfers. Contrary to the claims of flood protection by the large structures, which has been a failure hitherto, there is a need for flood planning. She questioned the attempts for foreign-funding of the project and the danger of privatization of water. "There must be something wrong in the machinery of your task force that it cannot release the pre-feasibility reports to us. It seems the govt wants to avoid any debate on the issue before getting clearances from state govts," Patkar said. She pointed out that river linking aimed at bringing together two different ecosystems and stopping the flow of tributaries to sea. This may lead to seawater entering tributaries and the danger that adjoining land would turn saline. Maj. Gen. (retd) Sudhir Vombatker pointed out that the earlier experiments of river-linking, like Sutlej-Yamuna link had proved that scarcity-hit areas did not benefit from the project as the water gets diverted to more 'powerful' centers. "The Sutlej-Yamuna link has benefited Delhi, not Haryana," he added. Mr. Vombatkere dealt with the specific claims by the ILR-proponents – like floods and sediments and water-sharing disputes. He dismissed the static model of 'donor' and 'receiver' basins. The 20-year-old problem Sutlej-Yamuna Link canal could not be solved as yet. He pointed out the irrationalities abound in a single link like Kosi-Ghaghra, which exacerbate already existing serious problem of water logging of land. "On the basis of a shred of information provided by the TF, it seems that at best only 30% of the drought prone districts in India are covered by the inter linking". (NAPM PR 120204, THE TIMES OF INDIA 130204)

Committee to generate fact sheet on river-linking Experts including Ms Medha Patkar have come together to generate a 'fact sheet' on policy options to the river-linking project. Under the chairmanship of former Union Minister, Y K Alagh, the Committee, christened as "National Civil Society Committee', will develop a conceptual framework relating to water management in general and river-linking project in particular. It will facilitate independent, transparent and accountable consultative process for generating a national debate on the issue. Other members of the 12 member Committee include former Water Resources Sectretary Ramaswamy Iyer, Ashok Khosla, S R Hashim, Kanchan Chopra, E A S Sharma, A D Mohile, Tushar Shah, Ganesh Pangare, Jayanta Bandopadhyay, B P Singh and Biksham Gujja. A majority of experts on the committee felt that the project does not give any guarantee for providing security of domestic water supplies to the drier areas of India particularly the dry uplands. Only dependable solution to this problem lies in local level harvesting and conservation of rainfall they added. (THE HINDU 220304)

Debate on River-linking Activists and water experts Medha Patkar & Rajendra Singh voiced people's opposition on inter-linking of rivers, during the panel discussion on Water Crisis: Looking beyond" which had the chairman of the Task Force on ILR, Suresh Prabhu in the chair. Ms Patkar emphasized on "Micro level solution – the extent of reach and potential," and small was more just, sustainable and manageable. She questioned on mammoth river-linking project on which there were no feasibility studies, no DPRs, no realistic estimates of costs was being pushed ahead, because of foreign capital. Unless all studies were done there could not even be an estimate of the costs and benefits. The project entailed loss of 8000 sq km not to think of the rich fertile land and forests and the millions of people who would be uprooted. Mr Prabhu said that only those of the 30 proposed links, which would be found feasible by the variety of committees set up under the Task Force, would be taken up. Rajendra Singh said that they are undertaking rekindling of river projects in other parts of country – like rekindling of Arvari River in Alwar district of Rajasthan – instead of linking rivers. (THE HINDU 201103)

Alternatives need to be tried Delivering a lecture on river-linking at Indian Institute of Public Administration an expert B K Suri apprehended the future of the project. He said that alternatives like change of cropping pattern, watershed development in a big way and rain water harvesting need to be tried to conserve water and resist the size of the project. Only those links should be taken up which are independent and where no disputes are involved. He expected that steep siltation is expected in storage reservoirs and other water bodies, massive water salinity likely to affect several canal command areas, desertification of river deltas are among the hydrological constraints. He mentioned that river linking might come with a threat of mass displacement and submergence of rich agricultural land and forest. (KASHMIR TIMES 231103)

INTERNATIONAL DIMENSIONS

China planning to divert Brahmaputra China has planned to complete its South-North river water diversion plan. The plan is putting a question mark on India's RL plans. While the Indian plan is to complete the project by 2016, China envisages completing its project by 2009. The mega project was conceived to drain out surplus water from rivers in S China to North. The Chinese experts have reportedly planned to drain out water from the Tibetan plateau, which is the principle watershed in Asia and source of 10 major rivers, including the mighty Brahmaputra, known as Tsangpo in China. Tsangpo takes a sharp U turn (Known as the "Great Bend") near the Sino-Indian border, before becoming Brahmaputra. According to reports, it is on the "great bend" the China has planned to construct what would become the world's largest HEP with a capacity of 40 000 MW. The Chinese plan also includes diversion of water from the river towards North. Chinese experts claim that construction of a dam in Tibetan plateau would tame the mighty river saving the two countries the destruction caused annually by floods. Prof Chen Chanyu, a Chinese expert, claims the potential for this project in the gradient of 2400 m between the anti parallel running river sections. The plan is to divert the Tsangpo at the loop with a 15 km long tunnel drilled in to the Himalayas and then connected to pipelines and canals.

- **India Concerned** Union Water Resources Minister has expressed concern over the Chinese proposal. The Ministry has requested the Ministry of External Affairs "to seek details". MoWR officials said they were not aware of any such proposal. The Ministry sources said that in Jan 02, India has signed a MoU for supply of hydrological information on the Brahmaputra such as water levels, discharge & rainfall.
- The govt of Assam has also expressed concern over China's plan to divert Brahmaputra and other rivers, which have their origins in Tibet. The CM said the state has requested the Center to ascertain the veracity of the reports on the Chinese plan and, if needed, to take up the matter with Beijing. People of Assam are already opposing the ILR project, now the reports on China's plan have added to their concern. All Assam Student Union has already launched a stir protesting against the Center's plan to drain out water from Brahmaputra. AASU hopes that New Delhi would take up the matter with Beijing and oppose the Chinese plan. Discovering that China also has its grand design on linking rivers Bangladesh govt hinted its willingness to join hands with India to raise the issue to stop China plan. (ASSAM TRIBUNE 021103, 091103, SENTINEL 041103, THE HINDU 071103, DECCAN HERALD 091103)

Nepal - Bangladesh outraged Nepali and Bangladeshi experts have raised concerns over the possible consequences to them from India's proposed river-linking project. Former water resources minister of Nepal Dipak Gyawli said that the project would pose a problem to Nepal, which is yet to overcome problems in proper utilisation of available water resources. According to a Bangladeshi expert, Bangladesh's Sunderbans wetlands, a UNESCO world heritage site were already under threat due to reduced flow in to the mangroves from barraging the Ganga at Farraka. According to Dr F M Maniruzzaman from Bangladesh, diversion of water from the international rivers like the Brahmaputra and the Ganges, which provide 85% of the fresh water flow in the dry season, would cause havoc to the entire ecosystem of Bangladesh. Bangladesh is deltaic region and has the mouth of several large international rivers that drain out the 54 international rivers in to the Bay of Bengal. Bangladesh largely depends on the fresh water flow of these rivers that enter its territory from India for irrigation and water supply. Out of 1.72 M sq km area of the Ganges, the Brahmaputra and the Meghna basins, 8% is within Bangladesh. (DAILY EXCELSIOR 181003, MID-DAY 261003)

Indo-Bangla joint commission talks After 2-day discussion of Indo-Bangla Joint river Commission held in New Delhi, India managed to convince Bangladesh that ILR project was only in conceptual stage and the interest of Bangladesh would in no way be threatened by it. Dhaka insisted that the issue be made part of a joint statement to register its concern over India's attempt to inter-link the two major rivers. But India refused to do so, saying its proposal to link the rivers was only at a 'conceptual stage" and did not merit a mention. The Bangladesh Water Resources Minister said his country has lodged a protest following announcements about it made by Indian President & PM. (THE TELEGRAPH 011003, DECCAN HERALD 021003)

B'desh seeks Japan's help Bangladesh has sought Japan's help to stop India from carrying out its river link plans. "Bangladesh gets 65% of water through the Brahmaputra and if the water is withdrawn in the upstream, large part of Bangladesh will turn in to a desert", said the Water Resource Minister to Japan. (THE INDIAN EXPRESS 031203)

Bangladesh draws global attention Bangladesh drew the attention of the global community on the India's river linking plans. "In fact, the very existence of Bangladesh will be at stake if the project is implemented," Environment and Forest Minister Shajahan Siraj said at the ministerial segment of the seventh Conference of Parties on the Convention of Biodiversity. "The basins that will be seriously affected are the Brahmaputra, Ganges and Meghna basins. The project will adversely affect agriculture, irrigation, fisheries and navigation. It is apprehended that the USD 112 B project will cause salinity intrusion, desertification, drying up of wetlands, lowering of water tables, decreasing water flow of rivers, pollution of groundwater and arsenic contamination", he said. (New Age-Bangladesh 190204)

DAMS

The World Bank ready to fund large dams in India According to the officials from the WB, the Indian Govt wanted its help in building the dams in the Himalayan region starting from Himachal Pradesh to Arunachal Pradesh. All of it could take place in the wake of the WB deciding to double its infrastructure lending to India from $1.5 B to 3 B in two years. The dams could be used, water experts said, for India's highly controversial river-linking project. The WB sources said that it wanted to get involved in the river-linking project. Sources in the WB indicated that it had already initiated the process of funding hydropower projects. (FINANCIAL EXPRESS 081203)

Pong oustees NOT RESTTLED AFTER 30 Years The Supreme Court has directed the Himachal Pradesh and Rajasthan govts to submit the latest status reports about the allotment of land to 20722 families rendered homeless due to Pong Dam even as they continue to strive for rehabilitation after 30 years of their displacement. The court has sought details as to how many families were yet to be allotted land in the Indira Gandhi canal area in Sriganganagar district (Raj) and how many had been given the Eligibility Certificates by the HP govt, making each family entitled to get 6.250 Ha. 130 000 Ha of land was to be made available by the Rajasthan govt to the oustees as the state was the main beneficiary of the Pong Dam linking Beas with Sutlej to augment the inflow of water in the Bhakra reservoir. The petitioners, Pradesh Pong Bandh Visthapit Samiti and Himachal Pong Dam Oustees Welfare Committee, said thousands of oustees had not been given ECs even after 30 years of their uprooting and the committee appointed on the order of the court had not held any meeting since 1998. They stated that 16 100 families were issued ECs during 1974-5 but the land during this period was allotted only to 9 195 of them, leaving 6 905 families without allotments. Ironically, allotments of 6 658 families were cancelled by the Rajasthan govt during 1976-7 on the ground that they had not complied with the guidelines, fixed for acquiring the possession. "Meanwhile, several local inhabitants trespassed on the land reserved for ousted families and the state govt had invited applications from such people for making allotments in their name in the reserved areas. They sought implementation of the apex court's July 26, 1996 order directing the Union govt to set up a committee to sort out the problem.

- **Rajasthan blamed** The Centre in its status report to the Supreme Court has stated that the Rajasthan Govt has not been able to provide the basic facilities to them in the resettlement colonies all these years. Beas Construction Board Secretary in an affidavit to SC has stated that a sub committee set up to assess the situation in resettlement colony at Ramgarh in Jaisalmer district of Rajasthan found that the administration could not provide the basic facilities because the oustees had not moved there. The HP govt, in its report, had admitted that it had only issued eligibility certificates to 9 196 of the 16 352 families required to be settled in the Indira Gandhi canal area in Rajasthan, and of these 2 538 allotments were intact and the remaining were cancelled by the Rajasthan Revenue Dept.
- **The case transferred to HP HC** The Supreme Court, Jan 28, 2004, ordered the transfer of the Pong Dam oustees' case to the Himachal Pradesh high Court for mitigation the rehabilitation problems of 16352 families fighting legal battle since their uprooting over three decades ago. A Bench of the Jst S Rajendra Babu and Jst G P Mathur ordered the transfer of the case to the High Court in view of the fact that a majority of the affected families were staying back in the state instead of moving to the Indira Gandhi Canal area in Rajasthan, where they were to be settled. The SC said the HC would also look in to the action taken in this regard by a committee comprising the Union Power Secretary, Chief Secretaries of Rajasthan and HP, set up on its order earlier to ensure a solution to the problem. Counsel Vikram Mahajan represented the petitioners. (THE TRIBUNE 091103, 301203, 290104)

Not rehabilitated after 27 years The Chhattisgarh High Court has directed the State Govt to submit report for not rehabilitating to people displaced from Bango Dam. The people from 58 villages of Korba district had been displaced 1977. The govt had assured the affected people for proper compensation and alternate land. But till date affected people have not received any compensation or land. The HC was responding to a PIL by Herambo Prasad. (*DESHBANDHU* 180304)

Hirakud's Silt burial by 2020? With the International Commission on Large Dams observing that life span of large dam could go down by 50% in tropical areas, serious doubts are being raised about the survival of the Hirakud dam, the world's longest earthen dam. Built over river Mahanadi to survive for about a century, the future of the first post-independence project is now shrouded in uncertainty. Researchers have said that siltation will take its toll by 2020, 37 years earlier than its planned life. A remote sensing survey conducted by CWC in 1995 and another by the dam authorities in 1996-7 over water holding capacity reveals that the total water storage capacity has come down by 27.25%. A state govt study reveals that every year 12 000 acre-ft of silt gets deposited. Of the 53 km upstream spread of the reservoir, 50 km has silt deposition. The siltation rate has been 2.5 times faster than the anticipated rate. The original report had suggested desilting during the rainy season and maintaining reservoir level at 590 ft but that will mean no irrigation and power in monsoon. While the sedimentation capacity of the dead storage was planned for its life span of 100 years at 2262 MCM remote sensing survey puts the total silt deposit as 2209 MCM. Desiltation at over Rs 120 B seems a distant dream. (THE INDIAN EXPRESS 101103)

Tungabhadra height to be raised The Karnataka Irrigation Minister said that the state has decided to raise the height of the crest gates of Tungbhadra dam by 2 ft (the present level is 1633 ft). They were awaiting a green signal from Andhra Pradesh. He said that every year 0.5 tmcft of silt gets accumulated as a result of which the storage capacity of the dam has been reduced from 133 tmcft to 110 tmcft. (THE NEW INDIAN EXPRESS 081103)

Unmarked Village faces submergence The water of Baithli dam has started to seep into the Niyamatpura village (Rajasthan), about 500 m from the dam. The administration has ordered evacuation of the village. But the villagers are refusing to move, as village is not marked for submergence. (*RAJASTHAN PATRIKA* 291203)

Protest at Mapithel (Manipur) on March 14 The Mapithel Dam-Thoubal River Valley Multipurpose Project Affected Villages Committee, in protest on the occasion of March 14, International Day for Action Against large Dams and For Rivers, has threatened to launch agitation as the Govt has failed to fulfill the 1993 Agreement signed with regard to payment of compensation. The committee said that in 1976 the Irrigation & Flood Control Dept, Govt of Manipur had submitted a survey report and proposal for the construction of Mapithel Dam to the CWC, Govt of India and that the Planning Commission had given its approval in 1980 for the construction of the Dam. The committee stated that the Govt had started its investigation and survey works without the knowledge of the villages in the area. It added that the disappointed villagers of the area started agitating resulting in Govt agencies resorting to strong actions against those villagers. When the proposed 66 m dam is completed, 9 villages will be affected. The affected areas included 777.34 Ha of cultivable land, 110.75 Ha of homestead and 293.53 Ha of forestland in Senapati, Imphal East and Ukhrul districts. The agreement also promised to pay compensation amount at the rate of Rs 0.1 M per Ha for paddy fields, Rs 50000 per acre for homesteads and Rs 25000 for forest/ jhum land in 1994. However the govt has violated the terms and conditions of the agreement and the compensations were not paid. Even as the cost of project has increased from Rs 472.5 M in 1980 to Rs 2.23 B in 1994 and to Rs 3.9 B now, the compensation amounts were not increased. Lands of the villagers were taken but no compensations were paid as yet. (IMPHAL FREE PRESS150304, THE SANGAI EXPRESS 240304)

Arapa Dam hanging from 1979 The Arapa project in Chhattisgarh has had two foundation stones so far but no work. A 29.46 m dam is to be built on Arapa River at Bhaisajhar village at Bilaspur district. It was initially planned to irrigate 73 000 Ha. In 1979, the then MP govt had agreed to invest Rs 321.3 M for the project. Till 1992 Rs 43.1 M had been spent. The cost for the project has escalated from Rs 2.188 B in 1979 to Rs 5.867 B in 2002. The govt is again considering the project for completion in 7 years. A letter has been sent to Central Water Commission. Over 6873 Ha of land would be affected due to the project, of which 3050 Ha is forestland. The catchment area of the project is 1693.86 km^2 and 27 villages would be affected. (*DESHBANDHU* 180304)

Demand to scrap Pagladiya Dam A protest rally demanding immediate repeal of the proposed Pagladia river multipurpose project was held at Thalkuchi near the site of the proposed dam in March 04. The rally was organised by the Pagladia Bandh Prakalpar Khatigrasta Alekar Sangram Samittee. Thousands of people and several organisations attended the rally. The sangram samittee said that in 1968-9, in pursuance of a proposal of Assam Govt, the Centre decided to construct the 26.2 m dam on the Pagaldia River. 38 villages under Tamulpur and Mushalpar revenue circles would entirely submerge under the dam. About 80000 bigha having high agricultural productivity will be destroyed and about 12 000 families with about 0.1 M population will be directly evicted. All Bodo Students' Union said that the students union also committed to work unitedly against the anti-people policy of the govt in the BTC area. Biswajit Daimary, MLA said that the dam would create a new problem for 38 villages. SK Bwiswimuthiary, MP said that without prior permission of BTC administration, how could Brahmaputra Board start surveying the area for the dam. The dept has already spent Rs 502.2 M upto March 03.

- The Pagaladiya Dam on the Pagaladiya River at Thalkuchi in the Nalbari district of lower Assam was originally conceived as a minor flood detention project at an estimated cost of Rs 126 M during 1968-71. The Planning Commission approved it as flood control project for Rs 128 M at 1971-2 prices. In 1984-5 the project was taken over by the Brahmaputra Board. Later on the irrigation component was added and the project cost finalised at 2.88 B at 1988-9 prices. The Technical Advisory Committee of MoWR recommended the project in 1990 and recommended to explore the possibility of hydropower generation and conjunctive use of water. The DPR was submitted in 1992 and in Aug 1995, the technical advisory committee cleared the project. The CCEA approved the project in Nov 2000 at the cost of Rs 5.43 B for implementation by the Brahmaputra Board. The basic objectives of the project were protection of 40 000 Ha of land from flood and erosion, to irrigate 54 160 Ha of land and to generate 3 MW of electricity. According to the Brahmaputra Board the project will displace 18 473 people and submerge 38 villages. The figure of 50 000 people in affected villages do not include the number of people of the five villages added to the original 33 villages. The Affected people alleged that the project is illegitimate and undemocratic as it has not been approved by the affected. (EPW 061203, ASSAM TRIBUNE 040304)

HYDRO PROJECTS

Plans that did not click

The Union Power Ministry under the Vajpayee govt planned to add about 25000 MW HEP capacity each in 11th and 12th Plans. This was over and above the target of adding 14000 MW during the 10th Plan. The ministry had identified total exploitable potential of 84044 MW at 845 sites, of these 300 - totaling 43000 MW – are in operation or under various stages of development. As part of the new initiative, the former union Govt had proposed three-stage clearance procedure. Under first stage all pre feasibility reports were scheduled for completion by Sept 04. The second and third stages included DPRs and sanctions of investment by the PIB and CCEA. According to initial estimates of the Power Ministry, funds worth Rs 2250 B would be required. Along with associated investment in transmission and distribution, the total funds requirements would be over Rs 4000 B. Fortunately, the plans did not click and Vajpayee govt was voted out. (POWER LINE 0104)

Ranjit Sagar unable to generate full capacity The Ranjit Sagar dam on river Ravi on J&K-Punjab border is unable to generate full 600 MW power as another proposed project on the same river, near Shahpur Kandi with 168 MW capacity is yet to be constructed. At present the Rs 37 B HEP is generating only 110 MW. According to the Chief Engineer of the project, it may take at least five more years to generate at full installed capacity of 600 MW. For full capacity generation, the level of water is required to be at least 537-540 m. He said about 126 persons including labourers have sacrificed their lives while working on the project. (DAILY EXCELSIOR 041203)

Indo Nepal PPA The PTC has inked the draft PPA for the first wholly dedicated HEP in Nepal for India to provide peaking power for the northern grid. The agreement, signed recently, will enable power purchase at the rate of Rs 2.6 per unit at the Nepal border for 25-years. The 750 MW West Seti HEP is being promoted by the SMEC (Australia). (THE ECONOMIC TIMES 071103)

Use of Irrigation water for HEPs opposed Various farmers' unions have demanded that the Andhra Pradesh govt utilise the water of various irrigation projects exclusively for the agriculture sector and not for hydel power generation. Former CJ of Allahabad HC, Justice Lakshmna Rao, Chairman and Vice President of the Rythu Sanghala Samakhya said that about 700 TMC of water was stored in the Nagarjunsagar and Srisailam projects. The govt was utilising the projects for hydel power generation, causing a heavy wastage of water meant for irrigation. (CENTRAL CHRONICLE 191103)

Capacity of Shivsundar HEP to be enhanced Austria is going to help enhance the capacity of Shivsundar HEP in Karnataka from 1 MW to 11.2 MW, which had been installed about 100 years ago and at that time the project was the largest in Asia. The Finance and Labour Minister of Austria claimed that capacity of old HEPs could be enhanced through technical improvement. (*HINDUSTAN* 191103)

Four HEPs planned in Orissa The Union Govt is planning to install four HEP with a combined capacities of 1188 MW in Orissa at an investment of Rs 50 B. The four projects would be located at Lower Kolab (375 MW), Tikrapada (205 MW), Naraj (215 MW) and Balijori (393 MW). (POWER LINE Jan-04)

Mega Pump Storage project in Bihar The NHPC has said that a 2570 MW pump storage power project is proposed in the Kaimur district of Bihar. This would be a largest HEP in the state, for which dialogue was going on with the state govt for long time. The Bihar govt has sent its clearance to Union Power Ministry. The Bihar Govt put conditions for some relaxation for Bihar Hydropower Corp. PPS would be constructed at four places in Kaimur area: Telharkund (100x4 MW), Hathidah-Durgawati (200x8 MW), Panchgothia (75x3 MW) and Sinafather (115x3 MW). The cost for preparation of the DPR of the project is estimated to Rs 2.12 B. (*HINDUSTAN* 081103, 210104)

Bodhghat HEP gets clearance? The Union Ministry of Environment & Forest has cleared the Bodhghat HEP in Chhattisgarh, claimed the minister. Ministry has approved in principle diversion of 5734 Ha of forestland. In 1984, the Union Cabinet and Forest Secretary T N Sheshan refused to give Bodhghat HEP clearance on the ground that the construction of the project would submerge one of the centuries old rare core Sal forest of the world. (PIB & *DESHBANDHU* 060204, E-mail from Sairam Bhat, Raipur 070204)

Chakung HEP in Sikkim After entrusting all the welfare and security jobs to Toong Naga Development Welfare Association, the villagers of Toong Naga areas in N Sikkim have okayed the proposed 24 MW Chakung Chu HEP at Naga. A meeting of Toong Naga Panchayat Unit, landowners and residents of the area held on Jan 23 04 discussed the demands of the villagers: any employment whether skilled or non skilled may be exclusively provided to the residents of the area and any contract works should be allotted to the residents of the area; land compensation must be given at par with the Rolep project. Rehabilitation of displaced persons should be properly done; while accomplishing this project, influx should be monitored by the concerned dept strictly. Any permanent settlement should be discouraged and the road alignment to be considered according to demand of the affected public. (SIKKIM EXPRESS 040204, GANGTOK TIMES 060204)

NORTH EAST INDIA

NHPC TRACK RECORD **Loktak farmers seek compensation** Manipur Farmers' organisation in a meeting has decided to launch a series of campaigns to protest the adverse impacts of the Loktak Project on the agricultural lands in the periphery of lake and on the health of the environment. They resolved to press the govt to pay compensation to affected farmers for the damaged agricultural lands, an issue that has been gathering dust since the commissioning of the Project in 1984. Amongst the list of demands farmers organisation has asked govt to provide job to one member of each affected family, to pay pension money, to dredge the Sugunu Hump, to utilise the expert boatmen from Thanga island for clearing the Phumdi vegetation from the lake, and to open the Ithai sluice gates for allowing easy passage of the cut Phumdi pieces. The reservoir has caused loss of about Rs 350 M worth of paddy each year at the rate of Rs 100 per Shangbai, a local measurement. In today's market price, at the rate of Rs 200 per Shangbai, the loss comes to around Rs 850 M per year. (HUIEYEN LANPAO 041103)

Cabinet clears Subansiri HEP The 2000 MW Subansiri Lower HEP of NHPC has been cleared by the cabinet, to be completed by March 2010. The NHPC has finalised Contract Agreement for major civil works for the project. The NHPC has signed agreements with M/s BOGUCHANGESSTROY (BGS) (Russia)-Soma JV for construction of concrete Gravity dam at a contract price of Rs 10.98 B and with M/s Larsen & Tubro Ltd for the construction of Power House and Water Conductor System at a contract price of Rs 9.21 B.

- **Project Features** A 116-m high concrete dam and a surface powerhouse is located at downstream of the dam on the right bank to house eight units of 250 MW turbine generators. TGs will be fed by 9.5 m dia tunnels with length varying from 630 m to 1145 m with design capacity of 322.4 cumecs. The maximum observed flood of Subansiri is 12 024 cumecs. With a catchment area of 34 900 sq km of heavy rainfall zone, the flood havoc during monsoon haunts the people of Dhemaji and Lakhimpur districts of Assam. The Project is to be commissioned by 2010 with investment of Rs 75.34 B and average annual energy generation of 742 MU at projected sale rate of Rs 2.31 per unit. The reservoir will stretch 53 km along the river upstream of the dam. (BUSINESS STANDARD 081103, THE LOKMAT TIMES 251003, BUSINESS STANDARD 300104)

MoEF stand may hit Arunachal HEPs The conditions put up by Ministry of Environment and Forest while clearing the 2000 MW Subansiri Lower HEP, are likely to stop two other HEPs in Arunachal Pradesh. The MoEF has stipulated that the NHPC has to undertake not to construct more dams in upper reaches of Subansiri River. Besides it has to provide for R&R of the affected people and a national park covering at least 4000 Ha for a decade. According to sources, the conditions imposed by the MoEF is likely to put a question mark on the fate of the 1000 MW Subansiri (Middle) and 2000 MW Subansiri (Upper). The cost of maintaining the proposed national park to be created around the Project area in Arunachal Pradesh would make the Project economically unfeasible, sources said. The NHPC apprehends that the cost of providing R&R to the people who would be up rooted from the area now proposed to be declared as national park would also be passed on to it. Work on the Rs 70 B Subansiri (Lower) Project has been stalled because of a PIL pending in Supreme Court. (ASSAM TRIBUNE 020304)

Tipaimukh Opposition According to the campaigners from Northeastern states HEPs in the region would damage the environment and invite frequent earthquakes. Spokesperson from of the Citizens Concerned for Dams & Development said the first project to be implemented in Manipur would involve building a 160 m high dam over the Barak, the second largest river in NE, at Tipaimukh, an ancient spiritual site of Hmar community. He said that the 1500 MW project was pushed through by Assam without the knowledge of Manipur. He cited earthquakes as one prime reason why a high dam should not be built at Tipaimukh. There is no study on the geotectonic, biodiversity, environmental, Health, socio-economic and hydrological impacts of Tipaimukh. The exotic and rare flora and fauna and gene pools of Manipur will be submerged. He added that instead of conducting an up to date survey, the project authority simply refers to the early botanical survey record of the region dating back to 1972-97. The project will also violate the co-riparian rights of neighbouring Bangladesh, which shares the Barak River. (THE ECONOMIC TIMES 051103)

Tipaimukh and Loktak DS HEPs to be dropped? The Centre has decided to back off from taking up Loktak Downstream Project and Tipaimukh HEP. According to source, a high level meeting in New Delhi, presided by the secretary, power, Govt of India has discussed the issue at length and has in spirit resolved to drop the 90 MW Loktak Downstream project. The state power commissioner in-charge, Ch Birendra Singh, chief engineer (power), Ng Tiken and N Shyamsunder Singh represented Manipur in the high level meeting. The Union Power Secretary has expressed the desire of the Centre to altogether drop the power project. The Union power secretary stated that the project would not be cost effective as the loss incurred on completion could be well beyond 50% of the total cost. Moreover, compensation amounts of more than Rs 600 M have been demanded mounting a heavy financial pressure, he said pointing out that experts are of the opinion that the project will not be viable in the long run. Even if the project is completed, there will be no state willing to buy the additional power generated at the high rate of Rs 3.20 per unit. Meanwhile, the 1500 MW Tipaimukh HEP

is also unlikely to see the light of the day. Vehement opposition against project, coupled with the state govt's inability to effectively defend against the anti dam lobby are cited as reasons for dropping the project, according to the sources. (IMPHAL FREE PRESS 240204)

M Siang faces Opposition Following opposition by local people and NGOs, the authorites have agreed to hold another public hearing on Middle Siang HEP in Arunachal Pradesh on Aug. 3, '04.

NE HEPs The existing dams in NE states have irreversibly damaged the fragile ecosystems of the region – many identified as important biodiversity hotspots of the world. For instance, studies have confirmed that in Loktak, at least seven varieties of fish species are now extinct and 23 varieties of aquatic vegetation have either degenerated or become extinct. This destruction has directly affected the livelihood of many communities in the vicinity. The 26 proposed HEPs in the region will have 99 256 MW capacity. Compare this with Central and state Govts' projections for the energy requirements of the North-East only 5 700 MW by 2020. The EIA for Lower Subansiri, the number of species affected has been considerably underestimated; it includes a species called '*mastheis*' that is reported to be non-existent! There is no assessment of how vast will the submergence of forest tracts be or what the impact of impounding water in the reservoir will be on the water regime of the area, its consequent impacts on agriculture and livelihood. Similarly, the Tipaimukh Dam Project report downplays the rich biodiversity in its affected area (a biodiversity hot spot). Even though a comprehensive EIA, followed by transparent public hearings, has become mandatory in all big projects, official are pushing ahead with complete secrecy in the name of national security. Does national security merit social and environmental harm, and bypassing the democratic process? Officials invariably mention that local communities are "innocent" and "incapable" of understanding the complexities of dam building. Therefore, public hearing and access to Detail Project Reports are meaningless. This happened when the Citizen's Concern for Dams and Development, a coalition of about 45 organisations in Manipur sought information on NEEPCO's plan to build the Tipaimukh Dam. (DOWN TO EARTH 311203)

NEEPCO feasibility studies for HEPs The North Eastern Electric Power Corp has been asked to prepare Preliminary Feasibility Reports for 18 HEPs in the Northeast with an aggregate capacity of 5165 MW. NEEPCO will take up those schemes in three phases. In phase-1, the PFRs for the following schemes in the Kameng basin have already been prepared and submitted to the Central Electricity Authority. Based on the contents of the PFRs, a detailed project report will be prepared. The projects could spill into the12th Plan.

Phase-I				
S	**Scheme**	**State**	**River Basin**	**IC- MW**
1	Bhareli Lift Dam-II	Ar. P	Kameng	600
2	Kameng	Ar. P	Kameng	600
3	Tenga	Ar. P	Kameng	600
4	Papu	Ar. P	Kameng	200
5	Talog	Ar. P	Kameng	300
6	Kapak Leyak	Ar. P	Kameng	170
	Total			**2460**
Phase II				
7	Pakke	Ar. Pradesh	Kameng	120
8	Seba	Ar. Pradesh	Kameng	105
9	Bhareli-I	Ar. Pradesh	Kameng	240
10	Chanda	Ar. Pradesh	Kameng	110
11	Badao	Ar. Pradesh	Kameng	120
12	Utung	Ar. Pradesh	Kameng	110
	Total			**805**
Phase III				
13	Kimi	Ar. P	Kameng	535
14	Biochom-II	Ar. P	Kameng	205
15	Biochom Storage-I	Ar. P	Kameng	190
16	Yangnyu Storage	Nagaland	U Brahmaputra	135
17	Tizu	Nagaland	Barak & others	365
18	Dikhu Dam	Nagaland	U Brahmaputra	470
	Total			**1,900**

(Project Monitor 1-151203)

NEEPCO HEPs The NEEPCO has set a target of adding 2690 MW capacity during the 11th Plan at an investment of Rs 100 B. With the govt meeting 30%, NEEPCO is scouting for about Rs 60 B. NEEPCO has tied up with SBI caps for Rs 8 B to take up new projects. Some existing, ongoing and future HEPs of NEEPCO are as follows.

Completed Projects			
SN	**HEP**	**State**	**Capacity (MW)**
1	Ranganadi St-1	Arunachal Pradesh	405
2	Kopili	Assam	150
3	Kopili St-1, Ext	Assam	100
4	Kopili St-2	Assam	25
5	Doyang	Nagaland	75
	Total		**755**
On Going Projects			
SN	**HEP**	**State**	**Capacity (MW)**
1	Kameng	Arunachal Pradesh	600
2	Tuivai	Mizoram	210
3	Tuirial	Mizoram	60
	Total		**870**
Future Projects			
SN	**HEP**	**State**	**Capacity (MW)**
1	Tipaipmukh	Manipur	1500
2	Lower Kopili	Assam	150
3	Ranganadi St-2	Ar P	130
4	Dikrong	Ar P	100
5	Papumpam	Ar P	60
6	Hirit	Ar P	50
7	Kameng Basin Projects	Ar P	3945
8	Luhit Basin Projects	Ar P	7265
	Total		**13200**

{THE TIMES OF INDIA 160104 & NEEPCO Brochure Nov-03}

HIMACHAL PRADESH

MoUs of Himachal HEPs cancelled The HP govt has decided to cancel six MoUs signed by the previous govt for the HEPs, which were allotted in violation of procedural norms. It also decided to initiate action against the then Chief Secretary and other officers who arbitrarily changed the parameters of evaluation criteria. In order to favour certain companies, an "ingenious" method was adopted, under which the names of the IPPs were arranged in alphabetical order instead of merit for awarding projects. In all, 17 big HEPs were assigned during the previous govt. The MoU for the Fozal HEP was awarded ignoring the claims of 13 more deserving IPPs. Budhil & Kugti HEPs were awarded ignoring even the geographical realities of the sites. The Harsar & Bharmour projects were also cancelled. In the case of Sainj HEP the merit had been ignored by allotting it to M/s East India Petroleum that was placed at 5th place. The MoU of the Sal HEP was terminated by the previous govt and amended to the state sector. Dhaulasidh, Tangnu Romani and Baragaon HEPs were found to be liable for cancellation as they failed to submit the essential documents. In case of the Sarkothi HEP, the allottee M/s Venture Energy Technologies violated the clause of MoU. The Sunda and Neogal HEPs were cancelled due to lack of seriousness by the IPPs. In Karcham Wangtoo the agreement was signed in undue haste, it was found. (THE TRIBUNE 061103)

Himachalis being denied jobs in HEPs Himachalis are being denied their share in employment not only in IPPs but also in the mega HEPs assigned to Central Agencies. Although necessary clauses have been incorporated in all MoU and agreements to ensure maximum employment to local people, these are not being implemented. In Baspa HEP, when work was in full swing in May 02, out of total staff strength of 3321, only 924 were from HP. In the Kol HEP of NTPC, out of the total staff of 93 as on March 03, only 11 were from HP. In Parbati HEP, out of the 988 persons employed by the NHPC, only 393 were HP. (THE TRIBUNE 121103)

CEA clears Parbati-III The CEA has accorded techno-economic clearance to the 520 MW Parbati–III HEP on the river Sainj, a tributary of Beas, in Kullu district of HP to be built at a cost of Rs 22.28 B. The 750 MW Parbati-I had been dropped due to environmental reasons, while the 800 MW Parbati–II is already under construction. NHPC sources claimed that the work of diversion tunnel of Parbati–II HEP has been completed. (THE TIMES OF INDIA 141103, BUSINESS LINE 151103)

Larji HEP authorities fined The Forest Dept of HP has imposed a fine of Rs 15.4 M on the 126 MW Larji HEP authorities as penalty for dumping waste without prior permission of the Central Govt as per the guidelines laid down by the Supreme Court. The Conservator forest of Mandi directed the circle DFO Mandi to recover this amount from the project authorities for the violation of provisions of the Forest Conservation Act. The project authorities had been throwing waste into the Beas from the very beginning of the project. Earlier residents had been complaining about this to the various authorities but no action was taken. According to the forest dept of Mandi Circle, 0.401 MCM waste was dumped along the bank of the river over an area of 26.6 Ha. (THE TRIBUNE 181103)

Kol Dam The construction work on 200 X 4 MW Kol Dam HEP on Sutlej river in Bilaspur district of HP was started from 14 Dec 2003. The NTPC has claimed that the 163 m high dam will start generation from 2007. Spread over four districts in HP, the Rs 44.93 B Kol HEP will submerge 53 villages. HP will get 27% of power, of which 12% will be free. UP, Rajasthan, Delhi, Punjab, Haryana, J&K and Chandigarh would receive rest of 562 MW. The NTPC has awarded the Rs 7 B contract of construction of the main dam to Italian Thai Company of Bangkok.

- **Bungling in contracts** A bunch of operators have bid to build the project way below NTPC's own estimate of the likely cost. Strangely enough, NTPC also helped one of these would be project grabbers opt out of the bid process without suffering any financial penalties. NTPC's cost estimate of Rs 8.74 B for the Kol dam was higher by Rs 2.58 B than the least cost bid quoting at Rs 6.16 B. All other eight-price bids submitted in the first week of July 03 were over Rs 7 B, with three bids over Rs 8.1 B. Two independent consultants prepared NTPC's cost estimate: Wapcos and EDF France. These estimates are then approved by the CEA and the Ministry of Power. If the NTPC accepts a very low quote as it did not in the case, does it not make a mockery of its own cost estimate. The tender committee recommended that the work order be given to Guris-Ketan who filed the lowest bid at Rs 6.16 B. However, this was not done, NTPC sources say Guris-Ketan refused to take on the project, stating that it had 'mistakenly assumed' mega power project benefits and deemed export benefits at the time of bid. The withdrawal of a bid is ground for forfeiture of the bidder's earnest money deposit of Rs 90 M. Instead of claiming the earnest amount NTPC dragged its feet in finalising the tender process and the six month validity period was allowed. Guris-Ketan took stay from Court preventing NTPC from enchasing its bank guarantee, on the grounds that the EMD can be forfeited when the bidder withdraws the bid and not when he modifies the bid. Italian-Thai Development Company Ltd has, which had been third lowest in the original bidding was awarded the contract was awarded for Rs 6.642 B.
- **Muck flows into Sutlej** Thousands of truck loads of waste from the Kol Dam is being dumped either in to the Sutlej or by the side of the river every day. It is also posing danger to the Bhakra Project as the muck is flowing directly into the river and is threatening the

aquatic life of the Govin Sagar lake. The work of dumping the waste has been given to two private companies. The waste is unloaded within a radius of 500 m from the entrance of tunnel. The spot is not a dumping site. But the project authorities have never been stopped from doing so by any one, including the HP Govt agencies. The NTPC was also yet to deposit Rs 270 M assessed as cost of environmental works of the project. NTPC has petitioned for downward review of this amount. Basic objections are being raised that under the MoEF norms, no two dumping sites should be less than 5 km of each other. But in this case, they all are within this area. Further, since forestry in HP is community based, even the local forest officials were not consulted in finalising dumping sites. (THE TRIBUNE 211103, 200204, 260204 *DANIK BHASKAR* 211203, THE ECONOMIC TIMES 250304)

Snag in Nathpa Jhakri HEP In its commissioning stage the Nathpa Jhakri HEP has hit yet another roadblock, which will further delay the project. The first 250 MW unit was commissioned in Oct 03. However, the commissioning of the second unit could not take place on schedule because of a mechanical fault. The company then tried to synchronise the third unit but encountered the same problem. It is very unlikely that the project will be fully commissioned by July 2004. It has already fallen behind the original completion schedule by 54 months. The delay in commissioning of project will cause a loss of Rs 12.5 M per day. The second unit was finally synchronised in Dec 03.

- **MoU** The Satlaj Jal Vidyut Nigam has signed a MoU with the Centre for setting physical and financial performance targets for 2004-5. The targets include revenue realisation of Rs 11.85 B and gross profit of Rs 8.78 B. On the physical performance front the SJVN will generate net saleable energy of 5679 MU. The SJVN has completed the works related to the commissioning all six units of the 1500 MW Nathpa Jhakri HEP.
- **Rampur HEP to go to SJVN** The HP Govt has decided to hand over the 400 Rampur HEP to the Sutlej Jal Vidyut Nigam. The Previous govt could not sign the MOU because of stiff opposition from employees of the board who wanted a better deal. (THE TRIBUNE 251103, 221203, 250304, 310304)

HP Jal Vidyut Nigam to execute HEPs The HP Jal Vidyut Vikas Nigam has been assigned the Uhl-III (100 MW), Kasang (66 MW) and Ghanvi-II (10 MW) projects in the first phase. Poor financial position of the HPSEB has forced the govt to form a new special purpose set-up for expeditious execution of HEPs. Losses in the past four years crossed the Rs 3.5 B. Earlier, even the PFC had refused fund the Board, as Govt guarantees had not been forthcoming. The Govt decided to set up a new executing agency for raising funds. The PFC agreed to provide Rs 3.31 B loan for Uhl-III and Rs 2 B for Kasang HEP. Besides, the REC has sanctioned Rs 351.4 M for the Ghanvi-II. (THE TRIBUNE 170104)

UTTARANCHAL

NHPC plans in Uttaranchal The NHPC would invest Rs 100 B in six HEPs in Uttaranchal. While the NHPC had already signed MoUs with the state govt for four HEPs, it was in talks for the construction of two new HEPs. NHPC's projects include Tanakpur (120 MW), Dhauliganga (280 MW) and Kotibhel (850 MW). For the fourth project, an MoU was signed between NHPC and Uttaranchal Jal Vidyut Nigam Ltd. According to the agreement, NHPC will set up the multi purpose 420 MW Lakhtar Vyasi HEP that was hanging since 1990. The project will be set up on the river Yamuna at Vikasnagar. Under the pact the NHPC has agreed to plan, finance, build, operate and maintain the project at a cost of Rs 18 B, subject to techno-commercial viability and the central govt's approval. The Uttaranchal govt had agreed that UJVNL would purchase the entire power generated from the project at a cost of Rs 3 per unit. (BUSINESS STANDARD 041103)

Pala Maneri HEP The state CM has inaugurated the 416 MW Pala Maneri HEP, the first major HEP after the formation of the state. The estimated cost will be Rs 22.1 B, and it will be constructed over the Bhagirathi River in Uttarkashi district, to be completed in six years. The Uttaranchal Hydro Electric Corp will construct it. (THE TRIBUNE 100204)

Private HEPs The Delhi based Sun Flag Iron and Steel Company Ltd signed an MoU with state govt to construct 45 MW Hanol-Tuni HEP on the river Tons in the Dehradun district with investment of Rs 2.5 B. Polyflax Corp Ltd will set up the 8.4 MW Bhilangana-III project on the river Bhilangana in the Tehri district with the investment of Rs 500 M. (BUSINESS STANARD 241103)

Pancheswar faces opposition The Center has planned to construct a 6480 (12 X 540) MW Pancheswar HEP on Kali river in Champawat district in Uttaranchal. Experts from the state have opposed the dam and are threatening to launch an agitation. Anil P Joshi has said, "We totally disapprove any idea of building this huge project because our experiment with the 2400 MW Tehri dam has totally failed." Calling for a referendum over the Indo-Nepal dam, Dr Joshi claimed that the new project would uproot nearly 80 000 people from Pithoragarh and Champawat dists and submerge an area of nearly 10 000 Ha. The Centre entered into the Mahakali agreement with Nepal in 1996. The height of Pancheswar dam has been increased from 238 m to 315 m, which would make it the highest and biggest in India. 66% of the proposed reservoir would fall under India and rest in Nepal. "Moreover all these areas are earthquake prone," said Joshi, the director of the HESCO. There would be two underground powerhouses at the proposed sites. The dam would submerge 146 villages. (DECCAN HERALD, BUSINESS STANDARD 010104)

JAMMU & KASHMIR

Power plan The J&K Govt has formulated a Rs 4.01 B plan for exploiting the hydropower potential. The Govt had approved setting up of 12 small and medium HEPs in the first phase. The plan included projects of Rs 1 B to be set up in the border areas of Thanamandi in Rajouri and Chingus in Poonch. The CM stated that 11.11 MW installed capacity would be added with the completion of six languishing projects: Pahalgam (4.5 MW), Bhaderwah (1.5 MW), Sanjak (1.26 MW), Haftal (1 MW), Marpachoo (0.75 MW) and Igo-Mercellong (3 MW). Some of the ongoing mega projects are Sewa-II (120 MW), Dulhasti (390 MW) and Uri-II (280 MW), all being executed by NHPC. The state also requested the Centre and the NHPC for taking up to Burshar HEP (1000 MW). An ambitious project costing over Rs 4.01 B has been sanctioned for improvement of transmission and distribution system under APDRP, to be completed by 2007. (BUSINESS STANDARD 051203, THE STATESMAN, NATIONAL HERALD 020104)

Sinking feeling: IBA to mobilise funds for Baglihar The Indian Banks' Association has agreed to mobilise Rs 15 B from the banks in J&K for the 450 MW Baglihar HEP being built over Chenab. The chief executive of the association said the PFC would appraise the project and the finance would be mobilised by the IDBI and HDFC. (BUSINESS STANDARD 111103)

Demand for probe into Dul Hasti HEP delay The AITUC has urged the Prime Minister to the order of an inquiry into the delay in construction of the 390 MW Dul Hasti HEP at Kishtwar by the NHPC that has led to escalation of the project cost by over Rs 27 B. It was pointed out that the project was targeted for completion in 1994, but has not been commissioned so far. The project initially was estimated to cost Rs 12.60 B, but it has been revised to Rs 40 B meaning that it would consume Rs 102.5 M for each MW of capacity. The project was rescheduled to be commissioned in Dec 03 as work on it was not completed even in 15 years. The AITUC also demanded an enquiry into the payment made by the NHPC to Jaiprakash Industries for boring the 10 km long tunnel. (THE TRIBUNE 070204)

J&K HC rejects takeover of project The Jammu and Kashmir High Court has quashed the state govt decision to take over the canal powerhouse project and has restored the project to Trehan Industries. The company was awarded the project by the previous govt. But the present govt had asked the J&K Power Development Corp to take over the project last year. In a order, the HC said the present govt's order was not justified. The HC said, "The State violated the principal of natural justice as it was aware of the process of work and its financial input". The company was also transferred five canals of land on a 40-year lease. (BUSINESS STANDARD 050304)

WEST BENGAL

NHPC Track Record on Env Issues **Norms ignored in Teesta HEP** A fact finding mission, consisting of NESPON, Academy for Mountain Environics, Environmental Justice Initiative and Delhi Forum brought out some major facts about the proposed Teesta Low Dam III. The notification for Public Hearing was not published in a vernacular language. Summary of DPR, EIA and EMP were not available in the vernacular language 30 days prior to the Public Hearing. The Public Hearing was not conducted in the directly affected villages– Geilkhola and 29th Mile – but in Deorali, a village 8 km up in the hills. No district administrative authority was present in public hearing. The minutes of the Public Hearing are not available for public scrutiny. The directly affected villages have no prior information on the project, land to be acquired, rehabilitation and resettlement policy, and the benefits accruing to them. The concerns expressed in the Geological Survey of India Report on the Geological & Geotechnical Investigations of Teesta Low Dam Project (Stage-III & IV) have been ignored while granting the environmental clearance.

- **NHPC denied clearance by MoEF** The site of the proposed Teesta Low Dam-IV would have submerged a part of NH-31A connecting Gangtok to Siliguri, which is crucial link to Darjeeling and Kalimpong. The alternate road proposed would have passed through the 159.86 sq km Mahananda Wildlife Sanctuary and Reserve Forest, one of the world's richest biodiversity hotspots. (NESPON PR 291103)

Teesta LD III receives clearance The 160 MW Teesta Low Dam III has received techno-economic clearance. A 45 m high dam would be constructed for the Rs 9.98 B project to be completed in 4 years. (*HINDUSTAN* 311203)

NHPC Failure **Bengal to execute Purulia Project alone** NHPC has failed to pick up its 70% stake in the 900 MW Purulia Pump Storage Project. Govt of W Bengal is planning to go ahead with Rs 32 B HEP alone and has conveyed its decision to the Union Ministry of Power. The state has formed a joint venture company with NHPC for the project but its equity participation has been held up by the Public Investment Board. The project has 85% loan component from JBIC, the rest, as equity, was to be shared between the WBSEB and NHPC. To be commissioned in 2006-7, the plant will consume 1100 MW of power to pump the water to produce 900 MW of power during peak hours. The WBSEB and NHPC have obtained certain clearances from the finance ministry and the Planning Commission. JBIC will provide Rs 26.19 B as soft loan. It has already given Rs 6.107 B in the first tranche. The WB Govt has provided Rs 164.8 M. The cumulative expenditure for the project up to Nov 03 is Rs 5.264 B. (THE ECONOMIC TIMES, BUSINESS STANDARD 061103, THE TELEGRAPH 110104)

NEWS FROM THE NARMADA VALLEY

SARDAR SAROVAR

ICOLD gives less than a tenth of the truth on SSP The world's biggest dam industry association, the International Commission on Large Dams, claims (in *The Dams Newsletter*, a new electronic quarterly from the ICOLD) that India's controversial Sardar Sarovar dam on the Narmada River is displacing only 4,600 families. Even SSNNL, the state agency building the dam, admits on its web site that ten times more people - 40,727 families - will have to move. ICOLD states that only 14 villages are being submerged. SSNNL's web site gives a figure of 245 villages affected by submergence. Independent analysts say that when canals and other ancillary infrastructure and indirect impacts are included the total number of families displaced is at least 64,000. (www.icold-cigb.net/newsanglais.html)

Eminent persons urge SC for Suo Motu action A number of eminent persons have written to the Chief Justice of India, asking him to intervene in the issue of SSP, where gross violations of SC judgment & human rights is happening. The signatories include Former CJ of India, Jst (Retd) Venkatchallaih, Retired HC Judges, Jst (Retd) Daud and Jst (Retd) Suresh, noted social worker Baba Amte, Former High Commissioner to South Africa L C Jain, and former Chairperson of NCW, Mohini Giri. In the letter, sent in Oct 2003, they appealed to the CJ to direct the concerned govts and authorities not to permit or carry out any further dam construction until an independent body looks into the situation of compliance and, reports back to the CJ, on the ground reality of the Narmada valley today and till rehabilitation of all families in the village communities affected at 103 m height, is ensured. (NBA PR 141103)

Tribals attempt suicide at Narmada dam site At least 15 tribals from the Sardar Sarovar Project area had attempted suicide at the dam site in the first week of Dec 03. They are tribal youth who have been displaced and not rehabilitated. After being rescued they were booked for attempt to commit suicide and disobedience. Some of the tribals are canal-affected people and the govt does not include canal-affected people in the rehabilitation plan. (THE HINDU 111203)

Env-sub group clears 110 m for SSP The Environment sub group of Narmada Control Authority cleared the proposal to increase the Sardar Sarovar Dam height to 110.64 m. The decision would affect about 11 000 Ha of land in MP, Maharashtra and Gujarat and displace about 12 000 families. Medha Patkar said that Maharashtra and Rajasthan, both participating states, were not represented in the meeting of the environmental sub-group. The experts say that there is no need to increase the height of the project, as it would bring no additional benefit. There is no point increasing the height when the project has not built infrastructure to harness additional water for increasing power, irrigation and drinking water supply. (THE STATESMAN 271203, HINDUSTAN TIMES 291203)

Height increasing a HR violation The NBA has said that the clearance for the raising the height to 110.64 m is another atrocious step to annihilate the tribals and farmers of Narmada Valley. At least 3 000 tribal families in Maharashtra are in their villages and 2 000 are yet to be declared as oustees and resettled. As it will be unrealistic to leave only a few families in each of 33 villages and resettle them separately, all the 3 000 families will have to be resettled with village as unit, as per the NWDT provisions. (NBA PR 291203)

Decision on raising Narmada dam height

- The NBA leader Medha Patkar led a protest demonstration and sat on a dharna in front of the MP CM's residence to draw attention to glaring flaws in the R&R programmes for villagers being affected by SSP.
- Medha Patkar of NBA ended her six-day fast on Jan 28 after the Maharashtra Govt promised that it would not give its consent to raising the height of the Sardar Sarovar dam to 110.64 m until all families in Maharashtra affected by this were resettled. Medha Patkar urged the State Govt to make a realistic assessment of its benefit from the electricity generated when the height of the dam is raised.
- The Narmada Control Authority chaired by the Union Water Resources Secretary, V K Duggal, on Jan 29 04, deferred a decision on raising the height of the dam to 110.64 m at its meeting in Delhi, after Maharashtra raised objection and sought at least three months time for resettlement of the displaced. The Maharashtra representative said that surveys were still on and that about 450 families needed to be resettled.
- The political level Review Committee of the Narmada Control Authority chaired by the Union Water Resources Minister, Arjun Charan Sethi, on Jan 29 postponed a decision at its meeting on raising the height of the SSP. The Maharashtra representative in meeting opposed raising the height of the dam.
- Despite the Maharashtra Govt's reservations, the Narmada Control Authority on March 16 gave permission to raise the height of the dam to 110.64 m. It is claimed that at this height 40 - 90 MW power could be generated from the canal head powerhouse. Maharashtra wanted the dam height raised after it finished the resettlement of people to be displaced by the dam at the proposed height. Maharashtra had said that it still had between 177 and 500 families who had been identified for resettlement.
- **Decision inhuman & undemocratic** The decision by the Narmada Control Authority to raise the height of the SSP to 110.64 m and approval granted by Election Commission is yet another blow to the Indian democracy. After assessing the ground reality when it

was obvious that thousands of families in the villages (Nandurbar district, Maharashtra, Dhar and Badwani in M.P. and Narmada in Gujarat) are yet to receive land-based rehabilitation, the NCA had not permitted the raising of height in spite of two meetings held on Jan 29 and Feb 12 04. However, the Maharashtra's underestimation and unrealistic claim that 177 families would be rehabilitated within 4 months was used by the govts to push the dam ahead, sidelining its weak opposition. The project can produce only about 30 - 40 MW at the proposed height of 110 m, that too mainly during monsoon and hence, compared to the cost - human and financial - 10 MW to Maharashtra and 20 MW to MP is no benefit to justify the decision. (THE HINDU 080104, 290104, 290104, 300104, 170304, NBA PR 170304)

NBA protests against resettlement facilities Medha Patkar and other NBA activists and 200 displaced people from SSP were detained by the police on Feb 16 04 at Kevadia Colony. They were protesting against poor facilities at resettlement sites and the insensitive attitude of rehabilitation authorities towards the PAPs. People demonstrated against the callous attitude of the authorities before holding a public hearing of people's grievances who had come from some 20 resettlement sites, including from neighbouring MP and Maharashtra. Some of the common complaints pertained to allocation of bad lands to the displaced and denial of title clearances to the affected. Many complained that they have been reduced to working as labourers in cities after the lands allotted to them failed to yeild crops. One of the complainants, Gopal Premabhai, displaced in 1993 from Badgam village, said that he was suffering because the new site where he has been resettled has no provision for water. ''Some of them were displaced in the eighties and are yet to get titles of allotted lands cleared,'' said Patkar, amidst slogans and chants. Babu Jaisinh, who was displaced from Khalwani village near the dam site to Kharkda village 22 years ago, complained that his share of the Promised Land was yet to come. ''And despite claims of the Govt of Gujarat, the situation is far from satisfactory at resettlement sites,'' she said. (INDIAN EXPRESS 170204)

Gujarat seeks more funds from Centre

The Gujarat govt has asked cemtre to allot it a financial package, including a soft loan, to meet unprecedented financial requirements for the SSP. Due to lack of funds, the implementation of the branch canal and distributary network has been slow. Officials are not clear where the 26000 cusecs of waters should be utilised once the dam reaches 110.64 m. Significantly, the state has simultaneously reminded the Centre that the funds crunch has got aggravated also because the lateral states — Maharashtra, MP and Rajasthan — are yet to pay 20.28 B as their dues for the project.

(Rs B)

Component	Money spent	To be spent	Total Cost
Dam	16.07	7.22	23.29
RBPH	13.3	14.39	27.69
Main Canal	37.77	14.39	52.16
Branch canals, distributaries	31.14	114.64	145.78
Interest during construction	32.77	83.38	116.15
R&R	6.37	20.86	27.23
Overheads	6.17	9.2	15.37
Total	**143.59**	**264.08**	**407.67**

(THE TIMES OF INDIA 240304)

No Narmada water in farms before 2010 After the clearance to raise the height of Narmada dam to 110.64 m responsibilities of Gujarat govt has mounted. However, available information suggest that to complete the ambitious 66000 km canal network, it would require to raise Rs 170 B and even optimistic calculations suggest that this work may not be over till 2010. An official in irrigation dept, requesting anonymity showed the TECS 1983 cost estimates and points out that proportionately 45% of finance was said to be consumed by Canal and distributory network. Officials say that out of the available 26000 cusecs water at the present height not even a 10% is utilised for irrigation purposes effectively. When asked for the explanation a senior official said requesting anonymity that the work on Command Area Development has been neglected. He further opined that as per original planning of volumetric distribution, not supplying more than 18 inches, and along with it following conjunctive use of groundwater, the state may at best hope to irrigate 1.9 MHa of land. The sources suggest that in more than 1 MHa in Saurashtra, Kutch, North Gujarat and central Gujarat even the survey work has not been done, since the task of planning minor and distribution network, beyond branch canals has not yet been planned. Even if the state is able to raise the needed finance - which is highly questionable looking at the cut in annual plans, right from 2000-1 – even then the task is so stupendous that it may take 10 - 12 years for completion in all aspects. Even if hoping that inflation rate would stay stagnant at the present rate, in 2010, the required fund of Rs 170 B would have crossed Rs 250 B. (GUJARAT SAMACHAR 190304)

PM Assures Gujarat The then PM Vajpayee assured the Gujarat CM that the sate govt's request for concessions on the Rs 30 B interest cost in the Narmada project would be considered with sympathy and that the ultimate decision would rest with Finance Minister. (THE INDIAN EXPRESS 140104)

Higher dam will submerge temples Scores of ancient temples in the Narmada Valley, built between the 8 - 12 centuries, will be submerged if the height of the Sardar

Sarovar Dam is raised to 110 m. The NBA has accused the MP Govt of unjustifiably deleting people from its project affected families list with a stroke of pen. The Govt was justifying this reduction by making an artificial distinction between "permanently" and "temporarily" affected persons. The NBA added, "This distinction has no basis in the NWDT or subsequent Supreme Court decision and violates the rights of oustees". (THE TRIBUNE 240204)

Earthquake in Narmada valley The Narmada valley was rocked by another earthquake of the intensity of 4 on Richter scale on Dec 24 03. The epicenter was between the SSP dam site and the Toranmal hills in Satpuda ranges, 100 km from the SSP dam. This is yet another warning as it closely follows another earthquake of intensity of 4.5 on Richter scale on July 27 03, whose epicenter was between the dam and the Dhadgaon in Nandurbar district in Maharashtra. The eminent seismologists have time and again warned about the geological faults in the Narmada valley. After the earthquake of Kutch in Jan 01, Dr Harsh Gupta, Director of the National Geophysical Research Institute had observed that the extension of the fault zone in the Narmada-Sone lineament might have been responsible for such catastrophe, which released 900% more energy than the Latur earthquake. Narmada valley has always been a geological unstable area, as was evident by the Jabalpur earthquake (1998) and the series of tremors in Khandawa region in 1997-9.

- **Seismic movement in downstream areas** 1.5 kms long, 60 feet deep, and 3 feet wide split observed on the riverbank at Vanakpore village, 45 kms from Bharuch in Jhaghadiya block. The villagers are gripped by tension as just few days after the quake in upstream of SSP, the split in their land appears. (NBA PR 251203, GUJARAT SAMACHAR 050104)

Narmada tourism plan shows warped priorities The Narmada district collectorate is promoting the Sardar Sarovar dam and its surrounding tribal region as possible eco-tourism hotspots. The plan includes the Ninaighat waterfalls in Dediapada—at a height of over 30 ft and the Mat-Samot area at 636 m above sea level as a hill station. "We already get nearly 0.15 M tourists to the Sardar Sarovar dam every year," says collector. Gujarat govt's plans to develop the Narmada River for tourism has been attacked by experts who say it reflects skewed priorities. SSNNL sources, too, indicated that there was a proposal for an inter-state tourism project around the Narmada River involving Madhya Pradesh and Maharashtra. The proposal was sent to the two neighbouring states. "This only vindicates the stand of critics that this project is just not for a real solution to problems of drought-prone areas of the state," said critics of SSP. They said money was being allocated for these plans when there were no resources to find a solution for the water problems of arid areas. (THE TIMES OF INDIA 171203, IANS 181203)

INDIRA SAGAR PROJECT

Narmada riverbed Dry after closing ISP gates Large number of fish and other aquatic inhabitants in Narmada River downstream of Indira Sagar Dam have died near Badwah, Maheshwar & Omkareshwar after closing of gates of the ISP dam. The Narmada Bachao Andolan and Manthan have stated that downstream people are facing severe water shortage. On the other hand hundreds of families upstream of the dam have been displaced without proper rehabilitation. Downstream flow has also been heavily polluted due to stoppage of freshwater in the river. Both organisations have requested the Ministry of Environment & Forest for maintaining proper flow in the Narmada and have demanded for independent investigation. (*RASHTRIYA SAHARA* 231103, *JANSATTA* 271103, *SPS* 281103)

OMKARESHWAR

Protests On Jan 5, when around 4000 people affected by the Omkareshwar dam marched through the pilgrim town of Omkareshwar and held their first public meeting; they heralded the beginning of the struggle against the Omkareshwar dam. The people to be affected demanded that all dam work and land acquisition proceedings must be suspended until the affected people are given irrigated agricultural land in the command of the Omkareshwar Project. The Omkareshwar dam is part of the series of large dams being constructed in the Narmada valley and is to be built at Village Panthiaji a few metres upstream of the holy and exquisitely beautiful pilgrim town of Omkareshwar, at the conjuncture of the Narmada and Parvati rivers. This dam that will affect 29 villages is to be built on the Narmada, 40 kms upstream of where the currently stalled Maheshwar dam was to be built. In the upstream it will be hemmed in by the Indira Sagar dam. The Omkareshwar Project is to have installed capacity of 520 MW but as per the MOU between the state govt and NHDC, only around 12% of the electricity produced will be made available to Madhya Pradesh. The utility of Omkareshwar power for the national grid is questionable. Moreover, although the total outlay of the Omkareshwar Project has been increased to Rs 22 B, the power tariff has not been finalized and therefore the real possibility of Omkareshwar power being least cost and viable is yet to be established. The Report of the Indian Institute of Science, Bangalore has stated that 40% of the Omkareshwar and Narmada Sagar commands will be severely waterlogged. After the public meeting, the SDM came at the invitation of the dam affected people, was given their petition of demands and also had to answer the questions and complaints for two hours. He assured that the district administration would apprise the State govt of the demand of the affected people to be rehabilitated with around 7000 Ha irrigated agricultural land in the proposed 0.129 M Ha command area of the dam. (NBA PR 100104)

MAHESHWAR Finances The Union Minster of state for Power in Vajpayee govt said that 400 MW Maheshwar HEP in MP could be revived if the promoters and the State Govt agreed to discuss. Apart from the legal issues, the project has also been facing funding problems.

- The Madhya Pradesh Govt will give a Rs 3.3 B guarantee to the PFC to restart work at the 400 MW Maheshwar HEP. According to official sources, the State Govt would sign an agreement with Maheshwar Hydel Power Corp. (BUSINESS STANDARD 091203, 310104)

Opposition on Maheshwar guarantee Over ten thousand people affected by the Maheshwar dam gathered at Mandleshwar city on Feb 17 04 in a protest rally and public meeting to oppose the decision of MP govt to give Rs 4 B guarantee to the Maheshwar HEP. The affected people demanded that the MP govt should cancel the Maheshwar Project and implement the cheap and better alternatives to provide the people of MP certain and cheap electricity. In the public meeting held under the aegis of the NBA, People challenged the govt to take back this guarantee given to the Shree Maheshwar Hydel Power Corp as they were completely illegal because the dam site lands have long been seized from the S.Kumars. Radheshyam Patidar of Village Pathrad said that for the last 6 years the people of Narmada valley have struggled with great commitment and dedication to save the Narmada valley from destruction, compelling the German and US companies to withdraw from the valley and stopped the work on the dam for the last three years. Mangat Verma of Village Lepa said that within a decade after privatization the cost of the Project went up by five times from Rs 4.65 B to Rs 22 B. As per the PPA of the state govt with S. Kumars, the tariff of the Project would increase with the increased outlay of the Project. It is estimated that the cost of power at generation point will be Rs 5 - 6 per unit and will become Rs 10 per unit at the point of consumption. But as per the agreements, whether the electricity is sold or not, MP govt will have to pay Rs 4-6 billion per year for the next 35 years. Alok Agarwal, of NBA said that S.Kumars had borrowed Rs 450 M from the MPSIDC and did not return it. As a result, the movable and immovable properties of the Maheshwar Project were attached by the Khargone administration in Dec 2002. Apparently, the amount has now increased to around Rs 700 M. Agarwal said that if the MP govt does not withdraw its guarantee, the affected people would be compelled to take further action. Chittaroopa Palit of NBA said the total electricity produced in MP along with MP's committed share from Central undertakings in the Western grid is a good 45% over the demand by consumers in the state. The electricity crisis is because of the huge leak in the T&D. She said that the Maheshwar HEP would provide only 3% electricity to the MPand cost Rs 22 B. She said that if in place of the Maheshwar dam, 900 MU of electricity were to be saved by the installation of new transformers, poles and substations and by bolstering of the transmission and distribution infrastructure, it would cost only Rs 6.30 B. (NBA PR 170204)

Maheshwar & Upper Veda affected protest

Nearly one thousand people from the Narmada valley affected by the Maheshwar and Upper Veda Projects in District Khargone reached Bhopal on March 16 04 to begin a series of protests in front of various FIs supporting these Projects as well as the state govt. The affected people demonstrated at the offices of HUDCO, IFCI and NHDC located at the Paryavas Bhavan in Bhopal demanding accountability for the use of public money already invested in or being sought to be invested in the destructive Narmada Projects. They demanded that no more public resources be jeopardised in the destructive Maheshwar Project. The people went to the office of the MPSIDC (Madhya Pradesh Industrial Development Corp) and demanded that the MPSIDC should attach and recover their outstanding of Rs 700 M from the S Kumars by attaching properties belonging to the S Kumars. However, despite several financial controversies on the Jan 28 04, the newly elected MP state govt held a cabinet meeting in Maheshwar and announced a Rs 4 B guarantee for the S.Kumars promoted Maheshwar Hydel Project. It may be noted that since the last eight years the people of the Narmada valley have waged a strong struggle against the Maheshwar dam under the aegis of the Narmada Bachao Andolan. This mass struggle on the ground compelled several US and German power utilities to withdraw from this Project. Since 2001 all work was stopped on the Project and in Dec 02, the movable and immovable properties of the Maheshwar Project was attached.

A delegation met the Deputy General Manager of the IFCI at Bhopal. The officials at the IFCI informed the delegation that the IFCI was not putting any further public money into the Project, rather they were trying to recover their share from this sinking project. Another delegation met NHDC officials at Paryawas Bhavan and protested against the inhuman treatment. Subsequently, the oustees took out a rally and went to the office of the MPSIDC and demonstrated there. Senior officers of the MPSIDC met the demonstrators and answered their questions. It became clear from the discussion that both the loans given to S.Kumars by the MPSIDC Board were in contravention of the allowed limits and hence irregular. The MPSIDC officials assured that they had already begun the wider process of recoveries by sending Revenue Recovery Certificates to the administrations in Indore and Mumbai. (NBA PR 160304)

Upper Veda affected tribals hold rally On Jan 2 04, the tribals and other communities affected by the Upper Veda Project, one of the thirty large dams in the Narmada valley, held a huge rally at the District Headquarters of Khargone and interrogated the District Collector and senior officers of the Narmada Valley Development Authority. The gathered 2000 tribal men and women demanded that the state govt implement decentralized water alternatives in lieu of the dam, or alternatively distribute irrigated agricultural land to all displaced landed and landless families before land acquisition and work on the dam begins. It may be noted that the Upper Veda Project proposed to be built on the Veda River at Village Nemit is one of the thirty large dams in the Narmada valley. 14 adivasi villages are to be affected by the dam. The struggle against this dam has been ongoing for the last six years. In 1997, as a result of the struggle of the people, the contractor for this Project deserted it. Subsequently after 21 days of indefinite fast in Bhopal by the affected people of Veda and other dams, in May 1999, the state govt issued an Order constituting a High level Committee to explore and implement the alternatives to the Lower Goi (Badwani) and Upper Veda dams. But after this neither did the Committee do any further work. Nor was any work on the dam taken up. The affected people demanded that if the govt wished to build the dam instead of the alternatives, they must first make available irrigated agricultural land of around 1323 Ha to all affected landed families and 2 Ha of land each to landless families from the command of the Upper Veda dam of around 9900 Ha, to be acquired under the MP Displaced persons Act, 1985. When the NVDA officials mentioned that they would explore giving encroached land in small bits of 10-20 Ha, or that they could distribute land from 10,000 Ha of uncultivable charnoi pasture land in the area to the affected families, the oustees showed the NVDA officials the NVDA Report on the Upper Veda Project of March 2002, wherein was detailed the availability of 2000 Ha of land to be acquired under the MP Displaced Persons Act, 1985 in the Upper Veda command. The oustees also presented the NVDA 's own report to show that the Upper Veda Project had received its clearance from the Central Ministry of Social Welfare based on the condition that every landless family in the submergence area would be given a minimum of 2 Ha of agricultural land. The families of Villages Nemit and Devit Bujurg whose 70 Ha lands in Village Bedania are being acquired for the dam site refused to accept the cheques or any cash compensation from the govt. (NBA PR 100104)

MAAN PROJECT **Irrigation** The Irrigation Dept of MP claimed that about 3500 Ha would be irrigated from Maan dam built on Maan River, a tributary of Narmada, in Dhar district. The sluice gates are still not ready. At present 14.53 MCM water could be stored, which is one third of claimed capacity. (*NAI DUNIA* 011103)

SNIPPETS OF POST SSP GUJARAT

Gujarat govt Paper says cheaper alternatives exist The Govt of Gujarat's "*White Paper on Water in Gujarat*" prepared by the dept of Narmada, Water Resources & Water Supply, analyses the current water situation and advocates a number of alternative strategies for meeting water needs in the coming years. This includes both ways to increase the water supply, as well as ways to improve water use efficiency and reduce overall demand. Among supply side alternatives, the White Paper recommends several approaches for increasing water availability in Gujarat, including watershed management, catchment area protection and treatment, conjunctive management of surface and groundwater, and artificial recharge of groundwater. The cost of water using rooftop harvesting works out to 1.5-2.5 paise per litre. Another option explored by the report is desalination of seawater. The white paper estimates that cost of freshwater provided through desalination comes to only 4.5 paise per litre. While desalination is usually dismissed on the grounds of cost, it will be relatively cheap solution to the water shortages of Gujarat's drought prone regions when compared to the minimum Rs 300 B that will be sunk in to SSP. White Paper also identifies a number of opportunities to increase the efficiency of that supply and to further reduce demand. The report notes that the vast majority of water used in Gujarat is for irrigation (17099 MCM out of total 19053 MCM in 1996-7). The report points out that the efficiency of irrigation practices is very low, around 40%. If small border and furrow irrigation were replaced with high efficiency drip irrigation systems, however, net water saving of 40%-50% could be realised for most crops. White Paper estimates that 60%-70% of wastewater from cities could be recycled and used for irrigation. If treated, the wastewater of Ahmedabad alone could provide 200 MCM of irrigation water annually. While continually justified for the sake of Gujarat's drought prone regions, the SSP, if it fulfils its promises, will irrigate less than 2% of the cultivable land in Kutch and 9% in Saurashtra, calling into question the project's justification. These estimates are themselves questionable as current stream flow data suggests that there is 15% to 17% less water flowing through the Narmada than is assumed by planners. Moreover, the SSP's projected water supply is based on an assumed efficiency of 60%, in spite of the fact that no dam in India has achieved efficiency more than 40%. The track records on dams in Gujarat are also no grounds for encouragement. According to the 10th report of the Estimate Committee of the Gujarat assembly, chaired by Suresh Mehta, dams in Gujarat have consistently failed to live up their promises. Of the studied dams in Gujarat, the report found that out of the combined 1.8 M Ha of irrigation expected from the projects, only 0.78 M Ha or about 43% actually materialised. (EPW 271203)

NEW Projects for drought prone-hit areas in Gujarat The Gujarat Govt has announced a Rs 60.88 B Centrally aided "Sujalam Sufalam Project" for 10 perennially drought prone districts to boost agricultural production and solve power problems and to make them "permanently drought proof". The CM said that bulk of the funds would come from the Centre from its newly-created "Loknayak Jaiprakash Narayan Fund" for creating agricultural infrastructure and the remaining would be met from the State's own resources. He claimed that the outline of the project, which envisages a network of canal and linking of major rivers and dams and construction of over 0.15-0.2 M check dams to raise the depleting underground water in the N and central Gujarat and Kutch regions. He claimed that it would function as supplementary to SSP. He also claimed that the SSP, the proposed "Kalpsar" project, Sujalam Sufalam project and the Damanganga-Sabarmati link project, also in the pipeline, would give a tremendous boost to water availability in the state bring about the "second green revolution". Under the scheme, "excess" flood waters from Kadana dam would be taken through an unlined 349 km long recharge canal across 21 rivers up to the Banas river in N Gujarat, costing Rs 4.65 B to irrigate about 0.45 M Ha. Excess waters from the Narmada canal would be transported via 15 pipelines to fill the nine dams of N Gujarat, costing Rs 25 B. The rest of the amount would be spent on building checkdams and farm ponds on farmers' private land. He claimed that groundwater would not be needed, the state would save 2,694 MW power by Dec 05. Then, 2,791 villages would become fluoride free and Rs 10 B would be saved, as no new tubewells would be needed. He claimed 3,793 villages would get clean drinking water. Water from Kadana reservoir will be pumped into the canal through lift irrigation at few places. (THE HINDU, THE TIMES OF INDIA 140204, BUSINESS LINE 300304)

Rajkot residents likely to face acute water crisis The coming summer will bring in hard times for the people of Rajkot as the water crisis is going to get even more acute. Thanks to the decision of the irrigation dept to release over 2 450 MCft water from the Bhadar Dam for irrigation, Rajkot city will receive water only thrice a week from April 04. As it is, the city will get water only every alternate day from Nov 11 03 since GWSSB has decided to stop the Wankaner Bore Project. Now, the water crisis will get acute from March 03 in the absence of water supply from Bhadar dam, the main reservoir of RMC. "Presently, Bhadar dam has 3900 MCft water. If 2450 MCft will be released for irrigation, only 1450 MCft will remain for Rajkot against its requirement of 1800 MCft,"said a RMC engineer. Instead of 2450 MCft of water, farmers want 3500 MCft and have staged a dharna in front of the office of the executive engineer (irrigation) in Rajkot. (THE INDIAN EXPRESS 101103)

Kalpsar project The Kalpsar Project involves building a 64 km long dam across the Gulf of Khambhat from Ghogha in Bhavnagar district to Hansoti in Bharuch district. It will tap the water from 12 rivers that flows in the gulf – including Narmada, Mahi, Sabarmati & Dhadar – and create a huge fresh water lake. The Kalpsar reservoir will have an area of 2000 sq km which will be 50 times larger than existing Bhadar reservoir in Rajkot. It will store more water than all existing major, medium and minor dams in the state. It will store three times the water in the SSP reservoir. The Govt claimed that hardly anyone would be displaced from their homes. It will have installed power capacity of 5880 MW from tidal power. Traveling along a 660 km network of canals, it will provide around 561 MCM of water annually to irrigate 1.05 M Ha in S Saurashtra, where water is a scarce commodity. Besides, it will provide 900 MCM for domestic usage and 500 MCM for the industrial development in Saurashtra and Kutch.

Anil Kane, a former Vice-Chancellor of MS University first came up with this project 18 years ago. A survey has suggested that a multi-lane highway and a railway line should be built across the length of the dam. That would slash the distance between S Gujarat/ Mumbai and Saurashtra by about 225 km. The Govt believes that fish could be introduced into the freshwater lake and that this alone could generate an income of Rs 68 B. The Govt estimates it will be able to reclaim 1,100 sq km of saline land along the coast that is currently unfit for cultivation. The National Institute of Ocean Technology researchers carrying out the bathymetry studies will try to pinpoint the position where the dam should be built. The Govt has already floated a global notice to get the EIA done. Also, a strategy report is being prepared by the Gujarat Infrastructure Development Board, a state-run enterprise. GIDB has been asked by the govt to work out a framework for Public Private Partnership arrangement. That will be followed by a structural report. It will take at least 20 years to build and if it ever gets off the ground, it will cost around Rs 500 B. The head of the Geology Dept at MS University, Dr P P Patel believes that the project is on the intersection of the 400-km wide and 150-km long Cambay fault line running in the NS direction and the Narmada-Sone fault. This, he says, will: "Contribute towards the creation of bigger tectonic stress areas in the region." He believes that this and a combination of other factors mean that the region is susceptible to earthquakes 5.5 - 6 on the Richter scale. Therefore, building a dam there would be extremely risky. The experts say that the mangrove swamps on the coast will be destroyed by the project. Mangroves are of crucial importance because that's where many seawater fish head at spawning time. The experts also say that large numbers of people -- especially, the fishermen -- will lose their livelihood as a result of the dam and that it would be better to build a series of small dams. (BUSINESS STANDARD 060304)

Rural Gujarat faced with disaster, disease According to a report by the Gujarat Water Supply and Sewage Board, 44% of Gujarat villages don't have access to potable water and a govt report has revealed that 8252 out of 18822 villages surveyed face severe problems of high salinity, fluoride and nitrate in water. The study indicated that 4341 villages suffer from high fluoride content, 2571 from salinity and 1336 from nitrate. "2,504 villages of those identified have been covered under the regional water supply schemes. Of these, 1,286 villages have high fluoride, 748 salinity and 475 nitrates. Water from the Narmada through pipelines is the only solution as groundwater pollution is a permanent feature," GWSSB sources said. The Gujarat Ecology Commission's draft Action Environmental Programme, prepared last year, said that in 1991, just 831 villages had fluoride levels in groundwater higher than permissible limit. In 1997, the figure reached 2,836. Now, the GWSSB survey says the number of such villages have nearly doubled to 4,341. "The districts severely affected by fluoride contamination are Mehsana and Sabarkantha. The report also says that a survey of 14 villages in Amreli district suggested that while dental Fluorosis was prevalent in 20% of the population, skeletal Fluorosis affected about 30-40%. "In Mehsana district a detailed epidemiological survey showed that of the 559 villages surveyed, 236 reported Fluorosis. A field study on water in two villages in Patan district found the entire population suffered from Fluorosis," the report added. (THE TIMES OF INDIA 220304)

Sluggish response to salinity ingress According to an internal report of Gujarat's water resources dept, of the Rs 23.22 B needed to fight salinity in coastal Saurashtra alone, the state has so far spent only 2.76 B over the last two decades, out of which huge chunk of Rs 1.86 B went in as establishment costs! Report prepared by the dept's salinity control unit in Rajkot & titled "Steps taken to control salinity along the Saurashtra coast", states that of the 1,125 km-long coast, 68% (765 km), is affected by salinity ingress. It adds, "In the 7,00,129 Ha area, 534 villages, 1.079 M people and 32,700 wells have been affected. The quality of underground water too has been badly affected." In 1978, the area of 1,09,971 Ha was found to be adversely affected. A high-level committee in 1978 had recommended steps such as tidal regulators, recharge reservoirs, checkdams, recharge tanks, recharge wells, nala (channel) plugs, afforestation and spreading of channels. Yet, there has been little progress in many cases. Except checkdams (of 760 recommended, 390 completed), in most cases work has not even begun. Of the 108 tidal regulators just 12 have been completed. Of the 43 recharge reservoirs, two were built. Of the 90 recharge tanks, just one has been completed. Of the 1,130 recharge wells, 201 have been built. Of the 40,470 nala plugs not one has been built. Of the 40,750 Ha area of recommended afforestation, nothing has been done. And of 300 km spreading of channels, the work for a meager 7.39 km has been finished. The report agrees, of the 0.109 M Ha area identified as 'salinity-affected' in 1978, the quality of 11 066 Ha was found to have been improved by May '02. (THE TIMES OF INDIA 191203)

Damanganga waters for Saurashtra? The Gujarat govt is planning to lay a canal between Damanganga dam in S Gujarat and Chorwad in Junagadh to improve water supply position in Saurashtra. Water supply minister Narottam Patel said that the pre-feasibility report has revealed the Damanganga River could supply 7000 cusecs if the 400 kms long canal was laid from the dam to Chorwad through Kakrapar-Sabarmati-Fatewadi irrigation scheme. Its estimated cost is Rs 20 B. Under the project a reservoir will store this water, which will flow by gravity upto Sabarmati and then beyond to Chorwad. Despite the govt's massive efforts, the people of Saurashtra received only 500 cubic m of water per person as against the requirement of 1000 cubic m per annum. Water supply secretary said, "We have already studied feasibility report and put up a note to the govt that the Damanganaga-Chorwad project should be carried out as joint venture". (THE TIMES OF INDIA 230204)

Poor facilities hamper agri growth According a State Focus Paper for Gujarat prepared by NABARD, although Gujarat has a net sown area of about 51%, with a high proportion of land available for cultivation, low irrigation facilities, sea water intrusion in a large number of areas, lack of co-ordinated efforts to sustain surface water, low level of awareness about credit facilities available and poor water management continue to hamper growth. Over 70% of the cultivable land in the state is either arid, semi arid and is cultivable only under rain-fed conditions. The forest area is just 9.69% of the total area. Canal irrigated areas of S Gujarat have become water-logged due to excess use of irrigation water. Sea water intrusion in coastal areas of Saurashtra is on the rise and more and more cultivable areas in the region are being rendered useless for irrigation and groundwater is also affected because of sea water intrusion. The report suggests a huge scope for development of fisheries. Gujarat has a 1,640 km coastline and 0.188 M Ha of inland water bodies in the form of ponds, tanks, reservoirs and rivers. (BUSINESS STANDARD 180204)

ISSUES ABOUT RIVERS

Sheonath The first river privatisation effort in India has a chequered history. A Build-Own-Operate-Transfer agreement with 22-year lease with Radius Water Ltd, giving it the right to 23.6 km of the Sheonath and monopoly to supply Borai Industrial Centre at Durg through the nodal agency. Through this Radius controls the stretch of the river that runs mostly through Mohlai

village. Initially Radius was supposed to supply 40 ML water at Rs 10 per CM to the MPIDB. But, after the formation of Chhatisgarh, the company hiked the cost of water to Rs 15 per CM, which was brought down to Rs 12.6 after a prolonged agitation by activists and the local people. The Company now supplies water to industries and railway station through the nodal agency, which would pay Radius irrespective of whether it collects the money from industries using the water. The nodal agency has paid Rs 41.3 M to the company between Nov 2002 and Feb 2003, but has recovered only Rs 12.9 M from the industries. The largest consumer – HEG Ltd – has paid up less than half its water bill. Radius Water is now looking for other sources of revenue from the river such as fisheries. People are agitating against the Chhatisgarh govt seeking termination of the contract with Radius Water. With the protests intensifying, former CM decided, in April 03, after a ministerial meeting, to cancel the contract. According to the State Legal Committee, to which the issue was referred, if the govt ends the contract with Radius, it has to pay a compensation of Rs 4 B. But, the govt now points out that as the company had not taken the State Water Utilisation Committee's approval, as mandated, it may not be eligible for compensation. The activists are gearing to start another round of agitation urging the govt to cancel the contract.

- On Nov 1, the Chhatisgarh formation day, a daylong Dharna was organised to remind the CM to fulfill his promise to cancel the contract. Hundreds of villagers from more than a dozen villages along the River Sheonath joined in the protest. A memorandum with thousand signatures from citizens of Durg, demanding immediate scrapping of the contract was given to the govt. (FRONTLINE 071103, SNMA PR 041103)

Release water into Beas, demands Mandi council A memorandum was submitted by a delegation of citizens' council to the HP Human Rights Commission urging it to take remedial measures against the violation of human rights caused by the construction of the Beas – Sutlej project. It says that water of Beas has been diverted to the Sutlej through a 35 km long water conductor system by constructing a dam at Pandoh. With the diversion of the Beas, ghats of the town wear a deserted look and the BBMB has done nothing to restore the loss. (THE TRIBUNE 061103)

Tamil Nadu Taking on the sand lobby After years of inaction, TN govt finally took a decision on Oct 2003 to put an end to the indiscriminate, and often illicit, quarrying of sand on riverbeds. The govt seems to have been influenced by certain observations made by the CAG. CAG has pointed out that the govt had to incur an additional expenditure of about Rs 33 M on strengthening the "flood banks" on both sides of the Vallur Anicut in Turuvallur dist, owing to the failure of the PWD, Revenue & Industries depts to prevent illicit sand mining. It also said that depts did not honour the court orders to stop illicit mining. (FRONTLINE 071103)

Kerala HC notice against sand mining Kerala High Court issued notice to the state govt, Pathanamthitta district expert committee and the Vellavoor gram panchayat while hearing a writ petition seeking to prohibit illegal sand mining in Manimala river, filed by Manimalayar Samrakshana Samiti.

- **Sand beds to people** The Kerala Govt has handed over exclusive rights of mining and sale of sand from riverbeds to local bodies. Under the amended rules, now local bodies can either auction the sand or sell it by charging a fixed price. An expert committee at the district level would determine the amount to be mined. (THE HINDU 111103, DOWN TO EARTH 150104)

River diversion for Majuli There are plans to divert the course of two major tributaries of the Brahmaputra, the Lohit and the Dibang. The Brahmaputra Board is doing the work. Set up over 20 years back, the BB has done little more than a master plan of the river and its tributaries to show for all the money and energy spent. The reinforced concrete embankments would be built, old structures strengthened and a three-km channel built in Lakhimpur district, on the W bank of the Brahmaputra, to move the water of the Lohit westward. In the first phase of the project, the course of Dibang had already been diverted in an effort to protect the Heritage Island of Majuli and also the S bank of Brahmaputra. (THE STATESMAN 170104)

Sabarkantha villagers file PIL on water People living in catchment areas of the Harnav river in Sabarkantha and Gujarat Lok Samiti have filed a petition in the Gujarat HC seeking directions to restrain the State Govt from diverting waters of the river to a nearby canal. Representing the petitioners, senior counsel Girish Patel said that after construction of Vanaj dam on Harnav River in Sabarkantha, riparian and other rights of villagers living downstream were affected. Instead of being released downstream, the river waters are diverted to a Gohain Link canal, causing inequitable distribution of water. He stated that this was affecting about 50000 people of Jagmer, Kampa, Khedbrahma, Vasnakampa & other villages lying downstream along Harnav River. (THE INDIAN EXPRESS 250204)

National River Conservation Plan Presently, 157 towns in 18 States and 31 polluted river stretches have been covered under NRCP. The approved cost is Rs 46.88 B. Under NRCP, the schemes implemented in the States include Interception and Diversion of Sewage, Construction of Sewage Treatment Plants, Low Cost Sanitation, Crematoria, Afforestation and River Front Development etc. In all, 763 projects, with a value of Rs 24.6 B, have been sanctioned under NRCP. This is in addition to 261 projects sanctioned under Ganga Action Plan-I. The total expenditure incurred till March 31, 03,

under NRCP is Rs 12.37 B, including the States' share. Some success has been achieved in controlling industrial pollution in rivers and lakes in the country. In 1997 851 defaulting industries were identified which were generating BOD load of over 100 kg/day and discharging their effluents without proper treatment, directly or indirectly into the watercourse. These industries were directed to install their respective Effluent Treatment Plants. While 608 industries have installed ETPs, 238 industries have been closed down. (PIB 070204)

POLLUTED RIVERS

Ganga is the most polluted Of the major rivers in India, Ganga has a longest stretch (1760 km) that is polluted in terms of Bio Chemical Oxygen Demand load higher than 6 mg/l. It is followed by Tapi (160 km), Narmada (120 km), Mahi (70 km) and Sabarmati (65 km). The Central Pollution Control Board's 10 years of data shows that the 14% of the entire riverine length in the country is severely polluted with BOD level over 6 mg/l. 19% of river length are moderately polluted with BOD level between 3-6, while 67% (30 242 km) are "relatively clean." Maharashtra has the longest riverine length that is the most polluted in terms of BOD load. It is followed by UP, MP, AP, Orissa and Gujarat. About 135 000 polluting industries in India generate about 13 000 MLD of wastewater, of which only 60% generated from large and medium industries is treated. Distilleries generate the largest amount of pollutant load followed by the textile industry, engineering and Pulp and paper industry, says a CPCB study. (THE HINDU 231103)

Ganga pollution even after GAP The much hyped sewage treatment plants installed in the Kanpur, under the Ganga Action Plan are proving to be ineffective. According to a study by NGO "Eco Friends" and a researcher from IIT-Kanpur, the irrigation water supplied from these STPs to villages located in the area is contaminated with toxic heavy metals. A significant inference that can be drawn from the report is that the so-called treated water being fed in to the Ganga is increasing the river's pollution level rather than curbing it. The Kanpur city generates about 360 MLD of sewage and industrial effluents. The local people of the downstream (from STPs) villages – numbering about 20000 – had begun to suffer from several health problems. The research involved testing the quality of water being released by STPs as well as that of groundwater. Among the heavy metals detected were nickel, cadmium, mercury, arsenic and chromium with levels beyond permissible limits. Experts say that tannery water contains chromium sulphate, which is 200 times more efficient in depleting oxygen from water than any other pollutant. Ironically merely a handful of the 201 tanneries have plants to treat chromium-laden water. The NRCD's proposal to set up a common chromium recovery plant is still gathering dust. The Directorate had offered to bear 70% of the construction cost while the rest was to be borne by the Kanpur Nagar Nigam and tannery owners. Three treatment plants, with a joint capacity to treat 140 MLD do exist in Jajmau but are not functioning. (DOWN TO EARTH 151203, THE TIMES OF INDIA 250104)

Pace of GAP slow The Public Accounts Committee of Parliament has said that the pace of developing infrastructure to control pollution in Ganga and its tributaries was slow and the money released was either not enough or diverted for other purpose. The Ganga Action Plan-1, which was started in Feb 1985 and scheduled to be completed by March 1990, had been extended until March 2000 when it was declared it would be completed by 2001. It has now been extended to Dec 2008, which clearly indicates the extremely slow pace of the development work being done for the past 18 years. The committee headed by Buta Singh, noted that the MoEF did not fix any deadline for submission of DPR, the basic document for expenditure sanction needed from the states for Phase-II. While pointing out that GAP has failed to treat the river eco-system, the Committee suggested that there should be a provision for the creation of river regulation zone under an autonomous body. It observed that only 45% of the grossly polluting industrial units had installed effluent treatment plants, of which 18% did not function properly or did not meet the technical standard. "The Committee finds that while on the one hand, States have complained of lack of funds being a main reason for delay and failure to achieve the target, many have failed even to spend the money and fair amount is left unutilised. Charging the Bihar Govt for misuse of funds, the Committee suggests fixing of responsibilities for suspended work by the W Bengal Govt and deplored it for the non-cooperative attitude. (THE HINDU 080204)

Sutlej Ravaged by industrial pollution in Ropar In official parlance, the water of Sutlej may be pollution free, but the salt content of Sutlej water from Nangal Dam site is getting reduced from the normal level. People in Nangal complain that the discharge from the NFL adds pollutants to the Sutlej waters. Similarly, the discharge from the Punjab Alkalies and Chemicals Ltd contained high level of chlorine, ammonia and other chemicals. These pollutants are affecting the ground water in about 12-15 villages, making the water unsuitable for drinking and irrigation purposes. Huge quantities of fly ash are dumped into the riverbed with little concern for people living in the vicinity. Ropar dykes appear to be weak. Sources accuse the Ropar breach incident on the retaining walls of the dykes, which being made of ash in the crust are neither seepage proof nor breach proof. The authorities admitted that they have no long term plan to totally stop the flow of fly ash into Sutlej River from the dykes. (THE TRIBUNE 041103, 051103)

Pak tanneries polluting Sutlej Tanneries, situated in and around the border town of Kasur in Pakistan are polluting the Sutlej, rendering it unsuitable for irrigation and drinking purposes. Since the town is situated close to the border, its effluents are discharged into the Sutlej, which enters Pakistan at 9 places and re-enters India at 10 places. The polluted water has also affected the aquatic life of the river as fish are dying. In villages situated close to the border, the water is used for irrigation and household purposes, posing risk to the people. (THE TRIBUNE 130304)

Ghaggar fish in troubled waters The alarming results of the first post-monsoon test of Ghaggar water have failed to ring a bell among those concerned. The BOD level recorded by HSPCB is 14.5 mg against 2 mg considered normal. The bulk of pollutants that mix with Ghaggar waters have their source in Parwanoo. Sources said that its Himachal counterpart does not co-operate in tackling the pollution in Ghaggar, which has become an inter-state issue. (THE INDIAN EXPRESS 041103)

Damodar remains polluted even as plans pile up The CPCB classified the Damodar river in a 1998 report as 'D', or heavily polluted. The Damodar Action Plan was launched in Oct 1996 to clean its waters up to the CPCB class 'C' levels. It never attained the goal. At present, DAP is a part of National Rivers Conservation Project, and according to this plan, the Damodar is only a tributary of the Ganga. But its central problem– effluents from coal mines and industries remains untackled as the DAP has no strategy to take care of industrial pollution. The fly ash from the power plants is the biggest problem, 2.38 MT of ash are added to the ash ponds every year. The Damodar Valley Corp set up by an Act of the Parliament in 1948 to oversee all the development in the valley was also given the responsibility in 1957 to prevent water pollution. But this was withdrawn by the Central Water (prevention and Control of Pollution) Act 1974. The entire river comes under the jurisdiction of the state pollution control boards of Bihar (now Jharkhand) and W Bengal. (KASHMIR TIMES 051103)

Rivers in Kerala contaminated According to a recent study by the Centre for Earth Science Studies, majority of the water resources in Kerala are highly contaminated with coliform bacteria, fluoride, mercury and a lot of other bio-agro and industrial waste, posing grave health hazards. Study says that the bio-agro waste pollutes most of the rivers in Thiruvananthapuram district. (THE NEW INDIAN EXPRESS 160204)

Unchecked pollution of the Periyar According to a study "Status of Human Health at Eloor Industrial Estate, Kerala" by Greenpeace, Eloor has been identified as one of the toxic hotspots in the world. The report revealed the extent to which the Periyar and the nearby water and soil resources in and around the industrial area have been contaminated, leading to increased incidence of deaths and diseases among the 30 000 people living in the area. The study points out that in comparison to the less polluted Pindimana village on the banks of the same river in the same district, the chances that residents of Eloor Gram Panchayat will contract Cancer are 2.85 times higher. Children are 2.63 times at higher risk of malformation due to congenital and Chromosomal aberrations. Chances that children may die due to birth defects have increased 3.8 times. Deaths due to Bronchitis at Eloor are up by 3.4 times, due to Asthma up by 2.2 times. The study points out that the Hindustan Insecticides Ltd, a Govt of India enterprise, has been manufacturing pesticides including DDT and Endosulfan (both banned) at its Eloor plant since 1956. The plant located adjacent to a wetland apparently discharges its effluents to an open creek. The water samples from this creek contained more than 100 compounds, 39 of which were organochlorines, including DDT and its metabolites, endosulfan. Studies reveal that toxic pollution of the river has almost wiped out the traditional occupations including fishing and farming. The CAG Report (for 1999-00) strongly condemns the KSPCB for not taking proper actions to prevent the pollution. The report highlights that enforcement of statutory provisions of the Acts/ Rules for protection of environment, control of pollution and improvement of water quality, had been ineffective due to PCB's reluctance to invoke the legal provisions of the Acts, lack of monitoring and supervision, failure to conduct comprehensive surveys of polluting units. The report points out the failure of the PCB to conduct comprehensive survey of industries. Out of a total number of 0.217 M industries registered, the PCB has identified only 2250 as highly polluting units and issued letters of consent (official permission) to 1383 units (61%). The others function without permission. The PCB has ignored its own test results of water samples taken from the Periyar following two massive episodes of fish deaths in July '98. Analysis of water samples by the PCB from 12 points in the river found concentration of ammoniacal nitrogen at 12 to 24 mg/litre as against permissible limit of zero. (Indiatogether.org 0304)

Project soil being dumped into Beas tributary The multi-million marketing yard project in Mandi has been embroiled in controversy from the very beginning. The project was cleared by the Central Govt without any provision for a dumping site. The project was shifted to the Kagni forest, 2 km from Mandi town towards the Balh valley, in spite of opposition from adjoining villages. In 2001, a part of Kagni forest was cleared to start construction of the project and a large number of trees were felled without mandatory permission from the Central Govt. After this was highlighted Rs 5000/- recovered as a fine from marketing board for illicit felling of trees. It took more than one year to get sanction for

the project from the Central Govt. In Jan 03, the cutting of the forest areas began and the contractor started dumping truckloads of soil in to the Suketi, a tributary of the Beas. According to the officials of the Forest Dept, no provision for a dumping site was made in the project report. As a result, the project was passed without any dumping site due to which the Kagni forest is being damaged. (THE TRIBUNE 110304)

LAKES, WETLANDS, ECO SYSTEM

Kodaikanal Tale of Diabolic conservation In April '03, construction was noticed in the Kalaiarangam area, next to the lake, in wake of a Rs 103.3 M lake clean up proposal receiving sanction. Soon, deep ditches, which now are a "death zone", appeared along the roadsides. Pipes were piled up; presumably for the sewage collection and further construction activity appeared upon the marsh itself! Alarmed, citizens immediately called a meeting and decided to write to the relevant authorities asking for details of the proposal. A request to make a copy of the project proposal available for public scrutiny met with a firm No from the MD, who stated that the release of the proposal would be "prejudicial to public interest"! On July 8 '03, the Municipality invited all NGOs to participate in a public meeting where the contractors presented their plans and mentioned that an STP was going to be erected at Kalaiarangam, using a Fluidised Anaerobic Bio reactor. Inquiries about the status of the existing ETP on the Ghat Road were dismissed with an assertion that it was not working. When respective authorities were asked about the necessary EIAs and clearances, the reply was that they awaited clearance. When it was pointed out that the STP's location was in violation of the existing Master Plan, it was claimed that special exemptions for the plant were granted. By the end of the meeting, representatives made it clear that a public meeting could not be passed off as a public hearing. Sufficient notice had not been given and without appropriate documentation the public cannot arrive at an informed opinion regarding the impact of such a large project. Failing to be provided with any further information or details, the citizens decided to file a writ petition with the Chennai High Court. The TNPCB authorities who had been contacted and informed about the magnitude of such folly also set a meeting with the officials to get a further understanding of the project and present their doubts. The TWAD authorities were asked to point out the presumed sources of contamination and after going around the lake, could find none. In Oct '03, a Review Committee inspected the lake. Finally it was decided to issue a directive to the TWAD Board and the contractors that they had a grace period of 45 days before they submit a fresh proposal for the sanctioned money. The committee also asserted that informed public participation through a hearing was mandatory. At this juncture, an important aspect of Kodaikanal's saddening ecological crisis started to rear its head. For almost 18 years, the lake area received high doses of mercury contamination due to improper disposal from a near by thermometer plant. The contractors or the township had no clue about safe disposal, landfills or hazards of handling toxic sludge, preferring to dump it in the sholas and garbage dumps! It was exposed that the proposal does not address the actual sources of contamination, while talking about its conservation. (E-mail from Meenakshi Subramaniam)

Delhi HC seeks report on water bodies Delhi govt was supposed to get six water bodies restored by March 31 03, but after the deadline, the main work of cleaning the water bodies is till to start, said a status report. The agencies in charge of water bodies have not even sought extension of the deadline from the court. There is also no mention in the report on how the funds allotted have been utilised. Rs 1.9 M were sanctioned for the Ladpur lake and Rs 3.3 M for the Kerala lake. Rs 3 M was given for Hauz Khas lake, while Rs 4.23 M was sanctioned for Mayapuri lake. Mayapuri lake under the PWD needed to be cleaned and encroachments removed. Authorities are not commenting the status of the work. Of the 508 water bodies identified in the HC order, 6 were considered suitable for development as tourist spots. (THE INDIAN EXPRESS 031103)

Chennai's Choked wetland The Environment minister of Tamil Nadu has put the pressure on the govt to clean the Pallikaranai wetland, 20 km from Chennai, smothered by garbage and sewage from Chennai. In a report submitted by some scientists the wetland is dying – the area has reduced from 5 000 Ha to 743 Ha. The rest is covered with garbage and choked by untreated sewage. Originally it was a salt marsh fed by brackish water after the construction of Buckingham canal and became one of the most important wetlands of the state. If this sounds like exotica, the wetland provides sustenance to the parched city of Chennai. It helps in preventing inundation during monsoon and facilities groundwater recharging. Out of 743 Ha, 213 Ha is with the Chennai Municipal Corp. Legally, it is allowed to use 30 Ha to dump garbage. Instead it is using 180 ha to throw 3500 T of garbage daily. Nearly 40 MLD of domestic sewage is being drained in the wetland everyday. Rs 4.92 B was sanctioned in Sept 2000 as central aid for building Sewage Treatment Plant. Chennai Metrowater Board has not started constructing STP so far. (THE INDIAN EXPRESS 071103)

Maduravoyal lake is dying Maduravoyal lake near Chennai is fast disappearing with encroachers eating away almost 75% of it. The lake, which was originally spread over 50 Ha in Koyambedu village, was reduced to 18 Ha in 1980 and now it has been reduced within 10 Ha. Several truckloads of debris are daily dumped into the lake. The indiscriminate extraction of groundwater by the city hotels in Maduravoyal is also a reason for the drying up of the lake. (THE INDIAN EXPRESS 140204)

Action Plan for Dal Lake The Parliamentary Standing Committee on S & T of the MoEF in a report entitled "Conservation and Environmental Management Plan for Dal-Nagin Lake" suggests identifying the principal source and rate of accumulation of nutrients. Report says that the Lake formed the axis of life for the Kashmir Valley and therefore, it was not only important from the point of view of ecology, but also for augmenting economy. Committee stresses to free the lake from encroachment and asked for formation of monitoring committee for proper implementation. According to an expert, "all actions within the lake such as de-weeding, local aeration and skimming of algae help to fight the symptoms of the degradation process but will not be able to restore the desired water quality and sustainable, ecological development". The report recommends involving the people in the process. (THE HINDU 251203, *HINDUSTAN 301203*)

Wetlands in J&K threatened due to neglect Jammu & Kashmir abounds a vast array of water bodies that occupy an area of about 216-218 sq km. Most of these are natural water bodies with shallow basin and are categorized under western Himalayan wetlands. Wetlands in this region have not been given the importance that they deserve. They are being filled up with garbage, earth etc. to increase land area. A large number of ponds have gradually disappeared in Jammu and Kathua districts in this process in past 3-4 decades. As per a survey report of WWF, freshwater plants and animals have declined by a staggering 50% in past thirty years. The WWF, which has adopted several wetlands world over including one in the J&K has warned that unless more is done to protect wetlands, water shortage will become severe in at least 60 countries by the middle of the century. In addition, with fewer wetlands to absorb sudden, large quantities of water will increase the likelihood of flood –related disasters as weather patterns change as a result of global warming. Though efforts to conserve wetlands have intensified in recent years, only 80 M Ha of the World's total wetland area-less than 10%, are protected under the Ramsar Convention. In J&K several wetlands categorized as Valley lakes are—Wullar, Dal, Anchar, Manasbal, Malgam, Haigam; forest lakes like Nilnag in Pir Panjal range and Glacier or high altitude wetlands of Ladakh and Tibet plateau like—Alipather, Sheshnag, Pangong, Tso Kar, Tso Morari. The lakes occurring at low altitude (600 m) in Jammu region in the lower Shivalik Himalayan ranges have been referred to as Shivalik lakes, which are Mansar and Saruinsar. The Mansar and Saruinsar continued to be neglected and no serious conservation activity was carried on for them. There is urgent need to conserve neglected wetland resources. (DAILY EXCELSIOR 270104)

Hyderabad lakes under threat Encroachments in the 'protected' catchment of Himayat Sagar in Hyderabad poses serious risk to the lake, which augments Hyderabad's drinking water supply by 82 MLD. Although the catchment is a notified area, 60 000 unauthorised plots covering 2025 Ha have sprung up in the area. In 1996, the AP Govt had prohibited the construction of polluting industries, hotels and residential colonies within a 10 km radius of Himayat Sagar & Osman Sagar – the two supply 25% of the Hyderabad's drinking water. In 2002, Hyderabad received about 45 MGD of water from the lakes. But in 2003, Hyderabad Water Supply & Sewerage Board could not draw any water from them. Osmansagar dried up in Feb, while water lasted in Himayatsagar till June. An international airport is proposed in Shamshabad on the outskirts of city. This will take up about 810 Ha of catchment area of the reservoir. In Nov 2003, the AP HC dismissed a PIL challenging the proposed airport. The HC refused to treat the airport on par with a polluting establishment. This despite the fact that there are several studies that prove that air traffic causes substantial pollution. Environmentalists are not against the airport per se, but demand that it be situated outside the catchment area of Himayatsagar. (Down to Earth 311203, 150204)

Himalayan glaciers head towards hot finish Indian space scientists have gathered concrete evidence that four glaciers in the Baspa basin in Himachal Pradesh are facing "terminal retreat." Fifteen more glaciers in the same basin also face extinction. All of them are showing negative mass balance. That means glaciers are losing more ice due to melting in summers than accumulation of snow in winters. Baspa glaciers have lost 0.2347 cubic km of glacial ice between 2000 and 2002. Satellite pictures suggest four glaciers are getting covered with Debris because of which they are likely to experience relatively less melting. The debris is preventing the formation of new ice, leading to a slow death of these glaciers. (THE HINDUSTAN TIMES 290204)

Expert demands to save Sukhna Lake A former Chief Engineer of Chandigarh has suggested that the basic design of the radial gates of the Sukhna Lake must be modified if the lake is to be saved in a safe manner. He stated that the problem of the silting up of the lake and the consequent reduction in its storage capacity had so far been handled in an ad hoc manner. He said that not only the basic design of the radial gates should be modified in order to raise water level, but it should also be got checked from the Bhakra Beas Management Board. The original storage capacity of the lake was 8710-acre ft with a surface area of 565 acres at EL 1160 ft, where the original bed level was EL 1140 ft. The normal pond level was EL 1159 ft and the maximum pond level EL 1160 ft. The maximum flood level was EL 1161.5 ft. The top of the regulator gate was EL 1161 ft, which has now been now been increased to EL 1163 ft by raising the crest level from 1148 ft to 1150 ft. (THE TRIBUNE 010304)

WATER SECTOR

India ranks among most unhygienic According to a report from Geneva based Water Supply and Sanitation Collaborative Council, India has achieved another dubious distinction –that of having the highest estimated number of children dying from poor hygiene – 0.52 M. There are only two other countries that barely have six digit figures of the number of children dying due to poor hygiene annually – Pakistan and Nigeria, but the figures are much lower than India's. The report says, "the failure to achieve safe water and sanitation is the biggest mistake of national and international development efforts over the last 50 years. The percentage of children not growing normally is 47% in India as compared to China's 10%, Pakistan's 38%, and North Korea's zero percent. 16% people without access to water supply and 72% without access to improved sanitation yields these terrible indicators. Combined with the lack of safe water, it is the number one health problem killing 6000 children every day. The report makes the point that the traditional top down approach for providing water and sanitation to poor communities has not been successful. (THE INDIAN EXPRESS 220304)

Potable water in developing nations WHO report says that of the 2.5 B people in developing world only 38% have access to safe drinking water while water supply covers only 75% and 46% in urban areas and rural areas respectively. (NATIONAL HERALD 071103)

Orissa Orissa is likely to face acute water scarcity by 2050 if the state govt does not prepare a holistic water use plan in consultation with the people. As of now, the state, with 4% of the land area in the country is fortunate that it has 11% of the country's water resources, which is higher than its share of population. The state has prepared a basin plan for the 11 river basins and would soon set up a River Basin Organisation to execute the plan, said the CM. Given the present trend of population growth, the demand is expected to increase from the present level of 24.4 BCM to 55.9 BCM by 2050. (THE ECONOMIC TIMES 061103)

Call to declare water as Human Right Over 300 Water Warriors from over 70 countries called for the declaration of water as a human right at People's World Water Forum held during Jan 12-4 2004 in Delhi. The PWWF came in to being in response to the third World Water Forum, which took place in Kyoto in Japan in March '03, where water was seen as a vital need and not as a "human right". In Kyoto there were attempts to "treat water primarily as an economic good, not only as social good and to be given an economic value, determined by the market price mechanism according to the full cost recovery principle." A People's World Water Movement declaration adopted at the meeting reaffirmed water as a human right as stated in the International Covenant of Ecological, Social and Cultural Rights of the UN. It called for water service to be provided by the public and not the private sector and asserted its opposition to all corporate groundwater thefts including those enabled by trade agreements. It described India's river-linking scheme as "destructive". "We stand in clear opposition to the oligarchy of the World Water Council, a think-tank of the World Bank, and commit to democratic control of world's water resources," the declaration asserted. "We commit to working on the ground with women and men in communities recognising the special impacts on the world's water crisis on women," it said. The delegates including Riccardo Petrella (Secretary General of the International Committee for the Global Water Contract), Denielle Mitterand, Canadian activist Maude Barlow and Tony Clatke, Danuta Sacher from Germany and Vandana Shiva from India said the Govts should enact legislation so that every person should get water as right. The activists said that water privatisation and commercialisation was being effected through international trade agreements and that there was an urgent need to educate people about its adverse impact. (HINDUSTAN TIMES 130104, THE HINDU 150104)

WATER PRIVATISATION

Around the world Through designer studies about freshwater and public fund crisis, govts and international financial institutions are advocating a Washington Consensus solution: the privatisation and commodification of water. A handful of transnational corps, backed by the WB and the IMF, is aggressively taking over the management of public water services in countries around the world. There are 10 major corporate players now delivering fresh water services for profit. Between them, the three biggest - Suez and Vivendi Environment of France and RWE-AG of Germany - deliver water and wastewater services to almost 300 M customers in over 100 countries, and are in a race, along with the others such as Bouygues SAUR, Thames Water (owned by RWE) and Bechtel-United Utilities, to expand to every corner of the globe. A decade ago, they serviced around 51 M people in just 12 countries. Although less than 10% of the world's water systems are currently under private control, at the rate they are expanding, the top three alone will control over 70% of the water systems in Europe and N America in a decade. Vivendi earned $5 B a decade ago in its water-related revenues; by 2002, that had increased to over $12 B. RWE, which moved into the world market with its acquisition of Britain's Thames Water, increased its water revenue by 9,786% in 10 years. All three are among the top 100 corps in the world; together their annual revenue in 2001 was almost $160 B and growing at 10% a year - outpacing the economies of many of the countries in which they operate. The WB serves the interests of water companies through the IBRD loans to govts and can

impose conditions in exchange for money; and the IFC, which provides direct capital funding. Lending about $20 B to water supply projects over the last decade, the WB has not only been the principal financier of privatisation, it has also increasingly made its loans conditional on privatisation. The water companies and the WB have joined forces through the UN to create a set of international think tanks, lobby groups, advisory commissions and forums that have come to dominate the water debate and set the stage for a private future for water. (Third World Network Features Aug-Sep 03)

Indonesia WB water aid may dry up The WB may not disburse the third and last tranche of the Water Resources Sector Adjustment Loan, worth $150 M, to Indonesia if the controversial water resources bill fails to meet a 1999 commitment on water resource policy reform. Confronted with a severe economic crisis, the govt had agreed in 1999 to reform the legislation on water to allow privatisation, in exchange for $300 M loan. The first and second tranche were disbursed in June '99 and '01, totalling $150M. The House of Representatives has put the bill's deliberation on hold, due to strong public reactions concerning the privatisation. Many analysts and NGOs have expressed their opposition to the existing draft water resource bill, as it considers water as an economic commodity, which they say threatens people with uncertainty over access to safe and affordable water. (ASIA TIMES 141103)

Tirupur Tirupur in Karnataka is poised to get piped water by a private consortium. The USAID, which has provided loan guarantees for the project, says on its website that, this programme "advances US national interest: Economic prosperity through opening market." An estimated 0.3 M migrant workers, fear they will be left high and dry. While $1 B industry will receive 115 MLD water, the municipality which houses 60 000 slum dwellers would only get 26 MLD and other 792 rural settlements in the neighborhood will share the remaining 36 MLD. New Tirupur Area Dev Corp's Rs 9.6 B project signals a paradigm shift from water being considered a public utility. Worldwide, privatisation of water is being pushed through in three ways: imposing it as a condition of loans and debt relief, bankrolling water TNCs in preference to public enterprise and persuading govts like in Ghana to sell water utilities to reduce national debt in 2001. The strategy seems simple: Neglect development of water resources, claim a "resource crunch" and allow existing systems to deteriorate. (THE NEW INDIAN EXPRESS 021103)

Regulatory body in Delhi? The Delhi CM stated that very soon a regulatory body would be formed for better management for Delhi Jal Board. This regulatory body would work like the Electricity Regulatory Commission. She said that reform is required in DJB, and a World Bank & JBIC loan has been taken for this.

- **Privatisation under WB pressure?** Experts feels that DJB is moving towards privatisation as a WB sponsored study had recommended water sector reforms, which would end up in its privatisation. Arguing that a regulatory commission can play a role only in case of multiplicity of authority, the experts said they do not agree with the argument of the CM that the regulator was set up only for tariff fixation and its rationalisation. "The provision for fixing water tariff already exist in the Delhi Jal Board Act, 1988. Then where is the need to set up a regulatory body?" The experts say that the study had recommended that the regulatory commission would not only fix the tariff but also issue license to the companies for lifting, treatment and distribution of water. The WB has provided a loan of Rs105 M for the study. The report clearly recommended that the regulatory commission would open the avenues for participation of private players in water and wastewater sector, monitor enforcement of the tariff and service standards of private sector participants; and promote competition in the activities of water and wastewater sector. The leader of opposition has alleged that govt is trying to privatise water supply. Giving it to a private company and that too a MNC was against the national interest. He raised questions on the award of contract to the French company and said no details about the tendering process were known. There is no information on how many companies applied and how much was the bid by the Degremont. No reason has been given as to why counter-guarantees have been given to MNC. It is shocking that the Delhi Govt has not only given this company Rs 2 B to set up the water treatment facility, it has also agreed to allow the MNC to run it on Operate & Maintain basis for 10 years.
- **A Front against privatisation** A number of NGOs, residents' welfare associations, trade unions, social activists and eminent citizens formed a "Citizens Front Against Water Privatisation in Delhi" on World Water Day. In resolution, the Front demanded that the Delhi Govt withdraw its decision to set up a Regulatory Commission, make public all papers related to water privatisation and cancel all contracts with MNCs working with the DJB. (*RASHTRIYA SAHARA* 010204, 230304 THE HINDU 060204, 240204, 230304 *HINDUSTAN* 230304)

INTER STATE DISPUTES

SC on SYL The Supreme Court directed the Punjab & Haryana govts to place before it their lists of issues to be framed for hearing in a dispute between them on the construction of SYL canal. The direction was issued by a bench while hearing an application by the Haryana Govt, seeking the dismissal of Punjab's counter suit against the one filed by it for getting the SYL project completed by the Centre after Punjab had failed to implement the apex court's order in this regard. While Haryana in its suit has sought the completion of the SYL by the Centre, Punjab had submitted that it should be discharged of the obligation to complete the project.

➢ **Punjab CM for fresh water tribunal** The Punjab CM has impressed upon the Centre to constitute a fresh tribunal at an early date for the distribution of Yamuna waters in its territory as the previous award has outlived the present day realities. After meeting from Union Minister for Water Resources Arjun Charan Sethi, Capt emphasised that the waters in the Yamuna had dropped considerably, besides changing course. This river was one of the primary source of water for Punjab.

➢ **SC rejects Punjab plea** The Supreme Court, on Jan 12 '04, referred Haryana's application in the SYL case for rejecting Punjab's Counter Suit to the same Bench hearing its plea for enforcing the Court's January 2002 verdict for completing the project.

➢ Punjab, on Jan 21 '04, moved a fresh petition in the Supreme Court, challenging the constitutional validity of its Rule 6(a) under, which Haryana has sought rejection of the former's suit for "dissolving" the decree regarding construction of the canal. A Division Bench said it would first hear arguments on Haryana's application for rejection of Punjab's suit. The Bench disagreed with the Punjab's contention that preliminary issues needed to be framed first. When the court enquired from Punjab's counsel about the necessity for filing of the counter-suit, he said the Punjab Govt had sought to "discharge" it from the obligation of constructing the SYL canal due to various reasons in the changed circumstances. (THE TRIBUNE 211103, 251103, 130104, 210104)

PAP agreement between Kerala-TN The possible move to divert the Anamalayar and Upper Neera rivers under the Parambiculam Aliyar Project agreement to be revised by Tamil Nadu and Kerala in March, would spell doom for the Periyar and Idamalayar river systems, according to the official of Water Resources Dept and KSEB. The Minister for Water Resources of Kerala has said, "We have almost reached the final stage of understanding on all major issues related to the Neerar, Anamalayar, Parambiculam, Sholayar and Aliyar." It now appears that the technical committee of the Kerala Govt for the renewal of the PAP agreement is a divided house. T K Sasi, chief engineer of the technical committee, said, "Anamalayar and Neerar waters be given to Tamil Nadu while protecting the interests of the State". But another member of the committee said the Ministerial team had gone back on the Kerala Govt's known stand that the Anamalayar should be excluded from the PAP agreement. According to the supplementary memorandum on the review of the PAP agreement, "no sharing of Anamalayar waters had been proposed. The discussion revolved around sharing of the Thekkadiyar waters…. There was therefore, no basis for introducing the Anamalayar waters in to the agreement. Besides, Kerala has not completed the construction of the Idamalayar project. The precarious power situation of the state does not permit Kerala to let go any water from the Anamalayar.

➢ The Kerala Chief Minister has said that Kerala would review all inter-State water sharing agreements in the light of the acute water shortage. He said, "We will have look at the Parambikualm-Aliyar Project, Siruvani, Neyyar and Mullaperiyar agreements as it went against the interests of the State." The violation of the PAP agreement by Tamil Nadu led to the acute shortage of water for drinking and irrigation in Pallakad and also resulted in the drying up of the Bharathpuzha, he said. (THE HINDU 180104, 210304)

Court directs Karnataka, TN to pay compensation The Supreme Court on March 10 directed Karnataka and Tamil Nadu to pay within six months compensation of Rs 23.4 M to 9669 victims of the Cauvery river riots witnessed between Dec 1991 and Jan 1992. The SC bench gave this direction after accepting the report of the Cauvery Riots Relief Authority set up for both States pursuant to the orders passed in 1999. For 9576 Tamil victims in Karnataka, the Authority had recommended compensation of Rs 20.49 M and for 93 Kannad victims in Tamil Nadu, Rs 2.98 M was recommended. The riots were a fall out of a Gazette notification issued on Dec '91 of the interim award of the Cauvery Waters Dispute Tribunal given in June 1991 that stipulated release of 205 tmcft to Tamil Nadu every year. (THE HINDU 100304)

Second Krishna Tribunal constituted A sitting judge of the Supreme Court, Justice Brijesh Kumar, has been nominated, to chair the second Krishna Water Disputes Tribunal to adjudicate the dispute between Karnataka, Andhra Pradesh and Maharashtra on the sharing of Krishna River. The Chief Justice also recommended the names of S P Srivastava, a Judge of the Allahabad High Court and D K Seth, a judge of the Kolkata High Court to members on the proposed tribunal. There was a provision in the first Krishna Water Dispute Tribunal for setting up a second tribunal after 25 years, which ended in 2002-3. The second tribunal is required to submit its recommendations within three years. The Centre received requests from the three party states last year for the constitution of tribunal under the Inter-State River Water Dispute Act, 1956. (THE HINDU 200304)

IRRIGATION

Devdula Two consortia – one led by L&T and the other by Hindustan Construction have remained in the final race for construction of Rs 7.8 B Godavari Lift Irrigation Scheme, known as Devdula project. Israeli firm Tahal, which initially evinced keen interest, backed out and didn't file its bid. The irrigation dept had added micro irrigation component to rope in the firm and even extended the deadline for filing of tenders. Warangal collector has been asked to set up land acquisition project and see that lands were handed over before Nov end. The Forest dept was instructed to hand over 407 Ha of forestland. (DECCAN CHRONICLE 281003)

Waghad Farmers take over irrigation Samaj Parivartan Kendra, an NGO has taken the lead to form a federation of farmers that will take charge to manage distribution of water from Waghad for irrigating 9000 Ha in the Nashik dist. The seeds for the Waghad experiment were sown several years ago when farmers from Ozar formed a co-operative to share canal waters. The SPK has formed a federation to distribute over 40% of the water from Waghad. The Dam has a capacity of 2550 MCft but only 1135 MCft is available for irrigation. The federation promises a more profitable system as it has undertaken to recover 100% of the water bills (As against the existing 30%) and save Rs 10 M spent annually on establishment and maintenance costs. The federation expects irrigation dept to check on the gates regularly and has asked for subsidy equal to 50% of what the govt would save. (THE INDIAN EXPRESS 071103)

Upper Bari Doab case probe hampered The investigations on the scam is going on at a snail pace due to the non-availability of the technical expert. According to a report, the existing capacity of channels of the project was not adequate to carry the discharge of revised water allowances. The project for re-modeling the channel system to meet the revised water allowances of the Ranjit Sagar Dam stage was drawn up in 1998. The project was sanctioned by the Union MoWR in Jan '01, with 67% of the cost was to be borne by the Union govt and 33% by the state govt. The total cost of the project was estimated at Rs 1.79 B at 1998 prices. The then official concerned spent Rs 1.2 B within 33 months against the stipulated 48 months. The amount was reportedly spent in haphazard manner, which affected irrigation as envisaged in the project. Also, financial irregularities were detected to favour a particular contractor. (THE TRIBUNE 031103)

AP micro irrigation project The AP CM inaugurated a Rs 11 B micro irrigation project in the Ranga Reddy district to install drip and sprinkler irrigation over 0.25 M Ha spread over 901-village cluster. While NABARD would extend Rs 5.78 B as loan to the Govt, the banks would provide credit facility worth the same amount to farmers. Jain Irrigation Systems Ltd has signed a contract for the project. The plan has run into rough weather as the 7 identified companies are demanding higher rate per Ha for their services, including supplying high quality micro irrigation equipment, the govt is offering a much lower rate. According to sources the difference between the rates demanded by the companies and the one that govt is willing to pay ranges from Rs 2000 per Ha for crops like mango to over Rs 15000 per Ha for vegetables. (THE ECONOMIC TIMES 031103, THE HITVADA 071103, BUISNESS LINE 091103)

Micro Irrigation Task Force The task force on micro-irrigation headed by AP CM has recommended a Rs 105 B programme to cover about 3 MHa under the hi-tech irrigation system during 10th plan. The setting up of this task force was announced by Union Finance Minister Jaswant Singh in the 2003-4 Budget. The task force has pointed out that micro irrigation not only helps save water but also improves the quality of the produce, boosting its marketability. The TF has recommended a whopping Rs 510 B for the next plan period. The total cost involved during the 10th Plan could be shared by the Centre (40%) and raised either through the WB funding or import cess. State Govt may extend about 10%, which should be raised through the RIDF of NABARD. The balance 50% will have to be contributed by the beneficiaries based on easily accessible institutional financing. One of the suggestions for sourcing funding is that imports of horticulture products, oilseeds and pulses be taxed at 5%, generating annual revenue of around Rs 6.88 B. Again 10% of the total current spending on M&M irrigation projects (Rs 100 B at present) should be made available to fund micro irrigation projects. It has also been suggested that 20% of the Sugar Development Fund should be tapped to bankroll micro irrigation of sugarcane crop and all industries now availing the revival package should be made to bring at least 50% of the sugarcane area under micro irrigation. The Task Force has suggested that 50% subsidy be given to minor irrigation projects. The Task Force recommended abolition of all taxes, including excise duty and state sale tax, on micro irrigation systems and favoured a reduced interest rate of 6 - 7 % on bank loans to farmers to boost agricultural production. The Task Force said that as against the existing potential of 69 M Ha only a miniscule area was covered though micro/drip irrigation, and recommended that 3 M Ha be brought under the current Plan period and another 14 M Ha in the next Plan for achieving the goal of covering 69 M Ha in a phased manner. In order to cover 17 M Ha, a total investment of Rs 672.24 B was required by the end of the 11th Plan. As against this, the total benefit in the form of saving an on account of water, electricity, fertilizer and income due to increased production would be Rs 1306.83 B. The net benefit would be to the tune of Rs 634.59 B. (THE ECONOMIC TIMES 161203, 181203, BUSINESS LINE & THE HINDU 050204, INDIAN EXPRESS 060204)

Cauvey Compensation Karnataka has decided to give Rs 220 M as compensation for crop losses suffered by the farmers in Mandya district last year due to non-release of irrigation water. (BUSINESS STANDARD 191103)

AP-Maharashtra accord for Lendi project The Maharashtra and Andhra Pradesh have signed an agreement for executing Lendi, a Rs 2.76 B medium irrigation project, to be taken up as a joint venture. The agreement provides for construction of a dam, 30 km from AP border, for impounding 6.36 tmcft of Lendi waters before the river joins Manjira, a tributary of Godavari, with a provision of 3.93 tmcft for Maharashtra for irrigation of 10 866 Ha and 2.343 tmcft for AP for 8 800 Ha in the Nizamabad district. (THE HINDU 191103)

Maharashtra failure Maharashtra Govt admitted that no financial assistance was sought from the Center to expedite the incomplete irrigation projects entrusted to five Irrigation Development Corps till Oct '03. The state irrigation minister claimed that the state had demanded a soft loan of Rs 5.81 B for 30 projects under the AIBP. The Center had agreed to give Rs 1.2 B of which Rs 600 M have been released so far. The govt had released Rs 6.14 B to the Vidarbha Irrigation Development Corp, Maharashtra Krishna Valley Development Corp, Tapi, Godavari-Marathawada and Kokan corps. Besides, Rs 5.52 B has been collected through public bonds, which have been disbursed, to these corps. He admitted that the public bonds floated by the five corps and the Apex Finance Corp has miserably failed to mop up any substantial amount. The state govt admitted that Gosikhurd irrigation project has been delayed for years due to non-availability of funds for land acquisition. Of the 14 major projects, 27 medium and 55 minor irrigation projects handed over to VIDC in 1997, only 18 minor and six medium projects could be completed. (THE HITVADA 121203)

Over 400 projects pending 400 major and medium irrigation projects are pending in the 10th plan. The total cost of 170 major and 230 medium pending projects is approx. Rs 702 B. Several large & small projects are also pending in Rajasthan, MP, Chhattisgarh, Punjab, Haryana and Himachal Pradesh. Maximum 131 projects are pending in Maharashtra with total cost of Rs 111.72 B. 35 M&M projects (Rs 99.53 B) are pending in Karnataka. 27 M&M projects (Rs 55.49 B) are pending in Andhra Pradesh. 24 M&M projects of Rs 111.17 B are pending in MP. (*DANIK BHASKAR* 221203)

Rs 50 B projects in Cauvery basin The Board of Directors of Cauvery Neeravari Nigam cleared several projects with an outlay of Rs 50 B with an irrigational potential of 0.217 M Ha. All the projects are said to be within Karnataka's share of waters allocated by the Cauvery Water Dispute Tribunal. The irrigation minister said that the Corp would take up 50 projects (including 14 lift irrigation projects) with an outlay of Rs 15 B this year. The important projects were the Kabini Reservoir Project-II with an irrigation potential of 94 400 Ha, which was pending for 20 years. The Outlay for this was Rs 7.02 B taking the revised estimate to Rs 12.33 B. The Govt had spent Rs 4 B on the flow side of the project and the approval now was for the lift stage. Some of the other projects included Taraka Lift Irrigation; Arkavathi Dam; projects in Tumkur taluk; projects in Arkalgud taluk & Hebbala-Chintala. The CNNL has already raised Rs 2.5 B this year. It will raise Rs 15 B in the next financial year. Briefing reporters after the meeting, water resources minister stated that the plan was to irrigate 0.45 M Ha as permitted by the Cauvery River Authority. "At present more than 0.28 M Ha in Cauvery basin is under irrigation. CNNL wants to complete all other pending projects in the next five years at an estimated cost of Rs 50 B," he added. "The remaining projects will be completed by raising Rs 15 B each in next two," he noted. The CNNL has set aside Rs 250 M towards subsidy for sprinkler and drip irrigation in Cauvery basin. "Subsidy will be offered to farmers to purchase the necessary equipment from Feb," the minister said. He said CM would dedicate five major Cauvery basin irrigation projects to the state in Feb. They are Yegachi near Belur (14800 Ha); Uchanakoplu lift irrigation scheme near Holenarasipura (3320 Ha); Arkavathi dam near Kanakapura; Udatoreholla near Kollegal (2640 Ha) and Bagur-Navile lift irrigation scheme. CNNL MD stated that Rs 105 M had been released to Talacauvery Development Authority to improve Bhagamandala and Talacauvery, the origin of Cauvery. (THE HINDU, THE TIMES OF INDIA 200104)

Delay in irrigation projects The various govt's failure to complete the irrigation projects has led to an escalation of their combined cost by close to Rs 1000 B. According to the Planning Commission, 383 Irrigation projects in 23 states have spilled over from the Ninth Plan to the Tenth Plan. These projects were to irrigate more than 20 M Ha. The delay in implementation is attributed to several factors. For one, the allocation to the sector in the Union budget has been coming down. Another reason is the number of irrigation projects has been increasing over time, without the earlier ones getting completed. As a result, there are lots of projects and the available money is spread too thin. The land acquisition process for projects has hit many obstacles. (DOWN TO EARTH 150104)

Rs 760 M irrigation project in J&K The J&K Govt has formulated a plan to irrigate kandi and drought-prone areas as also to augment irrigation facilities to tail end of several command areas of existing irrigation canals. The plan, cleared by Technical Advisory Committee, includes 30 minor irrigation schemes costing Rs 141.5 M in Jammu division and 28 schemes in 8 districts of Kashmir division involving an expenditure of Rs 389.8 M. With an approved outlay of Rs 50 M as state share and Rs 150 M as central loan assistance for the current financial year, these projects are being taken up. The plan includes lift irrigation schemes, new canals, and modernization of existing canals and remodeling of several Zamindari kuhls. (DAILY EXCELSIOR 010204)

Project to check seepage in Haryana The Haryana Govt has formulated a multipurpose project at an estimated cost of Rs 1.65 B to solve the problem of seepage and flood control in Fatehabad, Hisar, Sirsa & Jind districts. The CM said the Ghaggar-Hisar drain would be constructed at a cost of over Rs 1.23 B to drain out floodwater. (THE TRIBUNE 290204)

Millions wasted on canal reconstruction The Monitoring and Appraisal Directorate of the CWC has questioned the propriety of dismantling the original

concrete bed of the Gang Canal for reconstruction with a project cost of Rs 4.48 B. Maharaja Ganga Singh had constructed the canal beginning from the Balawala head in Ferozpur to the Bikaner head in 1927. The Rajasthan Govt has so far paid Rs 1.21 B to the Irrigation Dept, Punjab, for reconstruction, but work on a 17 km stretch is yet to be completed including 6 km in Rajasthan. Farmers said that there had been loss of 400-425 cusecs of water as a result of seepage from the canal due to poor quality of construction by the contractors in Punjab. (THE TRIBUNE 140304)

Rajasthan Plan for River water The Irrigation Dept of Rajasthan has prepared a Rs 2.8 B plan to stop water that flows to Pakistan. The Ministry of Defense has also agreed for financial contribution. Every year about 0.05 MAF water flows in Ghaggar River, but approximately 50% water is used by the farmers and rest flows to Pakistan. (*RASHTRIYA SAHARA* 240304)

State of Land Resources Out of a total land area of 266 MHa in India 175 MHa suffer from degradation, caused for the most part by soil erosion, but also by waterlogging and excessive salinity. The most serious threat to the soil is posed by deforestation. This results in soil erosion, which affects over 150 MHa of land. It is impossible to calculate the loss caused to the economy by these processes as they result in soil erosion, displacement of topsoil, which causes the premature siltation of reservoirs to the detriment of irrigation, flood control and hydel power generation. Again, displaced soil raises the beds of rivers, thus reducing their water-carrying capacity. Waterlogging and salinisation, which constitute the second major threat to the soil have already claimed 13 M Ha and threaten many more. The lands affected are for the most part situated in canal-irrigated areas and have suffered because of the absence of adequate drainage. Canal-irrigated areas account for around 50% of the total net irrigated area of around 45 M Ha. According to the 10th plan document, the irrigation efficiency of M&M projects on an average only 30 - 40%. (DAILY EXCELSIOR 180304)

WATER OPTIONS

Water table in Saurashtra up due to check dams The groundwater level in Saurashtra has risen through construction of around 20,000 check dams in the last three years. The average water level in Saurashtra has risen to 7.18 m after monsoon during the current year compared to 4.18 m on an average during 1991 to 2000. Water level in Bhavnagar & Junagadh had risen by 8.50 m, 8.28 m in Rajkot, 8.06 m in Porbander, 8.01 m in Amreli, 7.30 m in Jamnagar, 5.50 m in Kutch and 2.22 m in Surendranagar.

- **The Khopala example** 20 Check dams built before three years are proving to be a boon for villagers of Khopala in Bhavnagar district of Gujarat as their once parched land has turned into fertile soil surging the income of the villagers. While agriculture income of the village prior to the building of the check dam was less than Rs 10 M, this year it is expected to rise up to Rs 70 M. Villagers said earlier the village used to have drinking water problem in summer and water level in wells was depleting at a fast rate. However, in the first year after the building of check dams the underground water level has remained stable and water was available in wells even during summer. (Ahmedabad.com 041103, THE TIMES OF INDIA 030104)

Ranpur Schoolchildren build RWHS, improve GW School students of class 6/7 of Ranpur village in Ahmedabad dist built 34 crude check dams using sand bags. The inspiration came from a geography lesson where, the teacher told them how their village faced water shortage, as there were no check dams on the local streams. The discussion generated ripples and children embarked on a mission to use sandbags to construct temporary check dams. Meanwhile seeing the enthusiasm of students, word spread and within a week there were about 200 students all wanting to build bunds to save rainwater. After getting help from local committee students first built a bund on a tributary of Bhadar River and within no time they raised 33 other bunds in which 30 teachers from the local school also joined. The enthusiasm bore fruits and within two months, water levels in the fields surrounding the bunds rose by 2-3 mts. (THE INDIAN EXPRESS 091103)

Mithi Virdi Linking Lives, not rivers A coastal village on the Gulf of Khambhat, named after the numerous fresh water holes- V*irdi* - that have been the source of clean drinking water for many years, has shown that empowered local communities can tackle water problems. The villagers completed the construction of a check dam on the Chaya River flowing through Mithivirdi; this had been initiated by a govt scheme and left incomplete. There have been two approaches adopted by the community to harness rainwater, namely (a) using rainwater to regenerate and maintain the local water resources for the entire community; and (b) collecting rainwater through innovative collection storage schemes for individual households. Check dams, key to water harvesting in these villages, serve two purposes - they help re-charge the water table by slowing down the drainage of water and hence allowing it more time to seep into the ground. They also prevent the saline water from flowing back into the land and destroying crops, which happens at high tide and especially when the land is dry. (Indiatogether.org, Oct 03)

Watershed Dev over 16.3 M Ha? Inaugurating a national workshop on 'Best practices in watershed development' in Ahmedabad, Union Rural Development Minister admitted that of the 1.4 M human habitats in hilly, forested and remote areas, 0.11 M are without drinking water facility. He claimed that 99% of villages have been covered by drinking water network. He said

that over 16.3 M Ha have been covered under different projects during the last eight years. Emphasising on the need for water conservation, he urged state agencies to implement the target of providing drinking water to 'no source' villages through low-cost watershed development works. (THE TIMES OF INDIA 081103)

Managing watershed through communities The implementation of Sujala Watershed development project in Haveri district in Karnataka is showing some fruitful results in the first phase. This project envisages people's participation in water harvesting and soil conservation. The govt had chosen five districts, namely Haveri, Kolar, Dharwad, Chitradurga and Tumkur. It believes in the involvement of community and stakeholders' participation in various stages of planning, implementation, management and maintenance. At present, the activities of watershed project are going through the second phase in Haveri where six out of seven taluks have been chosen. About 13 micro watershed groups have been formed in Haveri, Hirekerur, Ranebennur, Shiggoan, Byadagi and Savanur taluks. The project covers 62 548 Ha in 111 villages and is sheduled for five years. The state govt is to spend Rs 1.03 B in 3 phases over the five years.

- **Rs 50 B watershed projects** The Additional Chief Secretary and Development Commissioner of Karnataka said that the state govt had chalked out a major watershed plan at a cost of Rs 50 B to bring 8 M Ha of barren land under cultivation in the next 10 years. 77% of the cultivated area in the state came under dry-land farming. (DECCAN HERALD 231203, THE HINDU 280104)

Village shows example of community management The village used to import water tanker after even 15 inches rainfall, is facing no water scarcity after three inches rainfall. The Ralegaon Siddhi village in Maharashtra has become the symbol of watershed management in the country. Once the average per capita income in the village was only Rs 225, now the village is earning over Rs 10 M per year annually and per capita income has gone up to Rs 2500. All these have been made possible only due to community based watershed development. (*RAJASTHAN PATRIKA 071203*)

WB loan for Uttaranchal The World Bank has agreed to provide Rs 3.25 B out of the Rs 4.3 B Uttaranchal watershed management project to be taken up in ten districts. The state govt will contribute Rs 1 B for the 7-year project. (BUSINESS STANDARD 240204)

Kandi project Ecologically degraded area of over 0.117 M Ha in the foothills of the Shivaliks, falling in the districts of Ambala, Yamunanagar & Panchkula would be treated under the WB aided Integrated Watershed Development Project, also known as Kandi project, at a cost of Rs 1.8 B. An official release said an area of over 67 000 Ha had already been developed since the inception of the project in April '90. (THE TRIBUNE 101103)

RWH compulsory in Pune The City Improvement Committee of Pune on Nov 14 cleared a proposal to make RWH compulsory for all new constructions. Tax rebates for older constructions if they too go in for RWH has also been suggested. (THE TIMES OF INDIA 161103)

RWH improves Groundwater quality Rainwater harvesting facilitated a 40% improvement in groundwater quality in Chennai despite short spells of rain, according to a survey conducted by the Chennai Metropolitan Water Supply and Sewerage Board. With the state govt making RWH mandatory in all buildings, about 99.7% of the city's structures had complied as on Dec '03, a Metrowater official said. To check the impact of RWH on groundwater level and quality, the dept conducted a baseline survey in Sept '03 of 759 open wells/ bore wells and continued to update it every month. The survey revealed that salinity has decreased in 303 wells observed during Dec '03. The city and its suburbs together, have recorded a 50% improvement in groundwater quality. (THE HINDU 251203)

RWH mandatory in Kerala The Kerala govt has made it mandatory for all new buildings to install rainwater harvesting systems with effect from Jan 12 '04 through an amendment to the Kerala Municipality Building Rules 1999. According to the new regulation, all buildings that are used for residential purpose and also those used for education, medical, office/ business and special residential purposes and have a minimum floor area of 100 sq m and are on a plot of at least 200 sq m, will have to install rooftop RWHS. (BUSINSS LINE 140104)

Harvesting Water from fog? It is estimated that in India 12.5 B liters can be effectively collected through 'fog capturing' in net screens. It is based on the principle that whenever mist or fog touches a metallic or net surface it condenses to form dew or droplets of precious water. Hence 'fog capturing' is done by means of appropriate 10 by 10 sq meter net screens that favour the coalescence of the fog water droplets to create larger drops that are big enough to flow down into collectors at the base. Each net at a 90-degree angle has a capacity to collect up to 750 liters in one day given that relative humidity is 90%. Already scientists from Central Institute of Medicinal and Aromatic Plants are experimenting with fog capturing technology in Uttaranchal. This technique is also being implemented in Chile, Peru, Brazil and Nepal. In Nepal where they have 100 fogs days in a year they collect 10-30 L per sq meter per day. Chile has fog all 365 days but the collection rate is 3 L per sq meter per day. In India initial figures indicate that 7.5 L per sq meter can be collected per day. (THE TIMES OF INDIA 140104)

Revival of water bodies in Karnataka For the last many decades water sources in Hassan district in Karnataka have remained neglected and unused. But some rural folk, self help groups have found the solution

to the problem on their own. They have identified old *kattes* and *kalyanis* (temple tanks) cleansed and converted them into usable water sources. Now even the members of Stree Shakti Group have come forward to take up such works. As a result many dried up wells, ponds and kalyanis have water once again. This work has been taken up extensively in Hassan, Belur and Arasikere taluks. Arasikere taluk has benefited profusely as 105 revival works has taken place here out of 120 in the district. (DECCAN HERALD 030204)

Farmers cooperate to harness water The residents of Pimpalnare village with a population of 2600 in Maharashtra's Nashik district had learnt to encourage farmers' participation in water management. Farmers from the village got together to form the Shriram Water Users Cooperative Society Ltd, Pimpalnare, in April 1995. They made plans to convey water from the reservoir to their fields, thereby reducing water loss. Nineteen groups of around 10 farmers were formed. Each set up an electric pump at the reservoir that pumped water through a PVC pipeline out to the fields. A 160 HP electric transformer was bought for the increased power needs. During the monsoons the electric pumps from the reservoir are dismantled and placed along the pipeline where rainwater from the small streams is collected. The water now flows in the reverse direction, filling the reservoir. After the monsoons, the pumps are dismantled from the small water sources and placed at the reservoir to draw water for the fields. Since the implementation of these schemes in 1997-8, instead of just 15-20 mcft, the reservoir holds about 50-60 mcft water. With about a three-fold increase in the availability of water, the area under irrigation has increased from 100 Ha to 500-600 Ha. The area under grapes, during both the kharif and rabi seasons, which used to be 2 Ha before, increased to 55 Ha. Similarly, the acreage under vegetables increased from 30 Ha to 225 Ha. Today, they earn Rs 0.1 M per Ha and recovered their capital costs within the first two years of improved farm incomes. The total cost of the project worked out to Rs 11.5 M that was shared by the members. (InfoChange 0304)

Pardi sets Example Two years ago, Pardi village of Nanded district in Maharashtra suffered from acute water shortage and water borne diseases. Since Aug '02, the people of Pardi realized what it meant to gain access to clean water in the village when it became the first village in Nanded district, one of the poorest in Maharashtra, to have a pilot water management and distribution scheme. It all started after a gram sabha was organized to tackle the problem. The setting up of the Village Water and Sanitation Committee on Aug 15 '01 followed. The VWSC prepared an estimate of Rs 2.5 M. The villagers decided to collect Rs 200/- from each of the 260 families in two installments. This led to the collection of about Rs 0.115 M, which was further strengthened when the govt provided a grant of Rs 1 M. Those who could not pay did shramdan. As a pattern, each village raised an estimated 10% of the amount in cash and kind. This money was utilized for digging up a new well. Then a 700-m pipeline was built to collect and store the water in the new 60 000 litre tank; the old one was repaired as well. A three km network of pipelines was connected to community tap at every lane. To maintain these facilities, people were charged Rs 15/- per month for public and Rs 30/- for private connections. Now efforts are on to dig a new well and build four small dams on a nearby stream to recharge the wells. Now people are careful about water and realize it is their right. (Teri.org, Issue 55)

Haryali A new scheme (basically new name for old schemes) called "Haryali" has been launched in Jan '03. Its aim is to strengthen and involve Panchayati Raj Institutions for the implementation of Watershed Programmes viz. Integrated Wastelands Development Programme, Drought Prone Areas Programme and Desert Development Programme. Under this initiative, the Gram Panchayats would execute watershed projects with technical support from the Block Panchayat/ Zilla Panchayat who would act as Project Implementation Agency for all watershed projects in a particular block. During the last four years, under IWDP, a total of 353 new projects have been sanctioned to cover an area of 2.938 M Ha with a total cost of Rs 16.23 B. Under DPAP, a total of 10,179 new projects have been sanctioned to cover an area of 5.089 M Ha with a total cost of Rs 28.254 B. Under DDP, a total of 6,120 new projects have been sanctioned to cover an area of 3.06 M Ha of wastelands with a total cost of Rs 21.941 B. (PIB 070204)

WATER POLLUTION

Policy to protect freshwater sought Speakers at the international workshop on "water safety and water microbiology" at Mangalore highlighted the need to protect available freshwater and expressed concern over pollution of freshwater sources. The Karnataka minister said though the target of state govt is to provide 50 litres of water a day per person, in some villages only 10 L is available. Stating that the rejuvenation of groundwater has not reached the expected level, the minister said people have been digging bore-wells to a depth of 700 ft. In some areas, the fluoride content was very high at this level. (BUISNESS LINE 111103)

Lucknow: Bacteriologically unsafe water The Aquatic Toxicology Div of the Industrial Toxicology Research Centre conducted a drinking water quality survey in Lucknow during Sept-Oct '03. 44 water samples from residential areas, 28 from commercial areas and 8 from industrial areas were collected. Results showed that 44% samples were bacteriologically unsafe. (NATIONAL HERALD 071103)

Puri: Discharge of sewage into the sea Worried by the unchecked discharge of untreated sewage into the sea at Puri, the Orissa PCB has warned the Puri municipality and the district administration about possible health hazards. Tests by the board have put the BOD at 110. Puri has no proper effluent treatment plant to treat the large amount of sewage generated by the many hotels in the area. (THE TELEGRAPH 271003)

India Becoming Mercury dumping ground Mercury imports in India have increased six fold in last seven years even as the world is phasing out its use. India is now the second largest user of mercury in the world (170-190 T a year) after the US (372 tonnes). According to figure from CSE, imports have doubled between 1996 and 2002, from 254 T to 531 T. Import of organo-mercury compounds has jumped 1500 times – from 0.7 T to 1312 T between 1996 and 2002. A collation of sporadic studies shows it is the coastal areas that are at maximum risk. In Mumbai, Kolkota, Kochi, Karwar, Chennai, North Kowel and Bihar, high levels of mercury were found in fish. (THE INDIAN EXPRESS 041103, THE HINDU 051103, THE TRIB UNE 061103)

Cattle die due to water toxicity Sporadic death of cattle is a common in Andhra Pradesh. A lot of the cattle died after drinking water contaminated by treated waste released from industrial effluent treatment plants in nearby area of Hyderabad. The toxic water has affected not just cattle but it has also destroyed the fragile ecosystem of these tanks. Hundreds of families have lost their means of livelihood. The National Geological Research Institute, in a survey of 1998, said that the level of arsenic in the tanks and wells was beyond permissible limits. Water samples showed the presence of 802 mg per litre of boron, 492.8 mg of iron, 401.8 mg of nickel, 136.5 of chromium, 762.4 of strontium, 94.97 of barium and 8.6 mg of mercury. (THE TIMES OF INDIA 031203)

Tribals using high fluoride water In the absence of proper drinking water facilities, the Oraon tribals in Jharkhand have been forced to consume water contaminated with fluoride. Over 250 people are suffering from Fluorosis in these villages. Here, fluoride content in water varies between 2.24 to 7.54 PPM when as per the Indian Standards Institution; the maximum permissible limit of is one PPM. In 1986, the National Drinking Water Commission set up a committee to provide safe drinking water to all Fluorosis–affected villages by 1990, after a survey conducted by Society for Environmental and Social Awareness found that 17-20% of the villagers were suffering from the disease. (THE INDIAN EXPRESS 130104)

Farmers suffers due to polluted water Farmers in seven villages of Rewari district in Haryana are suffering due to Rajasthan Govt's delay in construction effluent treatment plants. Polluted water from Bhiwadi district of Rajasthan flows into these villages through a channel and gets mixed with the groundwater affecting its quality. The issue has now triggered off inter state tension. It has been taken note of by the Committee on estimates of Haryana Assembly. The report of the Committee for 2003-4, said that on being pointed out that there was a flow of polluted water from Bhiwadi industries of Rajasthan to Haryana, the chairman of Haryana Pollution Control Board replied that they were assured by the authorities of Rajasthan Govt regarding setting up effluent treatment plants. (THE TRIBUNE 220204)

Coastal talukas toxic hotspots A combined report of the National Environmental Engineering Research Institute and the National Institute of Ocean Technology, Chennai has identified 15 coastal talukas of Gujarat as toxic hotspots. The report says that industrial developments in these talukas are causing indirect or direct damage to the coastal and estuarine ecology. Talukas like Khambat, Lalpur, Choryasi, Rajula, Kodinar, Ankleshwar, Lakhpat, Mundra and Bhavnagar have been identified as major source of sulphur and Nitrogen oxide, while talukas like Navsari, Pardi, Olpad and Mangrol have been identified as a source of waste water and solid waste. The report is based on the Gujarat govt's plan of allowing more industries both proposed and under implementation in the coastal region mentioned in its 'Vision-2010' report. The report also projects on what will be the ecological condition of these talukas in the next 10 years if the concentration of pollutants increases. It reveals that SOx pollution load values will be forming major air pollution because of the power plants in Khambat and Lalpur talukas. Khambat is expected to contribute 0.237 MT of SOx per annum while Lalpur is expected to release 1.17 MT of SOx and 76700 MT of NOx per annum because of the petrochemical industries by 2010. Pardi, on the other hand, according, will be a major source of solid waste of pulp and paper, which is expected to soar to 5.53 MT by 2010. The Gujarat Ecological Commission in its 2000 report has noted that textile industries in coastal talukas like Mangrol, Mandvi, Umbergaon and Pardi are expected to contribute the pollution loads. (THE TIMES OF INDIA 070104)

BOTTLED WATER

Bromate in bottled water The Coca-cola recalled its entire Dasani range of bottled water from the British market after levels of Bromate, a potentially harmful chemical, were found to exceed legal standards. Bromate is a chemical that could cause an increased cancer risk as a result of long-term exposure. It was recently criticised in British media after its disclosure that Dasani was in fact treated and purified tap water - a practice not uncommon in the bottled water industry. British limits for Bromate in bottled and tap waters are 10 parts per billion and the Dasani samples had tested at between "borderline" 10 - 22 ppb. European tap water limits are 25 ppb. (BUSINESS STANDARD 200304)

COKE CAPTURES GROUND WATER

Kerala HC notice against Coke, govt Kerala High Court has issued notices to the state govt and Hindustan Coca Cola Beverages Pvt Ltd on a petition challenging the govt order extending the stay on the cancellation of license given to the company's bottling plant at Plachimeda in Palakkad dist. Admitting the petition by Perummatty Grama Panchayat President, the HC also directed the panchayat to implead the SPCB and the Ground Water Dept as additional respondents in the case.

- **Expert panel report to HC** According to a report submitted by the expert committee appointed by the Kerala HC the Coca Cola plant at Plachimada had extracted nearly 10 ML of ground water within a month. In its report the Committee Convener said that they carried out monitoring of 6 tube wells and 2 open wells within the company premises. The committee had also monitored the level of water availability in 24 observatory wells outside the factory premises between January 19 and February 2, 2004. Water level in these wells varies as per the quantum of extraction by Cola, the report said. The Expert Committee, headed by Dr. James of Central Water Resources Development Management, Kozhicode, was appointed by the High Court to inquire into allegations of overexploitation of ground water by Cock while considering a writ appeal filed by the company challenging the earlier single judge's verdict directing the company to stop extraction of ground water and find alternative source of water.
- **Contamination/ Depletion of water** The ground water extracted by the company is enough to satisfy the total domestic needs of about 20 000 people, about two thirds of the population of the perumatti panchayat. Coca-cola meanwhile claims that the depletion in ground water is due to decrease in rainfall. According to them the annual rain fall in the area has dropped from 2137 mm in the year 2000 to 670 mm in 2002 (state ground water dept). The question which now comes into the foreground is that why was the company allowed to extract ground water when the ground water dept had earlier declared Chitoor panchayat as drought affected. The study by the Kerala Sastra Sahitya Parishad also says that the extraction of ground water by Coca- cola at the current rate would stem the possibility of ground water discharge because of the peculiar geological character and the rainfall pattern.
- The water sample analysis done by Green Peace and analysed by Dr Mark Chernaik, as staff scientist of ELAW US – a network of public interest environmental lawyers says that Water from the well would be classified as very hard. Use of this water for bathing and washing would cause severe nuisance and hardship. Water samples from wells analyzed at the Regional Analytical Laboratory at Kozhikode under the orders of District medical officer have revealed hardness, chlorides and concentration of total dissolved salts beyond tolerable levels for drinking water. On the basis of this, the medical officer of the Public Health Centre in the village recently informed the Perumatty gram panchayat that people should not drink water from the three wells neighboring the Coca- Cola plant.
- **Cock distributes toxic sludge** The sludge, which the Cola Company at Plachimada in Kerala distributed to the farmers claiming to be beneficial as manure, came under vigorous attack after the presenter of Face the Facts program of BBC visited the area, and collected samples, which revealed that the said material was not a fertilizer as claimed and it also contained a number of toxic metals including cadmium and lead.

Element	Observed data (mg/ l)	Permissible limits (mg/ l)
Lead	65.7	10
Cadmium	10	3
Chromium	36	5

(Source: BBC /Greenpeace/ Unv. of Exeter)

The report by the Kerala PCB also reported a high cadmium concentration 0.5 - 20.6 mg/kg. The pollution control board says that the solid waste generated by the factory is not advisable for applying as manure. (Initiative Mumbai -Report 2003 & (THE TIMES OF INDIA 011103, CHRO News 120204, cokewatch.org)

GROUND WATER

Nellore Rising prawns, depleting GW Nellore is one of the coastal dist in AP, famous for a paddy variety. The river "Penna " is perennial source of irrigation. During the British regime two irrigation canals and one major irrigation tank were built in central Nellore district, having capacity to irrigate 0.06 M Ha. But today all this has become a dream, as everywhere the potential ground water areas have been changed to freshwater prawn culture. All the coastal prawn farms shifted from saline to fresh water prawns cultivation. Ground water exploitation has gone up. This trend is continuing since 1999 and today the impact is that 3 Mandals have been declared as dark areas. (E-mail from REMEDE)

Delhi HC direction On the suo-motto cognizance, the HC has set up a four-member committee to be headed by the secretary of Union Water Resources Ministry to check the illegal withdrawal of groundwater for commercial and private use. The directions came after the counsel for Delhi Jal Board said there are no provisions to regulate groundwater and that there is no revenue collection from the use of groundwater. (THE TIMES OF INDIA, THE INDIAN EXPRESS 131103)

IWMI office in India The International Water Management Institute has established its India office in Delhi. The Institute has taken up a study of groundwater utilisation in India and also a study of river linking proposals. (*RASHTRIYA SAHARA* 201103)

'Fluoride in Groundwater a public health time bomb' Researchers from IWMI-TATA Water Policy Programme have warned that the mismanagement of groundwater could "seriously hinder" the country's pace of development. Groundwater currently irrigates well over 35 M Ha, sustaining 60% of the country's irrigated land. Due to over exploitation of groundwater close to 25% of the country's grain harvest could well be under threat over the next two decades. Research shows that while more effluent farmers have prospered by drawing down groundwater tables, the health costs from rising levels of Fluorosis have been disproportionately borne by the rural poor. The institute had surveyed tribal villages in S Rajasthan and found that 20% of men and 30% of women in the 30-46 year age group suffered from skeletal Fluorosis. (THE ECONOMIC TIMES 270204)

Water map The Central Ground Water Board has prepared the first of its kind "water map" showing the water regions, quality and depth of water and even excessive contamination. The map will also show the various kinds of rocks in different areas, fresh water supply and the high concentration of fluoride, nitrate & iron in water. It is expected to be a guide for the civic bodies dealing with water supply. (THE HINDU 130304)

SC takes serous note of Haryana Minister's stand The Supreme Court has taken serious note of Haryana Minister Kartar Singh Badana's stand that there has not been much effect of the mining in the Faridabad and Gurgaon area on the ecology of the fragile Aravali hill ranges. The SC said the Minister, him self a mine owner, had told the Environment Protection Central Authority that the impact of ground water abstraction was minimal and miners were harvesting the water and allowing it to flow to the Yamuna. "A perusal of the report of the groundwater regime shows that his contention can not be upheld," ruled the SC. The SC has refused to vacate its ban on mining in the entire Aravali hill region comprising Faridabad, Gurgaon and Alwar districts. The EPCA had found that most of the mines were operating 20 - 100 ft below the water level and thus abstracting excessive water from confined aquifer. (THE TRIBUNE 290304)

Water resources in Punjab, Haryana critical According to a report by an NGO 'Kheti Virasat', out of 17 districts of Punjab, the ground water balance in 7 districts is negative. Water flow is alarmingly going down in Sutlej and Beas rivers. Due to the loss of massive forest cover in Shivaliks resulting in drying up of several sub-rivers, natural streams and rivulets, the foothills of Punjab have become a water-scarce area. Jayanti, Budki, Siswan, the three major tributaries of Sutlej River flowing through Ropar district, have vanished. The rivers, Tangri and Ghaggar, which once catered to the entire area throughout the year, have become dead rivers full with heaps of sand after monsoon. The report noted that Punjab had already lost its several wetlands, which plays a major role in recharging ground water and sustaining required moisture in soil and surface. The mighty Bhupindra Sagar Lake in Sangrur district, once spread over an area of 1280 Ha is no more now. Tarkiana wetland near Dasuha, and Lobana wetland are almost dead now. Others such as Jasterwal, Khanuwan, Lobana, Mand Bharthala, Rababsar and Bareta are the worst victims of man-made disaster and ignorance. Apart from this several major reservoirs such as Sitasar (Sunam), Ajj Sarovar (Kharar), Mullanpur Garib Dass, Gharian, Pandusar (Dasuha), RajeTal, Bopa Rai Kalan, Kahangarh, Chamunda Devi, Thand Kasel, Attariwala, Batala, Gurdaspur, Bhagna, Fatehgarh Churian, Chmiari, Preet Nagar, Ramsar, Lakshmansar (Amritsar) are in a bad condition. The report said Jalandhar district was one of the worst affected zones where its ten blocks were in a 'dark zone'. In Kapurthala all five blocks, in Moga all four blocks, in Sangrur all 13, in Fatehgarh Sahib all 5 were in 'dark zone'. In Amritsar district, 14 were in 'dark zone' and other two under grey zone'. In Patiala 8 out of 9 and in Ludhiana 10 out of 11 blocks were in 'dark zones'. The white zone area of Bathinda, Mansa, Muktsar, Faridkot and parts of Ferozepur have problem of salinity and chloride. Nawanshahr and Hoshiarpur districts have problems of selenium contamination. Nickel and chromium is reported in Ludhiana & Mandi Gobindgarh.

- A survey by the CGWB has found high fluoride and nitrate in groundwater in Ballabhgarh, Gurgaon and Panipat. In Chandigarh, water samples taken along the Suhna choe have shown higher a level of nickel and potassium and the groundwater quality has deteriorated in general. According to Punjab State Council for Science and technology report, high yield intensive cultivation has caused nitrates from fertilisers and pesticides to seep in to the groundwater. A groundwater contamination study of Ludhiana was carried out in collaboration with experts from Stockholm University, Sweden. Even the unsaturated zone (0-5 m) is highly contaminated by nickel and cadmium here. The static water level has gone down and luckily the deeper aquifers are not as polluted as the upper ones. (THE TRIBUNE 240204, THE TIMES OF INDIA 300304)

GROUND WATER CONTAMINATION

Contamination due to coal slurry dumping The underground dumping of coal slurry by National Fertiliser Ltd within the municipal limits of Nangal has caused concern. The NFL authorities have been dumping coal slurry lifted from their dykes in 'kutcha' ditches about 200 m away from the Nangal Municipal Council. According to experts, the underground dumping of coal slurry at a depth of about 15-20 ft could damage underground water in the surrounding areas. The Punjab Pollution Control Board rules prohibit the dumping of the coal slurry without pulverised lining on the outskirts. The pulverised lining has been mandatory

for coal or ash dykes to prevent the leaching of heavy metals into the surrounding areas. According to sources the dumping of coal slurry by digging ditches 15 to 20 ft deep not only violated the PPCB norms but also violated the Mining Act. (THE TRIBUNE 110304)

URBAN WATER SUPPLY

Water trade A study by IWMI-Tata Water Partnership programme of the six cities – Ahmedabad, Indore, Bangalore, Chennai, Jaipur and Nagpur – reveals that the water lorry economy is of the order of almost Rs 2 B annually. Transmission and distribution losses in the municipal water supply in these cities is 30% of the net water supply and only 51% of the economic water demand of these cities is met by the municipal systems. After reducing such losses to the achievable level of 15% in the six cities would release enough water to meet the entire demand of Indore and Jaipur. (THE ECONOMIC TIMES 270204)

ADB project for MP cities The Asian Development Bank has approved a $200 M loan 'to help improve basic urban services' in six cities of Madhya Pradesh. According to ADB sources, the Urban Water Supply and Environment Improvement project will improve and expand infrastructure and services for water supply, sanitation and sewerage in Bhopal, Gwalior, Indore, Jabalpur, Ratlam and Ujjain. It will also strengthen the cities' capacity to better plan and manage their water supply and sanitation system. (BUSINESS LINE 151203)

Delhi's Bhakra solution peters out The Supreme Court's May 2000 directive for the release of 125 cusecs of additional water from Bhakra Dam remain unimplemented due to breaches in the carrier system coupled with Delhi Jal Board's inability to draw the full quota. In an affidavit, the CWC informed the apex court that it has told the BBMB to release only 60 cusecs of water instead of 125 cusecs till further orders. "The full allocation of Nangloi Water Treatment Plant of 125 cusecs can not be restored without endangering the safety of the canal system," the CWC said and added that experts who examined the canal system were of the opinion that it was fit enough to carry only 60 cusecs. (THE TRIBUNE 031103)

DJB revenues leak through pipes Almost 20% of the 650 MGD produced in Delhi is lost due to leaks in old and corroded pipes. The biggest problem are smaller pipes called ferrules, which take water from the main pipelines to the consumers' end, and are proving to be the hardest to plug. DJB has about 1.4 M connections. By DJB's estimates, the water lost in these pipes is about 78 MGD – enough to solve the water crisis in S Delhi and other areas if saved. (HINDUSTAN TIMES 111103)

Karnataka Karnataka Urban Infrastructure Development Finance Corp is implementing a Rs 9.8 B project to improve drinking water and sanitation and other infrastructure in coastal districts of Dakshina Kannada, Udupi and Uttara Kannada. KUIDFC has already implemented ADB funded Rs 4.89 B drinking water and underground drainage improvement project in Mysore, Tumkur, Ramanagar, Channapatna, Mandya and Maddur. Another WB assisted project at a cost of Rs 2 B would be taken up shortly.

- The Greater Bangalore will get water supply through the Bangalore Water Supply and Sewerage Board's Rs 3.43 B Greater Bangalore Water Supply Project by 2005. The project has been initiated to provide water supply distribution network to cover seven city municipalities and one town municipality. The project will cover a total area of 240 sq km. Out of the project amount, Rs 460 M will be funded under KUIDFC Mega City Project, Rs 1 B under USAID, Rs 780 M through the state's budgetary support and the remaining Rs 1.2 B will be funded by users.
- **Bangalore water supply** According to a survey by the Bangalore based Public Affairs Centre, 73% of the City's residents expressed satisfaction with water supply as compared to 42% in a similar survey in 1999 and 4% in 1994. According to BWSSB, the per capita availability in the city is up 20% from 100 liters two years ago and the city has already made plans to ensure that there is no water shortage till 2025. As part of a master plan, being financed by JBIC, BWSSB will tap 500 MLD from the Cauvery River. A project with JBIC and AusAID is also being worked out to cut distribution losses to below 15%. Bangalore has also hiked water tariffs twice in 2002 by around 40%. (THE ECONOMIC TIMES 071103, THE NEW INDIAN EXPRESS 080104, BUSINESS STANDARD 260304)

Shimla Water charges up Himachal Pradesh govt has asked the Shimla Municipal Corp to hike water charges. With effect from Oct '03, the rates for domestic consumers have been increased from the present Rs 2.5 to Rs 3.5 per KL for up to 30 KL water use per month. Charges for water use of 30-75 KL per month will be Rs 5 per KL and consumption beyond 75 KL would be charged at Rs 7 per KL. For adjoining areas of the MC, the charges would be Rs 12.5 per KL up to 30 KL, Rs 15 per KL for use between 30-75 KL and Rs 17.5 beyond 75 KL. The General House of Shimla Municipal Corp passed a resolution urging the state govt to reconsider the decision. (THE INDIAN EXPRESS 301003, THE TRIBUNE 011103)

Ahmedabad Water drainage charges up The standing committee of the Ahmedabad Municipal Corp has decided to hike the water and drainage charges for residential properties above 200 sq m as proposed in interim budget. With this the owners of such properties will now pay Rs 1 500 as against the existing Rs 300 with immediate effect. The committee chairman told media that for commercial properties above 150 sq m water and drainage charges have been raised from Rs 600 to Rs 1,500. (THE TIMES OF INDIA 031103)

Proposals for Bhopal Water Resources Dept has submitted a report to the MP govt for Bhopal, according to which the Upper Kolar lake water will be used for drinking water supply in the city while the Lower Kolar lake water will be reserved for irrigation. The project suggests an investment of Rs 812 M to ensure supply of 44 MGD water, which will be sufficient to meet the needs of the city for the next 25 years. According to sources, the Lower Kolar scheme was prepared two years ago. Under the scheme, there is a proposal for construction of another lake at Jholiapur Barrage. Following construction of the new dam, an additional 70 MCM will remain for potable supply in the main reservoir while the remaining water will be sufficient for supplies for irrigation. The project will involve submergence of 450 Ha.

➢ In Jan '04, the Govt gave clearance for the implementation of Kolar Augmentation Scheme (Phase-II) with major changes. The cost of this Rs 1.11 B scheme has been reduced to Rs 500 M. The loan for this scheme would be taken from the HUDCO. The Kolar-II pipeline would provide 44 MGD to Bhopal till the arrival of Narmada water. The CM also decided to allot Rs 3 B for Narmada Water Supply project to Bhopal. It was also decided to complete the project by 2007. The project would get Rs 1 B each from Planning Commission, HUDCO and as well as from the State Govt. (CENTRAL CHRONICAL 291003, THE HINDUSTAN TIMES, *NAVBHARAT* 150104)

Delhi & Noida to get water from Tehri A High level meeting in Lucknow took decisions for distribution of water from Tehri dam. 4500 cusecs would be supplied through Ganga canal. Delhi will receive additional 300 cusecs from Muradnagar when at present it is getting 200 cusecs. UP will receive 200 cusecs for Noida. 3000 cusecs would be supplied for irrigation. The balance 1000 cusecs would be dropped in E Ganga canal at Kuakheda. (*AMAR UJALA* 071103)

Bonds for Krishna river plan The Union Finance Ministry has in principal agreed to permit Hyderabad Metropolitan Water Supply and Sewerage Board to float tax free bonds of Rs 500 M for the Krishna river water project for the drinking water requirements in twin cities. Permission would also be given for floating tax-free bonds worth Rs 500 M for implementation of Godavari water supply scheme in Visakhapatnam. (THE NEW INDIAN EXPRESS 151103)

MCs buying chlorination plant at different rates The Nangal Municipal Council has recently installed a water chlorination plant at a cost of Rs 1 M. However a similar plant was being installed by the local municipal council at a cost of Rs 0.25 M. The BBMB, another organisation at Nangal, has also purchased similar plant at a cost of Rs 0.2 M. Many other municipal councils and corporation, including Bathinda and Ludhiana, had installed similar water chlorination plant at cost of Rs 1.2 M. The question arises that can different municipal councils in the state purchase similar equipment at different rates? In the Chlorination plant installed at Nangal, while chlorination is generally done for the drinking water, the Nangal Municipal Council for the first time in the state has installed a new plant for chlorinating the sewerage water after treatment. The council officials claim that the plant has been installed on the direction of the Punjab Pollution Control Board. However, the PPCB authorities said though chlorination of sewerage water was an affective method of control microbes in the water, no direction in this regard had been issued to the councils. (THE TRIBUNE 241203)

Water for Jaipur from Bisalpur dam The Rajasthan CM has directed the Water Resources Dept to complete the Rs 10.19 B project for drinking water supply to Jaipur from the Bisalpur dam on Banas River in Tonk district by 2007. The project comprises two phases involving the transmission of water from the dam to the pumping station situated about 25 km from Jaipur and its distribution to the city. Rs 5.56 B were likely to be spent on phase 1 and Rs 4.63 B on phase 2. The Bisalpur dam – envisaging 31560 mcft of live storage of water - is already providing drinking water to Ajmer and Nasirabad towns. Though the project was initially launched in 1986 with the priority to supply of water for irrigation, the water availability was later divided between irrigation and drinking with the latter getting two third portion. (THE HINDU 310104)

RURAL WATER SUPPLY

Kerala panchayats to get WSS The Kerala Planning Board has recommended that all rural water supply schemes be handed over to Panchayats. The Vice-Chairman of the Board said that the Constitutional Amendments 72 & 73 had clearly placed the subject of water supply in the hands of the local self-govt institutions. The State Govt too had, in 1998, taken a decision to hand over all rural water supply schemes to the panchayats. However, of the over 1000 rural WSS, only 166 had so far been transferred from the Kerala Water Authority to the Panchayats. (THE HINDU 181203)

Plans fail to deliver The Accelerated Rural Water Supply Programme was introduced in 1972-3. After one year, the scheme was discontinued only to be reintroduced in 1977-8 due to the unsatisfactory performance of the MNP on the drinking water front. The ARWSP is currently implemented through the Rajeev Gandhi National Drinking Water Mission. Though substantial funds have flown into the project, its achievements have been meager. The ARWSP has utilised Rs 93.89 B in the last five years. Another Rs 17.47 B has been allotted for 2003-4. In Jan '02, the number of habitation covered was 26803 against a target 45527 and the population covered was only 10.5 M against a target 21.6 M. The latest data show that

apart from Andhra Pradesh at 80% and Rajasthan, which have achieved substantially more than planned, no other state has achieved even 40% of the yearly target of habitation. In all, out of the 111051 habitations targeted this fiscal, only 32654 have been covered. (THE ECONOMIC TIMES 080104)

Rajasthan HC asks report on drinking water Hearing the petition seeking the irrigation water from Jawai Dam in Pali district, Rajasthan High Court has asked Jodhpur Commissioner to submit the report on the drinking water availability and asked it to review the decision on irrigation water. The HC has also asked the authorities to submit detailed information on the action plan to execute this Rs 1.53 B plan of 1999 to connect Jawai dam with pipeline. (*RAJASTHAN PATRIKA* 071103)

FLOODS

Indonesia flash floods At least 200 people have been killed in a flash flood, which swept through a resort town in one of Indonesia's biggest national parks. A river in the Gunung Leuser national park on Sumatra island burst its banks in the early hours of Nov '03 after torrential rains, sweeping away roads, bridges and budget guesthouses. (REUTERS NEWS SERVICE 051103)

Floods claims 1334 lives in 2003 According to a statement in Lok Sabha by Minister of State for water Resources, the floods, which affected over 30 M people, wrecked havoc over an area of 3.587 M Ha. 1334 people were killed and property worth over Rs 9.72 B has been damaged. (THE INDIAN EXPRESS 091203)

Mokama Tal area development scheme The Union Railway Minister has stated that the Centre has prepared comprehensive plan for the development of Mokama Tal area in Bihar. Spread from Fatuha, Mokama, Chandi up to Barahaia, the total area is over 0.109 M Ha. Under this scheme, renovation of 73 embankments (total length 485 km), hundreds of channels and bridges are proposed. The Union Ministry of Water Resources has sanctioned Rs 273.8 M for the plan. The money is also to be used for draining out water during the monsoon when the tal area gets submerged. The project that is to be completed in four years from Mar 2004 would free 18 000 Ha from water logging and benefit 1 M people, it is claimed. The state water resource dept would execute the fully centrally funded project, which would be monitored by the CWC. (*DANIK JAGRAN* 070104, THE TIMES OF INDIA, HINDUSTAN TIMES 210204)

Flood Protection Measures

- "To assist the Ganga Basin states of Bihar, Uttar Pradesh, Uttaranchal and W Bengal, a Centrally Sponsored Scheme, namely "Critical anti erosion works in Ganga Basin States" with a Central share of Rs 1.1 B, has been taken up in Jan '01, and several anti erosion works have been implemented. The scheme is being continued during X Plan with an outlay of Rs 1.34 B. Pagladiya Dam Multipurpose Project, benefiting 40 000 Ha land under irrigation and for flood control to 54 160 Ha, has been taken up by the Brahmaputra Board at an estimated cost of Rs 5.429 B, as a Central Sector Scheme in Assam. The Project estimates has been revised to Rs 10.3 B and techno-economic viability vetted by CWC. The revised estimate is under examination. The project is to be completed by 2008."
- "A Centrally Sponsored Scheme, during X Plan, for taking up critical flood control and anti-erosion schemes in Brahmaputra & Barak Valley (in the North-East), including Sikkim & N Bengal, amounting to Rs 1.67 B, with Rs 1.5 B as Central share, has been formulated by the Brahmaputra Board, in consultation with MoWR."
- "A new Central Sector Scheme has been proposed, to be taken up during the X Five Year Plan, viz. "New Schemes for Majuli Island in Assam, Dibang Project, etc". For this scheme, Rs 420 M has been earmarked for the X Plan. Central Water Commission has been providing assistance to the State govts in flood management by making on an average, 6,000 timely flood forecasts every year, that are of high accuracy. A scheme of Rs 720 M has been approved for further strengthening and modernisation of flood forecasting network." (PIB 070204)

UP embankment on Yamuna The Uttar Pradesh Govt has decided to build a 6.4 km long embankment on Yamuna River at a cost of Rs 45.1 M, for which Nabard would provide the funds. The decision has been taken due to the ongoing construction of embankment by Haryana Govt on Yamuna River near Saharanpur, due to which over 50 villages are under threat of flood. Earlier the UP Govt had opposed the Haryana move. (*HINDUSTAN* 240104)

NABARD aid for Kerala The NABARD has sanctioned Rs 25.4 M to Kerala under its RIDF IX. The fund will be utilised for implementing four drainage and flood protection projects in Kottayam, Alappuzha and Thrissur districts. On completion, these projects are expected to protect 1834 Ha from flooding and water logging related problems. (BUSINESS LINE 060304)

Brahmaputra to submerge Nagaon Massive erosion along the southern bank of the Brahmputra in its 150 km course from Hatimura to Kapilimukh in Nagaon district in Assam has placed people's lives in peril. A 125 km long embankment from the Hatimura hills to the Kukurkata hills constructed in 1971 and facing erosion for the last 10 years, is now under serious threat. Over 800 Ha of land at Hatimura, Baneshwar, Bagjhan, Kukurkata have been severely affected. Even the world famous Kaziranga National Park is facing threat. Nagaon dist administration has adopted temporary measures, like constructing bamboo structures to prevent further erosion and washing away of embankments. Two dykes protection plans of Rs 266.5

M and Rs 21 M had been drafted and sent to the state govt by concerned depts. Experts claimed that the spur of the Kaliabhomora bridge connecting Nagaon and Tezpur districts has prevented the river's natural flow, thus causing the rapid erosion. (BUSINESS LINE 051103, THE HITVADA 061103, DOWN TO EARTH 151203)

Anti Erosion Scheme for Ganga Basin The Centre had constituted A "Committee for Identification of Central Anti-erosion Scheme of Ganga Basin States" in 2003. The chairman of Ganga Flood Control Commission, chief engineer of all states and General Manager of Farakka Barrage Project were the member of the committee. Committee asked proposals according their priority from Bihar, Uttar Pradesh, W Bengal, Jharkhand and Uttaranchal. Every state studied their priority and identified eroded area. The committee submitted its report in the same year. The implementation on recommendations has to done from 2004 to 2007. According to recommendations Centre has finalised its share of Rs 1.3 B. Center's share in Bihar would be Rs 400 M and total cost in the state is estimated at Rs 530 M. (*DANIK JAGRAN* 080104)

AGRICULTURE

Panel seeks relief for drought areas The Parliamentary Standing Committee on Agriculture has asked the Centre to consider providing 100% drought assistance to states that aren't in a position to pay 25% of their share under the Sampoorna Grameen Rojgar Yojana. (THE HINDU 261203)

AP plans to increase productivity The Govt of Andhra Pradesh plans to achieve 20% increase in productivity of various crops over normal output levels or 10% over the best Rabi crop, whichever is higher, during the current season. The govt also plans to increase the area under crops from a normal of 3.38 MHa to 3.41 MHa. According to official sources, critical interventions such as optimum plant population, balanced fertilisation, correcting micro nutrient deficiency, integrated pest management and integrated waste management will be promoted on large scale for increasing productivity. (BUSINESS LINE 181103)

Toxic heavy metals through leafy vegetables In a research on heavy metal content of plant samples of sewage irrigated area of Coimbatore district, leafy vegetables were found with very high levels of heavy metal contamination including Cadmium, Zinc, Copper and lead. The study indicated that long term and indiscriminate application of raw sewage effluent or letting of sewage water directly to agricultural field without prior treatment which contains heavy metal in association with suspended solids particle may cause accumulation of toxic metals in surface and subsurface soils. (THE HINDU 061103)

Panel to review GM crop policy The Union Govt has set up a sub-committee to review the transgenic crop policy. The committee headed by Prof Sushil Kumar, Co-chairman of GEAC will finalise its recommendation after examining the report of the Dr Swaminathan Panel on Biodiversity. The GEAC had already approved 13 pharmaceutical products based on GM technology. But it had asked the Mahyco and Raasi to go for more field trials before allowing the production of GM seeds on a commercial level. The GEAC would also take in to account reports from the dept of Biotechnology and other related organisations. (BUSINESS LINE 291103)

Ganga, Kosi plains losing fertility The plains of Ganga and Koshi, that once used to produce bumper pulse crops, are now fast losing their fertility. According to an official data, the total cultivable land in the district is 0.293 M Ha of which, 24 649 Ha have been found fit for pulse cultivation. Despite the availability of better irrigation facilities, the target of land to be covered by pulses in 2003-4 has been fixed at 3500 Ha that is about 25% of the Pulse producing lands. This includes production of Arhar-1000 T, Urad-250 T and others-750 T. (THE HINDUSTAN TIMES 181103)

Schoolchildren develop cheaper organic pesticide The students of Maharana Pratap Public School have prepared Eco-friendly bio-insecticide 'CODAAK' using plants of the congress grass (Parthenium Hysterophorus), Dhatura (Datura Straonium) and Aak (Calotropis Procera). According to school science teacher, he had an idea that if some insecticide can repel insects from human skin then an insecticide from poisonous plants can be made to keep insects away from plants. His team started working on this idea and succeeded in making 'CODAAK INSECTCIDE' obtained by distillation. One liter of 'CODAAK INSECTICIDE' with 20 liter of water will make solution. According to an estimate, 15 liter of 'CODAAK INSECTCIDE' solution is enough for an acre of crop and cost would be Rs 4 only. After a field trial on cotton crop, within a fortnight the crops were found to be free from any ailment compared to other cotton plants in the field, which were affected, by white fly and bug cotton plants. (THE TRBUNE 291203)

Can India think organic? India's growing use of fertiliser, though low by Western standards, is still high enough to cause concern. On an average fertiliser consumption is 90.12 kg per Ha, figures thrown up at a seminar on organic farming and its "emerging opportunities" at Goa. Some states such as Punjab have, however, touched levels as high as 173 kg per Ha, and AP 143 kg per Ha. Dept of agriculture additional commissioner suggested that we go in for organic farming on a "large scale", particularly in regions where fertiliser consumption is still minimal, such as the northeastern states. (IANS 081103)

Organic farming yields results A campaign for promoting "organic farming" launched by the M R Morarka Rural Research Foundation since 1995 in Jhunjhunu and Sikar districts the Sekhawati region of Rajasthan has started yielding positive results with a reduction in cultivation costs and improvement in the quality of farm produce. Some of the positive results of the use of vermi-compost, for example, were lesser requirement of water for irrigation, better flavour and size of the produce, faster growth of crops and reduction in damage to crops by the insects and termite. (THE HINDU 290204)

Mizoram to ban chemical fertiliser The Mizoram will be a first state, which is officially going to adopt organic farming. Govt of Mizoram is in the process of drafting a Bill, which will ban sale of Chemical fertiliser. In Mizoram, which has potential to export fruits, vegetables and spices, the use of chemical fertiliser is among the lowest in the country. It accounts for only 4% of the North East's chemical fertiliser use. While the national average consumption is 95 kg per Ha, its only 12.78 kg per Ha in Mizoram. (THE INDIAN EXPRESS 200304)

Uttaranchal to promote organic farming The Uttaranchal Govt has set up the "Uttaranchal Organic Commodity Board" for sensitisation, training, promoting organic farming and to provide marketing support to farmers. The Chief Secretary said that state had also formed a "Seed and Organic Produce Certification Agency" for providing and maintaining certification standards in organic farming. He said, "All the State universities have been directed to dedicate their research programmes for organic agriculture and horticulture. Besides, all Govt farms in the hilly areas are being converted in to organic demonstration farms, while those in foothills and plains have been directed to begin the conversion of 50% of land for such farming. (THE HINDU 250304)

Punjab farmers caught with land in the no-till In the last sowing season, 40 000 Ha land experimented with zero-tillage in Punjab. Right now, nearly 0.25 M Ha have adopted the technology. Zero-tillage cuts out the pre-sowing labour by advocating wheat cultivation in unprepared fields. It uses a machine with tines to sharp as to penetrate five to six inches into the soil, negating the need to clear the topsoil of the debris of the previous harvest. Of the 0.25 M Ha using zero-till at the moment 5700 Ha belong to 367 farmers. The traditional method of sowing with elaborate field preparation pushes up production cost, delays wheat planting and also robs the soil of post rice harvest residual moisture. Zero-tillage, on the other hand, saves planting time, fuel water consumption, and cuts down the risk of weeds without disturbing soil composition. All in all, it slashes the production cost per acre by about Rs 880-1200 and increases yield by 10-15%. (THE INDIAN EXPRESS 050304)

PIL against GM field trial The Gene Campaign has filed a PIL in the Supreme Court on Jan7 '04, seeking to put a stop to trials and commercialisation of GM crops till a sound regulatory monitoring system is put in place. (THE TIMES OF INDIA 090104)

WB funds for Assam farming The WB has sanctioned Rs 8.36 B to the Assam govt under the Agriculture Competitiveness Project. (THE INDIAN EXPRESS 060204)

ADB loan for J&K The ADB is extending an emergency loan of $350 M for post-conflict infrastructure development for the period June 04 to Dec '07. Besides the emergency loan, ADB is considering regular loan for upgradation of facilities in power generation, environment conservation and social services. (DAILY EXCELSIOR 130104)

Programme for Agri-Infrastrucutral Facilities The Center has announced a Rs 500 B programme to be spread over three years, will address issues like agri-infrastructural facilities, wasteland development, minor irrigation, functioning and viability of cooperatives, grading, certification, storage of agro-products, their processing, cold chains and modern abattoirs. Under the programme, to be operated by the NABARD, loans will be made available to borrowers at low competitive rates. (PIB PR 070204)

Bengal focus on crop diversification The W Bengal has focused the spotlight on wheat, oilseed, pulses and other foodgrains. The Govt is looking forward to make private sector an integral part of its programme for crop diversification. The State Finance Minister said that W Bengal produced only 14% of the requirement of pulses, 44% of wheat and 32% of oilseed. Out of a total output of 16.2 MT in current year rice accounted for 14.75 MT. While the state govt run agricultural farms were revitalised to produce the seeds and other bio inputs required for such crop diversification, efforts have been initiated to encourage 'private initiatives' in these spheres. (THE HINDU 170304)

Impact of climate change on farming The Network on Climate Change and Indian Agriculture comprising 14 premier agricultural research institutes, will launch a nationwide study of impact of global environmental changes of different areas in agricultural production and prepare strategies for minimising the damage. The project under the 10th Plan will be led by the Central Research Institute for Dryland Agriculture, a constituent of ICAR. Some ICAR institutes, including IARI New Delhi, CPCRI Kerala, National Dairy Research Institute Haryana, and five agricultural Universities are part of the network. The Rs 100 M study will come out with an Indian National Agricultural Research System that would provide a detailed understanding of the impact of environmental changes and suggest ways to gear up for the situation. (BUSINESS LINE 020304)

Green Revolution brings poverty to soils The dirty side of the Green Revolution is that soils are loosing their nutrients due to heavy use of fertiliser, according to a document from Ministry of Agriculture. Generally about 17 elements are required for nutrition of soil. Some important nutritious elements are Nitrogen, Phosphorous, Potassium, Calcium, Magnesium and Sulphur. According to experts due to scarcity of Sulphur in soils, the production of oilseeds has been affected. Over 130 districts in the country are suffering from scarcity of sulphur. Soils of Bihar, Punjab and Haryana are facing iron scarcity. The production of foodgrains has been raised from 50.82 MT to 211.20 MT in 2002-3. However, the use of fertiliser (Nitrogen, Phosphorus & Potassium) has been raised from 69 000 T in 1950-1 to 7.4 MT in 2002-3. The per Ha use of fertiliser has been raised from 0.5 kg to 91 kg. The use of fertiliser in Arunachal Pradesh is 3.5 kg per Ha, while in Punjab it is 171 kg per Ha. The use of fertiliser in 19 districts is over 200 kg per Ha, in 110 districts 100 to 200 kg per Ha. The country is using pesticides at over 47000 T every year. (*RASHTRIYA SAHARA* 300304, 310304)

FOODGRAINS MANAGEMENT

Fall in net availability of foodgrains The per capita availability of foodgrains fell from 177 kg in the early 1990s to an all time low of 151.06 kg in 2000-1. According to the latest report of the State of Food Insecurity in the World of the UN's FAO, out of 842 M undernourished people in the world in 1999-2000, about 214 M, over 25%, were in India. There was no crisis of overproduction but people who needed the food did not have the purchasing power. (THE HINDU 110304)

CACP support price The Agriculture Ministry has accepted the recommendation of CACP on support prices for wheat, oilseeds and pulses. The CACP had recommended that the one time drought relief of Rs 10 given last time be clubbed with the support price of Rs Rs 6.2 per kg and set the MSP this Rabi at Rs 6.3 per kg for wheat. The CACP recommendations have yet to be approved by the CCEA before being implemented during Rabi 2003-4 procurement, giving farmers the same price as last year. The CACP also recommended that the support price for pulses and oilseeds this Rabi go up in the Rs 1.8-2.0 range per kg. Support price for gram among pulses, was set at Rs 14 per kg against the current Rs 12.2 per kg. Support price for masoor rules at Rs 13.2 per kg. (THE ECONOMIC TIMES 011103)

NHRC blamed UP govt as kids die of hunger The NHRC rapped the UP govt for the death due to starvation of at least 18 adivasi children of the Ghasia community over the past 11 months. The specter of poverty among Ghasia adivasi living in village Naibasti, Rope in Robertsganj tehsil of Sonebhadra, was brought up before NHRC by a group of citizens. The Ghasias were hounded out of their ancestral villages with the nationalisation of forests, the petition said, which forced them to migrate from their villages to Naibasti, some 8 km from the main township. The Ghasias had been deprived of their land holdings and were forced to survive on poor quality of rice, wild mushrooms and grass. Sporadic reports of the deaths brought about an independent probe by district officials. The probe confirmed starvation. A team of doctors candidly reported that the deaths among the community were the result of malnutrition. (THE INDIAN EXPRESS 051103)

Farmer ends life Unable to cope with mounting debts, a cotton farmer, Yenna Narsi Reddy of Kodandapur village in Nalgonda mandal committed suicide. He had borrowed more than Rs 0.1 M and went for cotton crop but incurred loss. (THE HINDU 291103)

Starvation deaths in Bengal Over 300 persons died due to starvation in Kathalguri tea estate village in Jalpaiguri in W Bengal during the past one year, claimed the state Agriculture minister. He also alleged neither the Centre nor the state govt had done anything for reopening the closed gardens and rehabilitating the distressed workers. (THE TRIBUNE 241103)

FCI plans to tap capital market In a move to control the debt servicing costs, the Food Corp of India plans to borrow from the capital market and avail of transit insurance for its stocks. (THE TRIBUNE 241103)

Survey reveals stink in PDS According to a survey of BPL families and PDS shops in E Delhi by Parivartan, over 70% of subsidised foodgrains do not reach the desperately poor. According to the survey documents "not a single family has got the full amount of ration. Only 23% got something, that too less than the prescribed amount and at a higher price. The parliamentary standing Committee chairman for food and civil supplies terms the PDS a huge scandal. He said: "65% of the 270 B food subsidy goes to bureaucrats salary, establishment costs, storage, traders and exporters. The remaining 35% goes by way of diversion and pilferage." (THE TIMES OF INDIA 311203)

Centre, states differ on agri-marketing The Union Agriculture Minister has said that there must be promotion of competitive agricultural markets in private and corporate sector for establishment of direct purchase centers and farmers' markets. He said states need to amend respective agricultural produce marketing committee Act to permit any organisation or corporate body to establish integrated facility for marketing of agricultural produce. States felt that allowing private agri-mandis to come up would hit their revenues and lead to a vice-like grip of the MNC on the sector. States like Punjab felt that the mandi taxes were a major source of revenue of around Rs 4 B annually, which is used for development activity and the state would not like to forgo the amount.

➢ **Kisan Panchayat opposed to private mandis** The Coordination Committee of the National Kisan Panchayat has opposed the proposed reforms in agriculture marketing proposed by the Centre saying such move will "do more damage to the farming sector, already reeling under a terrible socio-economic crisis". The memorandum said the move was a recipe for the elimination of small and marginal farmers forming 80% of the agriculture workforce and is meant to pave the way for the smooth entry of the private sector and ensure that India slips back into the dark days of ship-to-mouth existence." The memorandum says the move to give the direct access to multinationals and private sector in agriculture marketing and subsequent withdrawal of the govt will "penalise" farmers for the inefficiency of Food Corp and various govt agencies. At a time when over 16000 farmers had committed suicide, the govt's intention of introducing future trading in rice, wheat and other commodities shows "complete bankruptcy". (THE HINDU 070104, THE TRIBUNE 080104)

Laxity in fixing safety norms for food articles The Centre for Science and Environment has alleged laxity in fixing pesticide safety standards for food articles. The report said that the research by the CSE had revealed pesticide residues in food articles exceeding the safety limits by 100% to 6000% in different cases. This was mainly because the regulation on the pesticides residues in the country was not based on the concept of acceptable daily intake, the most rational method. However, the regulators, while registering new pesticides, were not ensuring that the maximum residue levels that could be allowed in different food commodities remained below the safety threshold. The CSE report said, "Even the setting of MRL at the time of registration is not compulsory. Out of the 180 odd pesticides registered, MRLs have been set for only 71 – about 40%". The pesticide residue-monitoring programme was under the Indian Agriculture Research Institute and the agency had found that in about 20% of the samples, the residue level exceeded the standards. IARI treated this as a "classified secret" and no report on this being published since 1999. (THE HINDU 100104)

Foodgrains export opened to private sector The Union Cabinet approved the opening up of all sectors in foodgrain export to the private sector including procurement from the market. However, an inter-ministerial panel will monitor the buffer stock levels and direct policy in such a way that food security interests are not harmed. It is claimed that apart from farmers, large constituencies such as the special category states, street vendors, fishermen were also the beneficiaries of this decision. A key decision was to enlarge the scope and content of the Accelerated Irrigation Benefits Programme by introducing a grant component and slashing the interest rate from the existing 10.5% to 6.5%. NABARD will now lend at the new rates even for extension, modernisation and modification in major & minor projects. The grant component of the assistance will continue to be 30% for general category but rise to 90% for special category states. Setting up of the first Farmers Commission was announced. (THE ECONOMIC TIMES 210104)

FCI procures record rice, paddy in Bihar The FCI has procured record paddy and rice in Bihar. During the kharif season of 2003-4, the corp. spent Rs 950 M for the procurement 1.82 MT of paddy and rice. During the last kharif season, the FCI was able to lift just over 60 000 T paddy. (THE ECONOMIC TIMES 160304)

CWC proposal for grain handling The Central Warehousing Corp has proposed to take up a Rs 3 B pilot project for bulk handling and movement of foodgrains in Punjab, which may set a new trend. The main objective of this project is to demonstrate the economic edge that bulk handling of foodgrains has over the existing conventional handling method, which is resulting in significant losses. The project envisages setting up bulk handling facility at a production centre at Nabha in Punjab, which will have a complex of special silos of 0.3 MT capacity. CWC has proposed this project even while it is in the race for the Rs 15 B project of FCI to set up bulk handling facilities for foodgrains on BOT basis at nine location across the country, including two at production centers in Punjab and one each in Mumbai, Bangalore, Chennai, Coimbatore and Kolkata. (BUSINESS LINE 240304)

FISHERIES

Nepal prioritises fish species protection The govt of Nepal is in the process of prioritising hatcheries for fish diversity preservation, while constructing dams vital for HEPs to maintain fish bio-diversity. The decision came following many complaints regarding the loss of fish bio-diversity in rivers where large-scale HEPs are currently in operation, i.e. at Kulekhani, Gandaki, Bhotekoshi and Trishuli. To be co-ordinated jointly by the Ministry for Agriculture and Water Resources, the new resolution will look into the building of reservoirs and fish hatcheries around dam sites. A part of the resource-generated income will be used for this purpose. At the Kaligandaki HEP, a fish hatchery of 0.4 Ha has been built jointly by Agriculture Research Council and Electricity Authority. The river has 57 different species of fish of the total 184 species found in Nepal. (KATHMANDU POST 121103)

HP Fish harvest According to the latest statistics 7363 T of fish harvested annually fetch Himachal Pradesh a revenue of over Rs 50 M besides generating direct and indirect employment. The Gobind Sagar reservoir in Bilaspur dist has already attained the distinction of producing the highest per Ha fish catch of 110 - 115 kg. Two reservoirs account for a yield of 1600 T annually of fish catch with a commercial value of Rs 40 M. Out of

this commercial value the state earns Rs 7 M as revenue as license fee, royalty and compensation. Regarding the 'destruction' of the trout variety efforts are underway to save the trout, which is a coldwater fish. (DAILY EXCELSIOR 121103)

Fish death in Sutlej Fishermen from Nangal area of Punjab have reported that death of seed fish in about 2 km stretch of the Sutlej river near Bela Dhiani village, which is an indicator of pollution in the river. The seed fish might have perished due to reduced content of dissolved oxygen in the river waters. Industrial effluents of NFL and others enters the river near the area is the main cause of the river pollution. Earlier, fish perished on a large scale in the same area in Dec 2001. The inquiry ordered by Chandigarh High Court indicated the NFL authorities responsible for fish death. The matter is still pending before the HC.

- Ammonia caused death of fish in Sutlej, said preliminary study of the affected portion of the river by PPCB. Death of fish seemed to have been caused due to industrial leak. The team collected water sample from points upstream as well as the downstream NFL dykes, at the points where NFL and PACL effluents enter the Sutlej water in Nangal and the groundwater of the surrounding villages. (THE TRIBUNE 071103, 081103)

CAG flays Bihar scheme The Comptroller and Auditor-General of India has indicated the Bihar govt for lack of monitoring and wasteful expenditure in implementation of fisheries development schemes. (BUSINESS STANDARD 250304)

FORESTS

Rs 1 B package for degraded catchments The Centre has approved a special package of Rs 1 B for the restoration of the degraded catchments of the Jhelum and Chenab basins in J & K. The project will last five years. MoEF said of this a sum of Rs 190 M would be utilised this year and the Centre had released Rs 120 M for the afforestation of 5985 Ha. (THE TRIBUNE 081103)

Forest clearance rules modified The Centre has issued a fresh set of guidelines for conservation of forest villages into revenue villages. The Environment & Forest Minister has said that ownership rights would be extended to all tribals who have been living on the forestland prior to 1993. Mr Bais said that regional empowered committees would be set up in all six regional offices to consider and decide on proposals recommended by the state govts. The process of granting clearance under the Forest Conservation Rules has been made time bound with accountability fixed at all levels. The state govts will have up to 210 days from receipt of the proposal to decide whether or not to recommend the proposal for forestry clearance to the Central Govt. Only cases above 40 Ha shall be submitted to the MoEF. (PIB 060204, BUSINESS LINE 090204)

Conversion of forest villages to revenue villages One of the important decisions taken by the Ministry relates to 'in principle' approval of conversion of all the 302 forest villages in 7 districts of Chhattisgarh to revenue villages. These districts are Raipur (50 villages), Dhamtari (59 villages), Bilaspur (20 villages), Dantebada (85 villages), Durg (16 villages) Bastar (56 villages), Kawardha (7 villages) and Kanker (9 village). Ministry has already taken a decision to convert 311 villages in MP. (PIB 060204)

HP to have new forest policy The Himachal Pradesh govt is contemplating formulation of a new Forest Policy with a view to conserve state's forest wealth. To achieve the goal set in the national and State forest policy, the Dept has been raising plantation over 25 000 – 30 000 Ha annually. Apart from afforestation, soil conservation works in the plantation area are also being carried out. Catchment Area Treatment plan has also been prepared. The state has recorded an increase of 561 km^2 of forest cover as assessed in the State of Forest report, 1999. The state has also achieved an increase of 859 km^2 as said in the State of Forest Report 2001. The increase is about 3.5% of the total geographical area. (THE HINDU 090204)

Forest Clearance for various projects

- 'Human river project' in Chandrapur Dist of Maharashtra involving diversion of 1925.55 Ha of forestland has been approved. This project is to irrigate 46 000 ha in 160 villages of Chandrapur District.
- Diversion of 29.942 ha of forestland for laying of 220 KV transmission line from Paikara Hydro Electric Project to Arasur Sub-station in Tamil Nadu.
- The Centre gave environmental clearance to a proposal for diversion of 304 ha of forest for Sanjay Sagar (Wah) Irrigation Project in Dist Vidisha (MP)
- The Indira Sagar project involved submergence of 41000 Ha of forestland for 1000 MW and 5800 Ha for 500 MW Omkareshwar HEP was approved previously.
- Ministry has approved diversion of 191.864 Ha of forestland for construction of 400 KV 2 Double Circuit Indira Sagar - Indore Transmission Line in M.P. This is for transmission of 250 MW power from Indira Sagar.
- Ministry has accorded approval to the diversion of 7600 ha of forestland for settlement of the landless tribals in Kerala and in lieu over 10,000 of private land has been brought under Reserve Forest. (PIB 060204)

CAG pulls the HP forest dept The CAG report for 2002-03 has pointed out massive discrepancies in the non-recoveries, short recoveries and other losses of revenue to the Dept of Forest in HP. Irregularities were detected in 151 cases and the dept incurred a loss of Rs 251.9 M due to non-recoveries under the various heads. The Divisional Forest Officers of 11 divisions issued passes for intra-State export of 20 862.95 T of Khair wood without levying export permit. This resulted in non-realisation of export fee of Rs 43.9 M. The

report says that six divisional officers of the Dept could not hand over 29 lots of 8997 trees containing 23 042.78 CM standing volume of timber for sale. The delay resulted in a loss of Rs 11.4 M. The delayed sales of extracted bamboo and less-yield of bamboo had led to a short fall in revenue of Rs 0.917 M. The Dept also failed to recover Rs 8.412 M from the SEB for supplying them 11425 electric poles of deodar trees. (THE HINDU 030304)

SUGAR

Southern mills seek raising of ethanol cap Sugar units in Karnataka have sought increased blending of ethanol with petrol to tide over the production crisis in the sugar mills. At present, a 5% cap has been placed on the blending of ethanol with petrol. The Karnataka chapter of the S Indian Sugar Mills Association wants this hike to be 10% and has also urged the govt to permit the blending of ethanol with diesel. According to the Sisma, the current annual offtake of ethanol in the state is around 33000 kl. (THE ECONOMIC TIMES 041103)

Haryana sugarcane development plan The Haryana govt has formulated an Rs 162.8 M Integrated Sugarcane Development Programme for all the 12 cooperative sugar mills of the state for the next financial year to reduce the cost of cultivation and enhance farmer's income. According to official sources, out of this amount, Rs 20.5 M would be subsidy and the rest would be given as loan by the cooperative sugar mills to farmers. (THE HINDU 081103)

Sugar mills show higher stocks for boosting FSQ According to an official inquiry, actual sugar stocks in the country are 2 MT lower than estimated because mills were holding these quantities only on paper. Some of the biggest sugar mills in UP, Tamil Nadu, Karnataka and Maharashtra have been enjoying an edge over others in the open market because on govt records they are holding stocks between 40% - 230% higher than what they actual posses. The discrepancy has implications for the govt-controlled free sale quota system because a mill is allowed to sell not more than 5% of its stocks in the open market every month. Consequently, a mill, which had on paper an extra 0.1 MT in Aug end, received an undeserved free sale quota of about 5000 T in Sept and 7000 T in Oct. The discrepancy came to light after the sugar directorate suspected that the some mills may have sold sugar without telling the govt and could thus be availing of a doubt benefit. The mills were then asked to submit an excise certificate of the stocks they were holding as on Aug 31. A comparison of the excise certified stocks with each mills as on Aug 31 and the previous date of stocks as on the same date with the dept shows that there is a discrepancy of 2 MT, which is too large to be a simple counting error. Mills appear to be thereby flouting the EC Act. (THE ECONOMIC TIMES 131103)

Expert group on pricing policy Amidst large-scale wrangling between millers, farmers and govts over sugarcane prices, the Centre has constituted an expert group to work on a pricing policy. The six-member group to be headed by the chairman, Commission on Agriculture Costs and Prices will suggest changes in the cane pricing regime. (THE ECONOMIC TIMES 191103)

Sugar exports up The sugar export for the year Oct 1, '02-Sept 30, '03 totaled 1.76 MT, up 63% from 1.08 MT in the previous year, according to an Indian Sugar Mills Association official. Sugar production totalled 20.1 MT in the year ended Sept 30, '03 compared with 18.5 MT in the previous year. (BUSINESS LINE 18103)

SMP for sugarcane The Union Food Ministry notified the new support price of Rs 730 per T for 2003-4. The Central Govt decided to fix the SMP of sugarcane at Rs 730 per T linked to a basic recovery rate of 8.5% subject to an additional Rs 0.85 for every 0.1% increase in recovery going by the CACP recommendation.

- **Short of expectation** The Haryana Govt, in a message to the Commission for Agriculture Cost and Price, had said that the cost of production of the one T sugarcane came to about Rs 980 in Haryana hence, the SMP should be around Rs 1100 per T. The Central Govt has increased the SMP by Rs 90 per T from last year's price. This is far less than the Rs 200 per T increase wanted by the state govt.
- **Delhi HC order** The Delhi High Court ordered Uttar Pradesh sugar mill owners on March 18 '04 to pay the full statutory minimum prices of Rs 730 per T fixed by the Centre for 2003-4. HC said the mill owners would pay the cane growers the differential amount of Rs 35 per T between the SMPs for 2002-3 and 2003-4 subject to the outcome of the petition. The UP Sugar Mills Association had moved the court for modification of the Jan 28 order when the Delhi HC had given a temporary relief to the sugar factories by putting on hold the hiked SMP of Rs 730 per T for 2003-4, till a judgement is pronounced on a petition of the Association. (THE TRIBUNE 040104, THE ECONOMIC TIMES 170104, 190304)

Mills favour raw sugar imports by actual users The National Federation of Cooperative Sugar Factories Ltd has favoured duty free import of raw sugar, provided it is undertaken by the mills themselves under the actual user condition. Both raw as well as white sugar now attract a basic customs duty of 60% and a countervailing duty of Rs 850 per T, making imports unattractive in the normal course. But these duties are not applicable on raw sugar import under the Advance License or duty free Replenishment certificate scheme. Under the AL scheme, raw sugar imports are subject to the actual user condition, with the license holders also obliged to export white sugar reprocessed from the import material. Entry 52 of the standard input-output norm permits duty free imports of 1.05 T of raw sugar against a corresponding future obligation to export one

T of white sugar. On the other hand, the DFRC scheme allows imports on a post facto basis. The DFRC license, which has normally validity period of 18 months, is transferable and can be sold to third parties, including traders, for a consideration. (BUSINESS LINE 250304)

POWER SECTOR

Paying capacity petition before of MPERC On March 4 '04, hundreds of farmers associated with the Nimad Malwa Kisan Mazdoor Sangathan and the "Jan Sangharsh Morcha" marched in Bhopal against the absurdly high power tariffs for farmers that is leading to the pauperization of farmers. They filed a petition at the Madhya Pradesh State Regulatory Commission asking for slashing of tariff hikes on grounds of a total lack of paying capacity by the farmers. The Regulatory Commission accepted the petition and held an hour long full hearing immediately. The Nimad Malwa Kisan Mazdoor Sangathan of MP and the Krishna Bharadwaj Memorial Trust, New Delhi had undertaken an exhaustive study of the current economic situation of farmers in MP. The study included a wide range of farmers from small and marginal farmers to medium and large farmers. The study found that as a result of the WTO regime and removal of quantitative restrictions on imports, the farmers are facing a deep "scissors" crisis with increasing input costs on one hand and falling output and commodity prices on the other. The study revealed the farmers of all categories are facing huge losses in agriculture and are deep in debt. Small and marginal farmers have to pay interest of an average of around Rs 2686 per acre at interest rates averaging 24% where as even large farmers were having to pay almost Rs 1254 per acre at interest rates averaging 14%. The marginal farmers were facing a stark deficit of Rs 2216 per acre without imputing family labour costs and a deficit of Rs 7360 per acre after imputing family labor costs. Large & medium farmers were also adversely affected and even large farmers earned no profits facing an average deficit of Rs 70 per acre, even without imputing family labor. The electricity cost was the second largest cost of the farmers after labour cost, averaging 14% of total outlay. The huge electricity tariff hikes in the last two years at the behest of the ADB were proving to be the last straw. Even according to the White Paper of the Govt of MP in June '03, 0.6 M connections of farmers out of a total of 1.2 M connections had been severed because of non-payment. The petition to the MPERC pointed out that the Section 26(5) of the Energy Reforms Act, 2000 stipulates that the paying capacity of the consumers has to be considered at the time of determining tariffs. (Nimad Malwa Kisan Mazdoor Sangathan PR 060304)

WB threat to Orissa In an ultimatum to the Orissa Govt, the WB has said that it will not process the Rs 50 B structural adjustment loan till it addressed the WB's concern over outstanding problems in the power sector. The WB has made it clear that as power sector reforms would impact the entire economy, it will process OERL only after the successful implementation of power sector reforms. The WB has sanctioned $350 M for the power sector reforms, which have gone from bad to worse even after 7 years. (THE INDIAN EXPRESS 181203)

Power Ministry moots sops to mega projects The Power Ministry has recommended a comprehensive change in the mega power policy. The ministry has suggested the minimum threshold level to be 250 MW and sought complete exemption of custom duty. It has also called for deleting the price preference provided to domestic bidders. The policy to be renamed as 'Large Size Power Projects Policy' also includes a comprehensive concession for associated transmission systems. A project may be required to sell at least 25% of its generation outside the state in order to be declared as inter-state to qualify for mega status. With regards to 250-500 MW projects, the mandatory condition of inter-state sale of power may be deleted. This draft note has been sent for cabinet approval.

- **FM rejects the proposal** The Finance Ministry has shot down the power ministry's proposal to grant mega project status to projects exceeding 250 MW. The finance ministry rejected the argument that giving concessions to projects above 1000 MW would make smaller projects uncompetitive. Reducing the threshold from 1000 MW to 250 MW would defeat the very definition of mega projects joint secretary Dept of Economic Affairs has said in a letter to power secretary. (THE HINDUSTAN TIMES 131103, 221203)

FM against payment security to generators The Finance Ministry has strongly opposed the Power Ministry's proposal to secure payment for power sold by new private power projects to bankrupt SEBs. According to the proposal, the power produced by the private players will be bought by the public sector power undertakings on a committed basis. The Finance Ministry has written a letter to Power Ministry that the proposal as one having "explicit and implicit sovereign guarantees of payment" and has urged that it "goes against the policy of not providing any sovereign guarantees for private power generation projects." The power ministry has argued in the cabinet note that given the weak SEB position, "there is danger that a part of the target of 7121 MW expected from the private sector may not materialise during the 10th Plan. The Finance Ministry has argued, "IPPs should base their projects on the power sector reforms and should bear the normal commercial and revenue risks attendant". It has further added "The proposal seeks to tackle the supply side problem while the real problem is at the distribution end. Hence, instead of forcing the pace for generating more power, the appropriate course of the action would be to focus on distribution reforms, which in turn will automatically result in augmentation in power supply." (BUSINESS LINE 060204)

No private power for central PSUs The power ministry has dropped a proposal, which seeks to allow private projects to sell power to central power utilities like NTPC and NHPC, following opposition from the finance ministry and the Planning Commission. To attract private investment in big power projects, the power ministry had proposed that the power generated by new IPPs with over 1000 MW capacity, be bought directly by the NTPC and the NHPC. According to the power ministry's proposal, private developers had been given the option of setting up their projects on a build-own-operate-transfer basis. If power from the project was to be bought by a central utility, the promoters of the projects were required to transfer the ownership of the plant to the central utility after the concession period of 20-25 years. The proposal was mooted to ensure the bankability of IPPs. (BUSINESS STANDARD 220304)

Lok Sabha passes Electricity Bill The Lok Sabha passed three amendments to the Electricity Act '03. The amendment seeks to dilute the anti-theft provisions to avert misuse, set a 3-5 years time frame for introduction of the Open Access' scheme and clip the powers of the Appellate Courts to ensure greater autonomy for state power regulators. The central theme of the new Act is the Open Access system, under which a group of consumers can get together and exercise their choice to purchase power either directly from the generation company or intermediaries such as traders or distribution companies. Currently, bulk consumers cannot choose their power sources and are forced to purchase it from the state electricity board or its successor distribution licensees. (BUSINESS LINE 191203)

CERC okays inter-state electricity transmission The CERC has issued final orders for inter-state transmission, allowing open access to generation and distribution companies and captive power plants to use existing lines or put up separate infrastructure to transmit power from one state to another. According to the policy, customers have been divided into two categories- long term and short-term customers. CERC has defined long-terms customers as those intending to access inter-state transmission links for minimum period of 25 years treating beneficiaries of regional transmission system as long term ones. All others have been designated, as short-term customers whose access shall not exceed one year at a time. Long-term customers have been prioritised at a higher level compared to short-term customers. CERC also designated Central Transmission Utility as the nodal agency for long-term transmission access while regional load dispatch centers have been have been assigned the task for short-term transmission. (THE ECONOMIC TIMES 030204)

New guidelines for power trading The Central Electricity Regulatory Commission issued draft regulations for inter-state power trading, which specify the requirements of being an electricity trader including technical norms, capital adequacy and credit worthiness. The guidelines envisage that the trading will initially be carried out only through bilateral contracts between generators and traders on the one hand and traders and licensees on the other hand. The CERC has divided the trading licensees, valid for 25 years, into six categories based on capital adequacy and credit worthiness. The net worth ranges from Rs 20 M - Rs 250 M, while the annual license fee ranges from Rs 0.1 M - 1.5 M. (THEW HINDU, THE INDIAN EXPRESS 111203)

Draft regulation for power tariffs The CERC issued a draft regulation on the terms and conditions for tariff for inter-state generation and transmission. It has suggested a change in debt-equity structure of power projects for determining tariffs. For power projects declared operational after April '04, a debt-equity structure of 70:30 will be considered instead of the prevailing 50:50. In the case of projects with over 30% equity, the balance amount will be considered as a loan while determining tariffs. The assured return on equity has been reduced to 14% post tax instead of the prevailing 16%. In case of IPPs, the CERC has made a provision that in case the govt is able to provide the same payment security mechanism to the IPPs, their return on equity can also be brought down to 14%. In the case of run-of-river HEP, the capacity index has been raised from 85%to 90%. For thermal projects, the plant load factor has been raised to 80% from existing 77%. (POWER LINE 0104)

Funds for R&M The Union Power Ministry has set aside Rs 100 B to provide soft loans for renovation and upgradation of power plants. This is part of Govt initiative to help power plants increase generation through its accelerated generation and supply programme. Today 106 power plants are operating at plant load factors of 30-50 %. The average plant load factor of Indian Power Plants was 73% in spite of these 106 under performing projects. (BUSINESS LINE 131103)

Rural Electrification lowest in the east According to the Union Power Ministry, the access of electricity in villages is poorest in the E and NE and in Uttar Pradesh. Bihar and Jharkhand had the highest percentage of unelectrified villages – 94.9% and 90% respectively – Orissa, Assam, too figured high on the list. In W Bengal, UP and Meghalaya the figures are 79.7%, 80.2% and 69.7%. The percentage of unelectrified villages for the whole country is 56.5%. As per the 2001 census rural population accounts for 72% of the total population. (BUSINESS LINE 121203)

Speed of rural electrification down During the 9th plan (1997-2002) 11200 village have been electrified, while during 8th plan 18500 and during the 6th plan 120000 village were electrified. (*HINDUSTAN* 211203)

States oppose report on power tariffs The provisions of the N K Singh Task force report on the power sector have met with stiff resistance from state govts and power sector regulatory bodies. "Task force report appears to be a watered down version of govt's draft tariff policy circulated in Aug '03, with specific financial norms spelt out only in case of return on equity, debt-equity ratio of utilities and depreciation norms stipulated in the case of almost all parameters in the Center's earlier draft. By specifying the financial norms, the policy steps into the regulatory domain," an official with a power regulatory commission said. According to state govt officials, if the depreciation norms for power projects are realigned with the provisions of the Companies Act 1956, as suggested by the Task Force, the cost of power for the consumer can go up. The companies Act provides for a depreciation of 5.2%, against a rate of 3.5% allowed to utilities at present. Since the incidence of depreciation is pass through, any increase in the rate will have to be borne by the consumer. (BUSINESS STANDARD 070204)

Open access at higher threshold The N K Singh led task force on the power sector has recommended that open access of power to retail consumers be initiated at a higher threshold of over 1 MW in less than 5 years. With open access to consumers in place, they will be able to source power from the utility of their choice. The Task Force has also recommended that the Centre, in consultation with the states and the electricity regulatory commission, needs to evolve a common power market design within a year. In an eight-point strategy, the Task force has suggested a periodical review of the rate of returns in line with capital market conditions. (BUSINESS STANDARD 070204)

Share cost of conservation KSEB urges Centre The Kerala SEB has suggested creation of an 'Opportunity Denial Compensation Fund' by the Centre to compensate the states that 'sacrifices' their development interests for the sake of conservation. The KSEB made this suggestion to the 12th finance commission. Referring to shelving of all the hydel proposals following objections from the Union MoEF, the KSEB said that it is not averse to conserving environment. We only wonder whether it should be entirely at our expanse. It is possible for the State to generate 4333 MW of power from its 44 rivers. Kerala has not been able to harness more than 1834 MW so far. Since 1982, the Union Govt on the ecological grounds has denied all the hydel projects proposed by the state including the Silent Valley and the Pooyamkutty project (THE HINDU 241203)

KSEB to be bifurcated The Power Minister of Kerala said the KSEB would be turned into two companies, one exclusively for power transmission and the other for power generation and distribution, both in public sector. (THE HINDU 090104)

Punjab power board to be split The empowered committee for accelerated power sector development in Punjab approved the unbundling and corporatisation of the PSEB as mandated by the Electricity Act, 2003. The PSEB would be reorganised into generation, transmission & distribution companies. It was also decided to have a holding company to coordinate generation and distribution companies in the transition period. A holding company would be set up as the successor to the PSEB in relation to all assets and liabilities and functions other than those of transmission. (BUSINESS STANDARD 301203)

Corporatisation of WBSEB on cards The W Bengal Rural energy Development Corp is proposed to be wound up as per the recommendations of the committee set up on the restructuring of the WBSEB. The committee, which submitted its report to the state govt, was set up as after the Electricity Act, 2003. It has also suggested the setting up of two distinct corporate entities out of the present WBSEB. The committee noted, "Even the timely completion of different projects for attracting cheaper fund is difficult with the present structure of the WBSEB". The committee also suggested that the distribution wing of the SEB would have to be corporatised as WB Electricity Distribution Corp. Under this entity there would be four autonomous strategic business units. The hydel power operations of the WBSEB will be under another SBU under the distribution company. A separate WB Electricity Transmission Corp on will be set up with two SBUs. (BUSINESS LINE 201203)

Tata-PGCIL gets first power supply license As the first private-public collaboration in power transmission, Power Grid Corp and Tata Power have joined hands to set up 1200 km Rs 12 B power transmission line from Siliguri in W Bengal to Mandoala in UP. Power Links is expected to complete the project in 36 months. W Bengal, Bihar, Jharkhand and Sikkim in the East and Haryana, Punjab, Rajasthan, UP, J&K and Delhi in north would benefit. (THE ECONOMIC TIMES 141103)

Chhattisgarh plans The Chhattisgarh State Electricity Board is planning to add 2000 MW power generation capacity in four years. At present, state generates 1360 MW. All the projects will be coal-based because the state has rich deposits of coal. The board will fund the capacity addition programme through Rs 12.7 B of fixed deposits, securitising receivables of Rs 18 B and a Rs 30 B loan from the REC. (BUSINESS STANDARD 141103)

NTPC, BHEL jointly bid for Oman project The NTPC and BHEL have joined hands to bid for the Oman govt's $1 B Sohar Water and power Project. The project involves a desalination plant of 60 MGD and a 450 MW power plant on BOO basis. (THE ECONOMIC TIMES 071103)

CCEA approves PGCIL proposal The Cabinet Committee on Economic Affairs has approved a PGCIL

proposal for Rs 16.73 B Power evacuation system for NTPC's 1980 MW Seepat Power project to evacuate power to the western regions. (POWER LINE 1203)

DERC finds meters faulty in Delhi The Delhi Electricity Regulatory Commission has checked 15 meters in some colonies and found that four of them were running fast. The DERC will ask the private firms to replace these meters and refund or adjust the excess payment made by the consumers. The DERC detected that the 40000 meters made by a particular firm were defective and asked the private firms not to install them. (THE HINDUSTAN TIMES 061103)

BSES to review Hirma project The Reliance owned BSES Ltd has decided to revive the $4 B 3960 MW Hirma TPS in Orissa that has been in a limbo for the last two years. According to the promoters, the Electricity Act 2003 has thrown up opportunities to get secure credible consumers and, in turn, payment from the power purchasers – the very reason why the project did not make progress earlier. The new Act allows for power generation companies to directly tie up with distribution areas, subject to the regulatory clearance. The project was conceived in 1994 by a company then called Consolidated Electric Power Asia. Later, Reliance took a 50% stake in the company. Later Cepa renamed SEAP and was taken over by Mirant Corp, US. In late 2001, the company withdrew from the project leaving Reliance as the lone promoter. Hirma was the first inter-state project to have its power tariff approved by CERC. (BUSINESS LINE 080104)

States reduce power losses Twelve states, lead by Tamil Nadu, Andhra Pradesh, Gujarat and Maharashtra claim to have reduced losses by Rs 118.17 B over last two years. One factor that links these is that they have constituted State Electricity Regulatory Commissions. Tamil Nadu claims to have reduced losses by Rs 31.22 B during 2001-2 & 2002-3. Maharashtra comes next with a cumulative loss reduction of Rs 22.13 B. Gujarat has projected a cumulative loss reduction of Rs 18.42 B and AP at Rs 11.23 B. (BUSINESS STANDARD 230104)

Suggestion to split NTPC opposed The N K Singh committee on power reforms has recommended that the NTPC be carved into smaller components, each covering a region of India. The power secretary as a member of the committee has assented the proposal. NTPC is India's largest power utility with an installed capacity of 21749 MW (19% of India's installed capacity) contributing 26% of total generation in the country. NTPC chairman and managing director has called for a review of its recommendation. He wrote that NTPC has been given a mandate by the Centre for a capacity addition of 20000 MW of the total 100000 MW to be added from various sources by 2012. NTPC would need capital investment of over Rs 900 B for such a massive capacity addition. "NTPC has decided to raise Rs 600 B through borrowings– bonds and loans from financial institutions. NTPC is confident of getting loans from funding agencies and also from the market in view of the cash flow and security. Splitting NTPC will affect the borrowings programme and ultimately its capacity addition." (THE INDIAN EXPRESS 120204)

NPCIL plans The Nuclear Power Corp has identified areas to construct nuclear power plants at Jaitapur in Maharashtra and at an undisclosed destination in Andhra Pradesh. The CMD said that proposal had been sent to the Centre. (THE HINDU 020304)

APERC notifies regulation on power supply The Andhra Pradesh Regulatory Commission has notified that it is the duty of power distribution licensees in the state to supply electricity "on request". As per the regulation, the licensees would be under an obligation to supply electricity to any applicant within one month, where no extension of distribution main is required. The regulation also allows the licensees to recover the cost of providing electric line. (BUSINESS LINE 100304)

Tata Reliance study on open power sector Tata Power and Reliance Energy are working together on a study for the opening up of the power distribution sector in Maharashtra. The study has been commissioned by the MERC and will deal with the introduction of competition in electricity distribution as provided under the Electricity Act 2003. (BUSINESS STANDARD 150304)

POWER PRIVATISATION

UP power policy seeks private role The power policy unveiled by the Uttar Pradesh govt seeks to bring in wide ranging reforms as envisaged in the electricity Act, 2003. The measures outlined in the policy, like free trading, a liberlised investment climate and greater competition are aimed at encouraging greater private sector participation. The policy has also highlighted the failure of the steps taken earlier, like the unbundling of the transmission, distribution and generation functions of the UPSEB in Jan '00. The earlier measures have failed to achieve the desired results as is evident from the fact even after three years, the power sector has a fresh deficit of Rs 13.59 B despite a subsidy of Rs 8.5 B provided by the state govt. Only a fifth of the rural households have access to power. The policy says certain concessions need to be provided to the private sector like interest free loans and a moratorium on their repayment for the projects like creation of new generation, transmission & distribution capacity as also their upgradation and refurbishment. The land required will be provided at the cost price and shall be exempted from registration and stamp duty. The policy lays special stress on the use of bagasse for generating power, as UP has abundant sugar cane production. Further, a state-level distribution company will be formed and distribution companies will be free to buy

power from the generator of their choice. While the private sector will be invited into distribution, transmission will remain in govt hands to minimise the losses of private players.

➢ **UP Privatisation crisis for govt corps** A new policy to be announced later to encourage power sector privatisation can spell doom for the four new distribution companies formed in Aug. With the foray of private sector in distribution, these new companies, with headquarters at Varanasi, Meerut, Agra and Lucknow, face bankruptcy along with their mother organisation UPPCL. Sources said when private sector take to power distribution in major cities, the UPPCL would face a severe revenue crisis as against the total UPPCL revenue of Rs 5 B per month, the urban areas of Kanpur, Allahabad, Lucknow, Varanasi, Noida, Ghaziabad, Meerut and Agra fetch Rs 3.5 B. (DAILY EXCELSIOR 141103, BUSINESS STANDARD 151203)

Delhi power firms revenue gap widens The combined revenue gap of Delhi's power utilities is up 75% at Rs 45.27 B for 2004-5 according to their second petition since privatisation, as against a cumulative gap of Rs 25.79 B projected by the state owned transmission utility and the three private distribution firms. If the entire revenue gap projected by the companies is loaded on the retail tariffs in Delhi, it will cause a 19.5% increase in tariffs. The power regulator in its last tariff revision had pruned the revenue gap of Rs 44 B projected by the utilities for the 21-month period between June '02 & March '04 to Rs 870 M. This became possible because of the Rs 26.24 B subsidy offered by the Delhi govt to the Transco Ltd, resulting in a 5.1% hike in retail tariffs. The crucial difference during the next fiscal is that the proportion of Rs 34.5 B subsidy provisioned for Delhi Transco, which would have cushioned the utility's revenue gap, is much lower. With Rs 26.24 B of the subsidy already used in the first two years, the DERC has only Rs 8.26 B for the transmission utility for the next 3 years. Also, the loss reduction targets before the discoms were higher at 5% next fiscal, as against 0.55% in 2002-3 and 1.5% in 2003-4. (BUSINESS STANDARD 190104)

The saga of failed IPPs FIs sanctioned 58 IPPs since the opening up the sector in 1992 with an investment of Rs 420 B, but only 16 projects with a generating capacity of 5000 MW have started generation. (THE INDIAN EXPRESS 140104)

POWER GENERATION

Tatas to join Damodar Valley for Maithon plant The Tata Power Board gave its in principal approval to partner DVC in Maithon, a Rs 40 B project hanging fire for nearly three years. Bulk of the 1000 MW Maithon generation is proposed to be exported after meeting the requirement of the eastern grid. Earlier BSES exited from the project. The Damodar Valley Corp has agreed to allow TPC to hold 51% stake. The project to be financed on a debt equity ratio of 70:30. However, in June '04 there was still uncertainty as to who will hold majority stake as DVC was having second thoughts on this. (THE ECONOMIC TIMES 031203, POWERLINE 0204, BUSINESS STANDARD 250604)

Kerala MoU with NTPC The Kerala State Industrial Development Corp signed a MoU with NTPC for enhancing the capacity of the Kayamkulam TPS from 350 MW to 2300 MW, Kerala to get 820 MW. With this, the NTPC would become the major power-generating centre in S India. (BUSINESS STANDARD 160104)

POWER FINANCE

NHPC's plans The Planning Commission has cleared NHPC to spend Rs 322.26 B in the 10th plan. The NHPC will get Rs 142 B budget support as equity. The total resources to be raised through market borrowings are paged at Rs 164 B, of which NHPC has already tied up around Rs 110 B. Recently NHPC has negotiated a deal with Life Insurance Corp to restructure its Rs 25 B loan concluded last year by lowering the rate of interest from 9.25% to 8%. The NHPC has received an approval from the Union Govt for increase its authorised share capital to Rs 150 B from the present 100 B. The NHPC sources said that the corporation registered a net profit of Rs 5.105 B, which was the highest ever profit since the inception of corporation in 1975. The corporation has also registered its sales turnover of Rs 13.249 B and generated 986.71 MU of energy during last year.

➢ The NHPC is planning to raise Rs 600 B over the next nine years to develop HEPs of around 18000 MW. It will tap both domestic as well as international banks to raise the amount at a coupon of less than 6%.

➢ **Seeks RBI approval for $100 M ECB** NHPC has approached RBI for approval to raise $100 M ECBs. Currently NHPC requires funds for Rs 65 B Subansiri Lower and Rs 6 B each for Sewa-II (120 MW) and Teesta Low dam (132 MW). The latter two projects are to be completed in 10th plan. NHPC has an authorised capital of Rs 100 B and paid up equity stands at Rs 72 B and would getting Rs 145 B as govt equity during the current plan, of which Rs 25 B have been withdrawn.

➢ **$100 M ECB** The NHPC signed an agreement with the syndicate of nine international banks for external commercial borrowings totalling Rs 2.25 B. The borrowings in Japanese yen, whose equivalent value is $50 M, was successfully completed in Dec '03. The banks included Barclays Bank, Standard Chartered Bank, Emirates Bank Group and the SBI. In Feb '04, the NHPC declared plans to tap the overseas market once again to raise $50 M to retire high cost loans. The CMD of the NHPC said the funds would be deployed for repaying costly debt raised for financing Dulhasti HEP in J&K. The 390 MW HEP is estimated to cost Rs 35.59 B at 1996 prices and was scheduled for completion in Dec '03.

➢ **NHPC gets line of credit from LIC** The NHPC has received a special line of credit of Rs 65 B from LIC for funding its ongoing projects for 19 years. This is the largest line of credit offered by LIC to any of infrastructure project. The fund will be used for the NHPC's 2000 MW Subansiri HEP in Arunachal Pradesh, the 120 MW Sewa-II HEP in Jammu and Kashmir and the 132 MW Teesta HEP in W Bengal. LIC's total exposure in the company now stands at Rs 90 B. (THE HITAVADA 111103, *AMAR UJALA* 281103, THE TIMES OF INDIA 121203, THE ECONOMIC TIMES 210104, 260204 POWER LINE 0104, THE TRIBUNE 190204, BUSINESS STANDARD 180304, 160404)

PFC's Rs 5 B venture capital fund The Union Govt and the PFC have jointly launched the India Power Fund with an initial corpus of Rs 5 B. The IPF has been envisaged as a venture fund initially and a mutual fund later with the aim of attracting retail investors. These funds would be utilised mainly for investing in power generation, but would also support T&D projects. It has been planned to raise the money from financial institutions, banks and Central Power Undertakings like NTPC, by the middle of '04. The IPF will be expanded to a Rs 7 B corpus in 3-4 years in the 2nd phase when money would be raised from multilateral agencies, NRIs etc. In the 3rd phase, it would be converted in to a mutual fund in 2012 when there would be public participation. (BUSINESS LINE 061103, POWERLINE 0204)

Himachal wants equity in HEPs The HP CM stated that to safeguard its long-term interests, state should have equity participation in the HEPs. He said that the Govt has finalised a policy for ensuring a minimum 25% equity participation in all HEPs including the projects executed by IPPs, if the state so desired. He said that the 1500 MW Nathpa Jhakri HEP was the best because a 25% equity and 12% free power had been ensured in the agreement. Observing that the state had no equity participation in the 1300 MW Parvati and 800 MW Kol Dam HEPs, he said that these two projects would be renegotiated. (BUSINESS STANDARD 151203)

Loan for Bihar HEPs The Bihar Govt has sanctioned Rs 230 M loan for 17 different HEPs of Bihar Hydroelectric Power Corp. 22 HEPs are under construction, which are scheduled to be constructed by March '05. The total cost of the projects would be Rs 910 M. The NABARD has already accepted to loan Rs 601.5 M for these projects. (*HINDUSTAN 081103)*

PFC to get loan from ADB The PFC sources said that it had signed a $150 M loan agreement with ADB to fund various transmission and distribution schemes, and is to be used for renovation and modernisation projects in different states. The major beneficiaries will be Maharashtra, Punjab, W Bengal and Karnataka. (THE INDIAN EXPRESS 110104)

LIC aid for NTPC In the largest exposure to a single entity in the power sector, LIC has sanctioned a line of credit of Rs 70 B to the NTPC. The loan has tenure of 20 years and a moratorium of five years. The loan will assist NTPC to meet part of its capital expenditure under the 10th Plan. The company has embarked upon a capacity addition programme of 9370 MW in the Tenth Plan and plans to be a 56000 MW company by 2017. (THE ECONOMIC TIMES 160104)

FIs not to seek guarantees for power projects The high-powered committee called by the Power Ministry decided that funding agencies would not seek such guarantees besides escrow cover as long as developers were credible and tariff reasonable. It was also decided to identify projects whose financial closure could be achieved within eight weeks and these would be projects of 8000 MW capacity. According to banking sources, "this could lead to a dangerous situation wherein banks would end up holding a big bad loan. Banks and FIs are unable to recover funds given to projects that have govt guarantees. What will be case if no guarantee are available". (THE INDIAN EXPRESS 140104)

NPCIL plans Nuclear Power Corp plans to invest Rs 48 B in 2004-5, which is the highest ever investment made in a year. The company had invested around Rs 23.9 B in 2003-4 and Rs 22.97 B in 2002-03. It has target of adding 1300 MW by Dec '07. Another 4660 MW will be added by Dec '12. (BUSINESS LINE 080104)

Funds for power projects Four projects totaling to 1097.8 MW comprise three in Andhra Pradesh and one in Tamil Nadu. The lending institutions would be investing almost close to Rs 28 B, given a 70:30 debt equity ratio. These projects, which have already been assured debt and funding assistance including Ispat Power's 370 MW Vemagiri gas based project, GVK Industries' 230 MW Jegurupadu project, 455 MW by Konassma CCGT and a Arkay Energy Ltd's 52.8 MW Valantharavai project. IDBI, ICICI and PFC are the lead financiers. According to the discussions, FIs and banks would be reviewing funding facilities for 17 power projects totaling to an installed capacity of 7587 MW. This would mean a debt commitment of over Rs 200 B. Also, the Vishnuprayag HEP (400 MW) in Uttaranchal and the gas based Karuppur project in Tanjore have achieved financial closure. (THE ECONOMIC TIMES 200104)

➢ Four private sector projects worth Rs 84.37 B with a total capacity of over 2000 MW have been finalised for financial closure by March '04 out of over 11 projects discussed. These include the 100 MW Rs 5.48 B Malana-II HEP by Everest Group, the coal-based 550 MW Rs 21.41 B Raigarh (Chhattisgarh) project of Jindal group, the gas based 464 MW Rs 14.5 B Gautami Power project by GVK groups (AP) and Nagarjuna Group's 1015 MW Rs 42.98 B Mangalore TPS. (BUSINESS LINE 170304)

ADB loan for Assam The ADB has approved a $250 M power sector-restructuring loan to help the Govt of Assam, including a policy loan, an investment loan, and three technical assistance grants. The $150 M policy loan will help restructure ASEB in to dependent companies and strengthen its regulatory framework. The $100 M investment loan will improve the T&D system, introduce a revenue management system, and increase access in rural areas. (POWER LINE 0104)

NDPL plans The Tata group company NDPL said that it would invest Rs 12.5 B in three years to strengthen power distribution network in Delhi. The company had proposed a capital investment of Rs 4 B during 2003-4 with the remaining Rs 8.5 B set aside for 2004-7. NDPL has tied up funds roping agencies like the PFC and IDFC for raising Rs 4 B. Besides, funds from the Govt's APDRP would also be accessed to finance the capital investment. About Rs 1.6 B is likely to be made available from the APDRP corpus while another Rs 1.6 B would be availed during the second tranche. (BUSINESS STANDARD 020204)

WBPDCL financial closure of two projects The Rural Electrification Corp has agreed to finance the 250 MW Rs 10 B expansion plan of the Santaldih Thermal Power Project in Purulia district in W Bengal. REC will provide 8 B, the remaining portion would come from the state govt and W Bengal Power Development Corp, which is implementing it. For the first stage (500 MW) of the 2000 MW Sagardighi project, PFC will provide 80% of the funds while the state govt will contribute the rest. The first phase, involving setting up of two coal based units of 250 MW each, requires an investment of Rs 20.57 B. (BUSINESS LINE 030204, POWERLINE Feb 04)

Funds for Arunachal Power The Centre has sanctioned Rs 880 M schemes under various power development projects from non-lapsable Central pool of resources. According to the State Power Minister, apart from this the Union Govt has already sanctioned 2000 MW L Subansiri HEP with an estimated cost of Rs 78.6 B. (BUSINESS LINE 180304)

WB fund to Power Grid The WB has agreed in principle to provide a loan of $1.2 B to the Power Grid Corp for its transmission projects under the National Grid Development Programme. The WB would release the loan in three tranche of $400 M. The Power Grid CMD said that the Power Grid would use the WB fund in the implementation of transmission projects of 15000 MW, which include Barh, Kahalgaon, North Karanpura and projects from the northern and north-eastern region. The WB has accepted Power Grid's suggestion on the formation of an in-house committee for the effective implementation of R&R and environment protection measures during the implementation of these projects. (THE INDIAN EXPRESS 010304)

NEEPCO loan The North Eastern Electric Power Corp has signed up a Rural Electrification Corp loan of Rs 30 B. The amount would be used for financing the expansion plans of NEEPCO. NEEPCO's targeted expansion for the 11th Plan was around 2690 MW and a total requirement was around Rs 100 B. The company is looking to raise Rs 60 B from external sources. NEEPCO has signed an agreement with a consortium of 13 banks for structured term loan aggregating Rs 8 B, and said it would raise Rs 25 B to part finance its two projects of 880 MW. NEEPCO will go to market to raise Rs 25 B to part finance Rs 25 B Kameng HEP (600 MW) in Arunachal Pradesh and Rs 7.8 B Tripura gas turbine project (280 MW). (BUSINESS STANDARD 030304, Assam Tribune 220304)

NTPC raises $200 M The NTPC has raised $200 M through a 7 year Euro Bonds as a part of requirement to borrow Rs 500 B by 2012. (THE TIMES OF INDIA 050304)

FIs' exposure The Inter Institutional Group comprising of IDBI, ICICI Bank, SBI, PFC and IDFC took up proposals submitted by eight IPPs with a total generating capacity of 5196 MW at a cost of Rs 215.14 B. In these the hydel project are Karcham Wangtoo (1000 MW, Rs 54.99 B) and Malana-II (100 MW, Rs 5.48 B). The coal-based projects are Jindal-Raigarh (500 MW, Rs 21.41 B), GVK-Mangalore (1015 MW, Rs 42.98 B), Torangalu Expansion (500 MW, Rs 18 B) and JP-Rosa (567 MW, Rs 25.28 B). The gas-based projects are Gautami Power (464 MW, Rs 14.50 B), Akhankol (100 MW, Rs 32.50 B) and Reliance-Dadri project (3500 MW). (FINANCIAL EXPRESS 160304)

POWER OPTIONS

SHP in China In 2002, at least 42221 SHP were operating in China, supplying adequate power to over 300 M people. While the development targets, strategies, standards and policies are decided by the National Govt, the people and local govts take decision about implementing a project or not. Detailed river flow studies, power potential assessment and designing are also done at the local level. Out of the 22700 SHP stations in 2001 in China, as much as 58% were owned and managed by the communities. The govt controlled only 19.7%. The policy is "the one who invests and the one who owns, benefits." Significant returns are obtained from SHP linkages with irrigation, fisheries and local industries. (DOWN TO EARTH 150104)

SHP in India The Ministry of Non-Conventional Energy Sources has identified 4233 potential SHP sites with a capacity of 10324 MW, of the country's total potential of 15000 MW. So far, 1550 MW of SHP capacity has been developed at 478 sites spread across the country. Another 196 project, aggregating nearly 609 MW are under construction in 22 states. The MNES has allowed the state Govts to formulate their own policies and

choose to implement the SHP programme in the govt sector, through private developers of NGOs. So far, 15 states have announced policies for setting up SHPs through private sector participation. These states have received encouraging response from the private sector with over 800 sites aggregating 2000 MW already offered or allotted. Himachal Pradesh has offered 400 sites aggregating 570 MW and UP is offering 57 sites totalling 161 MW. More sites have been allotted in Karnataka, Andhra Pradesh, Punjab and Kerala. (BUSINESS LINE 211103, POWER LINE 0104)

HP: 222 micro hydels planned, only 7 show up In Himachal Pradesh during the past seven years, 222 agreements have been signed with companies or individuals to start micro HEPs but only seven of these were under construction as of now. In all 750 micro HEPs sites had been identified by the Roorkee Remote Sensing Centre at the behest of HIMURJA, a state undertaking before 1995. 112 agreements had been signed during the previous Virbhadra govt in 1996. In 23 cases, the entrepreneurs have reached the PPA with the HPSEB, while 52 have reached the implementation agreement with the state govt. The MNES had given liberal capital subsidy of 45% on the total project cost, up to Rs 22.5 M per but no satisfactory progress has been seen. (THE INDIAN EXPRESS 011103)

Muppandal: Wind energy brings change On the southern tip of India the once-impoverished people of Muppandal village are thanking wind energy. In the decade since setting up of the first windmill, towering above the palm trees, their lives have changed dramatically. "In 10 years, my daily income has gone up to Rs 450 from Rs 45," says Koilpillai Gopal, a barber who has been able to convert his modest roadside kiosk into a glittering shop. "It is all because of the windmills," he asserts. Wind farms have sprung up all along the 19-mile road from Muppandal to Kanyakumari. (REUTERS NEWS SERVICE 051103)

NGOs call for Renewable Future "The Future is Renewable" - this is the headline of a joint declaration by 38 organisations from around the world calling for ambitious programme to promote renewable energies. The declaration was sent to Germany's ministers for environment and development cooperation, at the opening of the regional preparatory conference for the "Renewables 2004" summit in Brasilia. The NGOs have formed a new network "CURES" (Citizens United for Renewable Energies and Sustainability) whose members are, among others, Greenpeace International, Climate Action Network Europe, IRN, etc. The joint declaration of the coalition excludes hydros above 10 MW and those not meeting the WCD's criteria from programmes to promote renewables. (IRN PR)

Plastic to fuel Positive results of several experiments conducted at Indian Oil Corp's R&D centre at Faridabad show that the plastic to petrol process invented by Umesh and Alka Zadgaonkar yields 40-60 % liquid petroleum from a kilo of waste plastic. The plastic can include polyvinyl chlorides, carry bags, broken buckets or PET bottles. The outcome is significant for India, which produces 7000 TPD of waste plastic. Their secret formula: Shredded plastic waste – free of oxygen – is heated with coal and a secret chemical. The products include 80% fuel range liquids, 5% coke and 15% LPG range gases. However, it may take some time before the process yields petrol and diesel for commercial use. (THE INDIAN EXPRESS 061103)

Bio-fuel from Jatropa Now bio-fuel would be produced from Jatropa plant (Ratanjot). The Centre has cleared Rs 14.3 B project, which would be implemented through National Oilseed & Vegetable Oil Development Board, a subsidiary of ministry of Agriculture. The bio-diesel produced from Jatropa can be used with blending in existing diesel without doing any change in vehicle's mechanical component. The Planning Commission has identified 130 M Ha out of 33 M Ha barren land in the country for the production of Jatropa. According to experts there was no need of elaborate refining process for oil produced from Jatropa. This bio-fuel is totally free from sulpher and also non-inflammable. This is also pollution free and classified as EURO-3 standard. (*RASHTRIYA SAHARA* 131103)

Mini projects for Poonch, Rajouri The J&K Minister for Power stated that mini HEPs have been identified in Rajouri and Poonch, for which Rs 1 B is to be spent. He said the state govt has already notified 12 mini and micro HEPs for private investment and is getting good response. Out of these, 2 are to be in twin border districts. (DAILY EXCELSIOR 041203)

Renovation of small HEPs in Bihar The Bihar Hydroelectric Power Corp has started R&M of some exiting HEPs. The Kataiya small HEP in Supaul district has started to generate 2.8 MW. This plant never been able to generate more than 1 MW earlier. The installed capacity of the plant is 20 MW. The Kataiya power station was transferred on Dec 2003 to the BHPC from the BSEB. The Japan Consultancy Institute recently visited the plant and assessed its R&M needs. The Valmikingar HEP (3x5 MW) of the BHPC was also set up with the financial assistance from the OECF of Japan. (THE TIMES OF INDIA 010104)

APERC cuts tariff of renewable projects The Andhra Pradesh Electricity Regulatory Commission has reduced tariffs for non-conventional energy projects and thus decreased the power purchase cost of the AP Transco by Rs 1.2 B per annum. The new tariff rates effective from April '04 are Rs 2.14-2.88 for biomass and industrial based power plants, Rs 1.92-2.74 for Bagasse based power Rs 1.88 to Rs 2.60 for SHP, depending on their years of commissioning. For

projects based on wind and municipal waste, the tariff would be Rs 3.37 per unit. The power utility had spent about Rs 4.15 B on purchase of electricity from NCEP at a rate of Rs 3.48 per unit during 2003-4. AP Transco was expected to purchase 1850 MU of non-conventional energy during 2004-5, of this, 1070 MU would be from bio-mass based power plants, 450 MU from bagasse based power and 115 MU from mini HEPs. The NCEPs were treated as must run projects and were not subjected to any merit order. The tariff for SHPs were exclusive of royalty on water, which, Rs 0.38-0.39 per unit, was directly payable by the licensee to the state govt. (BUSINESS LINE 230304)

Electricity from human waste According to a report from *New Scientist* a device has been developed by researchers at Pennsylvania State University. Harnessing chemical techniques similar to those the body uses to break down food, microbial fuel cell diverts the electrons liberated in the reactions to produce electric energy. An electricity generator fuelled by sewage does the job of a sewage treatment plant at the same time as it breaks down the harmful organic matter as it generates the electricity. Slurry of bacteria and undigested food, consisting of carbohydrates, proteins and lipids are contained in sewage. In a process that releases electrons, the bacteria found in sewage treatment works use enzymes to oxidise organic matter. Normally the electrons power respiratory reactions in the bacterial cells, and are combined with oxygen molecules. However, the electrons can be wrested from them and used to power a circuit by depriving the bacteria of oxygen on the one side of the MFC. (THE HINDU 250304)

Rajasthan Wind Energy Plan The Rajasthan Govt has prepared a plan to produce 444.25 MW from wind, from 28 places particularly from the desert area. For this the govt has signed MoUs with 14 power companies. Rajasthan Vidyut Nigam will establish a 25 MW wind power plant at Jaisalmer. (*RASHTRIYA SAHARA 040304)*

ENRON SAGA

Panel to clear Dabhol mess The Ministry of Finance has set up a committee headed by the former US ambassador Naresh Chandra to expedite the resolution of the impasse over the $3 B Dabhol Power Project. The committee would have to address how the issue of repayment and political insurance claims involving the offshore lenders could be settled through the US govt promoted Overseas Private Investment Corp. The committee would have to look into the claims made by GE and Bechtel, which hold 10% stakes each, towards construction & engineering works. The committee would have to see that the Indian lenders, with an exposure of over Rs 62 B and also their guarantee of Rs 30 B in dollar terms, carry out the sale of Dabhol assets on an 'as-is-where-is' basis. (THE INDIAN EXPRESS 071103)

SC seeks response on DPC revival The Supreme Court sought the response of key shareholders in DPC – subsidiaries of GE & Bechtel – on restarting the plant. The Court asked the counsel for GE & Bechtel to let the court know about their response about restarting the plant. Bechtel Enterprises and GE have already filed an arbitration against the Govt of India, seeking about $600 M each against their investment of $120 M each in DPC. (BUSINESS STANDARD 181103)

RBI pulls up FIs The Reserve Bank of India has pulled up IDBI, IFCI & Canara Bank for not classifying DPC Ph-I as a bad loan. SBI & ICICI Bank have categorised DPC Ph-I as a NPA for 2002-3. (POWER LINE 1103)

Lenders allowed to raise Rs 7.2 B The IDBI led consortium of domestic lenders has got the approval from the Centre to raise Rs 7.2 B through the tax saving bonds for restarting the project. IDBI had approached for permission to mop up Rs 50 B through such bonds over the next two years. (BUSINESS STANDARD 120104)

INLAND WATERWAYS

ADB loan The Shipping Ministry is about to acquire a loan of about Rs 7.5 B from the ADB to improve inland water navigability. The ministry has made up its mind to include two new channels in the national waterway list. (THE ECONOMIC TIMES 141103)

Inland waterways to get fund The Inland Waterways Authority of India has identified 25 projects to upgrade the Inland Water Transport sector. Total investment envisaged in this sector over the next 8-10 years is over Rs 150 B. The full spectrum of IWT projects as they unfold, are poised to move at least 20 B T km cargo on the National Waterways in the next 8-10 years, raising the share of cargo transport on inland waterways from a low 0.15% at present to at least 2%, which will save fuel worth Rs 12 B a year. (THE ECONOMIC TIMES 090104)

SOUTH ASIA

WB power loan for Nepal The WB is likely to begin disbursing the loan to Nepal as the required conditions for the disbursement has been nearly completed. The $75.6 M loan approved in May '03 to electrify 47,000 households is the WB's first major investment in the HEP sector since the cancellation of the proposed Arun-III project amid controversies.

- **Micro HEPs in 10 Districts** Ten more districts will get electricity through community-based micro HEP (upto 110 KW) under the WB grant of $5.5 M as part of the proposed project. A similar programme was carried out with UNDP assistance in 1996 in 15 districts, which was successful in installing 1 600 KW covering 16 000 households. Out of the targeted 10 MW through micro HEPs during the current plan, the WB loan will help install 3 MW. (THE HIMALAYAN TIMES 011103, 261203)

Nepal-India HEPs Recently the Nepal govt signed a MoU on 600 MW Budhigandaki HEP. Both countries agreed to prepare a DPR on Budhigandaki within two years. Experts have cautioned that the govt's decision to permit India to build large HEP taking only 15% electricity in return could result in Nepal suffering a big loss in the long run. Also, the Nepal govt agreed for Koshi high-dam project and Kamala hydropower and irrigation project. Upper Karnali and Budhigandaki would generate hydropower at low price, it is claimed. However, many of the Nepalese intellectuals believe that India will never construct these projects, which will benefit Nepal economically. A decade ago, Nepal and India had signed an agreement for drafting a DPR of the Mahakali River with the time limit of six months that never materialized. Truth possibly lies somewhere in between theses various shades of opinions. (KATHMANDU POST 051103, PEOPLE'S REVIEW 06-121103)

Marsyangdi Ongoing construction of the 70 MW Middle Marsyangdi HEP in Lamjung district in Nepal had commenced in June 2001. NEA has a 15% share in the $190 M project with the rest being funded by KfW, the German Development Bank. Of a total of 1200 labourers being employed for the MMHEP, contractors have dismissed 1055. The contractors suspended the construction works indefinitely since Oct 10 citing security reasons after two workers were killed by Maoist-laid landmine blast. The govt has decided to reinforce security at the project site. The project's civil works contractor Dywidag-Dragados-CWE JV terminated the contract with the NEA, citing 'violation of contractual obligations' as the reason. Originally scheduled for completion by Dec '04, it has already been delayed by 20 months. (KATHMANDU POST 091103, 121103, 171103)

EuroCom allays fears on Sikta project The acting Charge d' Affaires of the European Commission denied there were any obstacles in the progress of Sikta irrigation project, with EC keen to fund the $ 100M project. While the EC commitment in the form of grant adds up to 40 M euros, the Saudi commitment has been put at $25 M. "I am sure the project should take off in a year, with the Indian side not seeing anything wrong with the project," said Rudiger Wenk, while referring to the project which is expected to irrigate 37 000 Ha in the W Terai. (KATHMANDU POST 171103)

Khimti, Bhote Koshi HEPs shut down Two major HEPs operated by private-sector – 60 MW Khimti and 33 MW Bhote Koshi – have been shut down for at least 10 days because of repairing works on the transmission tower which was badly damaged by the Maoists last month. However, owing to the "take-or-pay" nature of agreement, the NEA will still have to pay for the electricity. (KATHMANDU POST 081103)

Kali Gandaki cost up 67% The Italian contractor Impreglio S.P.A., which developed the Nepal's largest HEP, the Kali Gandaki 'A', was paid 67% more amount than what was agreed upon in the contract. The company was awarded the contract to develop the 144 MW HEP at a cost of Rs 7.35 B. But upon completion of the project it got Rs 12.17 B, which is 67% more. The project entered into an agreement with the company on Jan 12 '97. The company was to complete the work before Nov 13 '00, but it was completed on May 18 '02. The NEA has approved only 19.97% amount – Rs 1.46 B — payment to the company. (KATHMANDU POST 261203)

SMEC power deal with PTC The Power Trading Corp of India and Snowy Mountain Engineering Corp of Australia have entered into the Power Purchase Agreement concerning the 750 MW $860 M W Seti HEP in Nepal, to be completed in seven years. According to the agreement, the power will be sold to PTC at the rate of Rs 3.60. The agreement signed between the Nepal govt and SMEC allows the latter to trade power for the next 30 years, to be followed by the transfer of the project to the govt "on where is as is basis". The SMEC had got the license in 1994, which entails a huge reservoir. SMEC shall apportion the Nepalese side 10% of the power generated free of charge and pay 2.5% royalty. (KATHMANDU POST 101203)

Experts on Mahakali Treaty Water experts from Nepal and India ended their meeting on bilateral cooperation in water resources, with special reference to the Mahakali treaty and reaffirmed their commitment to the treaty. The meeting, organised jointly by the Institute for Integrated Development Studies and India's Centre for Policy Research, was the third and final round. The Mahakali commission as envisaged in the treaty should be established as a "broad-based body with eminent persons, including those from the Mahakali region," a resolution adopted at the end of the meeting stated. The meeting urged Nepal and India to take immediate action to implement the provision in Article 2.2 (a) to make water available to Nepal from the Tanakpur barrage, and maintain releases from the Sarada barrage in order to preserve the river ecosystem. It also urged the two govts to expedite supply of water to the Dodhara-Chandani area. (Kathmandu Post 120204)

U Karnali HEP The National Hydroelectric Power Corp and the Nepal Electricity Authority have agreed to jointly develop the 300 MW UKHEP in mid-western Nepal. NEA and NHPC would develop the project after setting up a joint venture company. India would put in 49% of the total cost of $500 M and will buy the power generated from Upper Karnali. (Kathmandu Post 070204)

Norway aid for Nepal HEP The Norwegian govt will provide a grant of $1.5 M to conduct feasibility studies, EIAs and on constructing 10 small & medium HEPs of 5 - 10 MW capacity. (IANS 170104)

Nepal to start Kulekhani-III and U Chilime HEP NEA has started work on Upper Chilime (30 MW) and Kulekhani- III (45 MW). After the govt was unable to secure Japanese assistance for Kulekhani III, NEA is considering taking on the project. Kulekhani-III, which uses the water from Kulekhani-I and Kulekhani-II, is considered an expensive project. According to a study by JICA, the estimated cost of the project is Rs 5.7 B. Per unit cost is expected to be Rs 5.11 for Chilme and Rs 10.5 for Kulekhani-III. (Annapurna Post 300304)

Floods forecasting a pipe dream in Nepal Floods and landslides kill 350 - 500 persons every year, making monsoon-related disasters the largest killer after epidemics. Between 1983 and 2000, 6464 people lost their lives to monsoon floods and landslides. Across Asia, there were 0.10 M floods-related fatalities between 1980 and 2000. According to the National Planning Commission of Nepal, "Every year Nepal loses property worth more than one billion to floods and landslides." There is a nationwide network of 154 Hydrometric stations that are maintained by the Dept of Hydrology & Meteorology. But flood forecasting continues to remain a pipedream because most of the floods here are flashfloods. (Kathmandu Post 170304)

Disappearance of wetlands Encroachment and conversion of wetlands into agricultural land is a major problem in Nepal. About two decades ago there were over 100 wetlands in Kailali district but now it has less than 20. Alien and invasive species-that grows and infests due to various human activities like the use of chemicals in agricultural fields, are also reasons for the shrinking of the wetlands. Nepal is a signatory to the Ramsar Convention & has designated four wetlands as Ramsar Sites, three of them—Ghodaghodi, Beeshazar and Jagadishpur—were declared as Ramsar Sites by Ramsar Bureau in Aug '03. (KATHMANDU POST 020204)

Bangladesh can benefit from Shapta Kushi BD can benefit from regional projects like proposed 4000 MW 'Shapta Kushi high dam', experts said at a workshop on 'Sharing of common regional resources' in BD. India and Nepal are planning to build the dam jointly on the Shapta Kushi river at Bara Kshetra in E Nepal, 107 km away from Thakurgaon. The experts from India and Nepal said BD could also join in the project, to be completed in 15 years. (The Daily Star 190204)

BD-Nepal agree on river sharing plan The Govts of Bangladesh and Nepal has agreed in principle to formulate a common strategy for sharing the water of common rivers. (THE DAILY STAR-Bangladesh 191203)

Rivers drying up in N Bangladesh Drying up of at least 50 big and small rivers in the north and emergence of numerous shoals are not only hindering navigation but also affecting irrigation for the cultivation of Boro paddy. The major rivers including Padma, Jamuna, Teesta, Karotoa, Atrai, Punarbhaba, Isamati, Boral, Phuljhur, Hatibanda, Aditmari, Jamuneshwari, Dahuk, Kakeswari, Kakol, Rupnai, Chikini and others have lost their navigability at many points. The once mighty river Teesta now looks lifeless and almost appears like a dead river. Experts said that the operation of the Teesta barrage built at huge expense would suffer a great setback due to lack of sufficient water. This river has of late turned into a "dead" river due to blocking of its flow at the upstream through Gazaldoba barrage in India, it is alleged. (NEW AGE-BD 181203)

Bangladesh rivers Over 170 of Bangladesh's 230 large and medium rivers are being choked by dams, pollution, encroachment and poor water management. Experts say, it could turn this impoverished country of 130 M people into an agricultural wasteland. Around 84% of Bangladesh's population is dependent on water for agriculture and fishing. Over 20000 Ha of arable land, which used water from the Brahmaputra for irrigation, now require groundwater. River-based irrigation is a thing of the past in most northern districts. Fishing is also under threat. River routes that stretched for 24000 km during the monsoon have decreased to 6000 km. While normal sedimentation is 20-30 MT, this year it is around 45 MT. Bangladesh is currently engaged in a massive campaign to combat natural arsenic contamination in groundwater. Deforestation in Nepal and the construction of dams in India and Bangladesh have affected the rivers. (Oneworld.net 221203)

Indo-Bangla panel for Teesta India and Bangladesh decided to set up an eight-member committee of senior technical experts to undertake a joint scientific survey of water availability in Teesta River during the lean season. The team would study historical information, availability, needs, flows, groundwater situation and prepare a credible set of data. This is the first time when a joint team would be working on the field to resolve "highly technical but involved issues". When they come out with their findings, they would take two long-standing issues forward. One, help prepare a draft interim agreement for sharing of Teesta water. Two, collect data that might be considered as the terms of reference for the detailed scientific study to be undertaken later. (THE INDIAN EXPRESS 220104)

BD blames India for Sundarbans destruction Increasing water and soil salinity are killing rare trees and wildlife in Bangladesh's Sundarbans forests, with officials blaming the destruction on India's dams. The Sundarbans is a UN World Heritage Site in the SE coastal belt, spread over India and Bangladesh. New studies reveal that the lack of fresh water from upstream rivers is destroying these trees and animals in the Sundarbans. Surveys of the Environment Ministry of Bangladesh, Khulna University and IUCN detected a 500% increase in salinity in the forest. Salinity levels

have gradually increased across the S Bangladesh. The BD Environment Minister said, "If this continues, we may have to consider relocating 15 M people from the SW coastal region." The Farakka dam in W Bengal is alleged to be responsible for the lack of freshwater. In Sundarbans, the "top dying disease" syndrome, triggered by a rise in salinity, has severely affected a large portion of the Sundari trees, which comprise 72% of the forest. "Nearly 95% of the root surface cannot absorb water and nutrients because of salinity. Once home to around 450 rivers and canals, several of the water bodies in the Sundarbans have now dried up. (Oneworld.org 230304)

$3 B WB projects in Pak The WB has agreed to extend around $3 B to Pakistan for the water and irrigation projects over the next 10 years. The bank team would submit its recommendations to their President. He said the WB had already appointed a full time expert to study financing of big projects like Kalabagh Dam, Bhasha dam and others. The WB had stopped funding big water projects in the early 1990's owing to strong opposition from the NGOs due to large-scale displacement and environmental issues. Executing agencies in Pakistan especially WAPDA has a bad record. The promised amount by the WB is sufficient to complete all the major controversial projects envisaged in vision 2025 by WAPDA. The schemes include Greater Thal Canal (work in progress), Gomal Zam Dam (work initiated), Kala Bagh Dam, Basha Dam, Rising of Mangla Dam, Kachhi Canal (Work started), Couple of drainage projects in Sindh (more dangerous than fresh water projects at upstream Indus). (DAWN-Pak 231103, others)

Cracks in Sukkur barrage Cracks have developed in the structure of Sukkur barrage, the backbone of the Pakistan's agriculture. The cracks have been caused by a ditch, at least 50-foot deep, between gates No 2 and 3. (DAWN 240104)

Protest rally against Kalabagh dam Thousands of protesters of political parties with diverse views staged a huge rally to register Sindh's rejection of the Greater Thal Canal and Kalabagh dam in Pakistan. The rally was organized by Anti-Greater Thal Canal Action Committee, made up of nine main political parties and over 200 leading writers, intellectuals, water experts, journalists and 35 parliamentarians and MPs were also marching with the protesters. Leaders demanded to stop work on the canal. They said that the govt was blatantly ignoring the unanimous resolutions passed by the Sindh, NWFP and Balochistan Assemblies in which it had been demanded that Kalabagh Dam and the work on the Thal Canal be immediately stopped. They said that the Sindh province was already braving an acute shortage of irrigation water and the construction of the Thal Canal would further aggravate it. (DAWN 110204)

Punjab for Kalabagh, Sindh against Pakistan's four provinces have forwarded their respective stand on new water reservoirs as Punjab emphasised an urgent need for building Kalabagh Dam and Sindh called for carryover reservoir instead. Parliamentary Committee on Water Resources Chairman said that the WAPDA wanted to go for Kalabagh Dam first. "The reservoir wherever feasible may be built, but if and when surplus water is available and not at the cost of the existing agriculture, environment and society. The only site on Indus for this dam is at Skardu where 35 MAF can be stored," Sindh submitted before the committee. The NWFP govt has opposed Kalabagh but agreed on Bhasha Dam to have sufficient water storage. Balochistan province contended that it would support the opinion of the three provinces. The WAPDA said that the feasibility report on Akhori Dam would be completed by 2005. Overall water storage capacity has decreased by 23% since Tarbela and Mangla dams were constructed. Almost 3.5 MAF capacity has decreased in this period. The country would have at least 5 MAF less water if new dams are not constructed by 2010. (PAKISTAN LINK 100304)

WB, ADB funds for Pak The WB and the ADB have made separate commitments to take major funding initiatives for Pakistan with primary focus on water and power sectors. The WB and the Planning Commission would put together a Five-year Action Plan for infrastructure projects, mainly water and irrigation projects. The ADB would provide $300 M next year to set up a Public-Private Infrastructure Fund.

- Pakistan plans to spend $3.5 B for water and power projects out of a total $10 B announced by the WB for Pakistan during the next 10 years, said federal minister for water and power. "Now the WB has relaxed its policies regarding support to large dams so the govt has decided to seek the bank's support for large dams," he said. Along with major dams, the govt will also seek financial assistance from donors, including the WB, regarding the smaller dams, HEPs and the wind and solar electricity system. (DAILY TIMES 170304, DAWN 200304)

WB for review of 1991 Indus accord The WB has asked Pakistan to overhaul the 1991 Indus water apportionment accord and publish a white paper in consultation with the federating units about the water sector problems, needs and irrigation governance problems. The bank has asked the govt to introduce an economic water pricing system fully commensurate with O&M costs of the existing system and funding of the future projects. The 1991 accord does not appear to work in the eyes of most stakeholders, said the bank. It should be replaced by a formal legal system of secure, tradable water rights based on total availability of water and including mechanisms for dispute resolution, recourse to justice system and mechanisms for adjustments to account for seasonal and annual variability of supply. (DAWN 240304)

ADB project for Rawalpindi The ADB is to provide $100 M in the current year as a part of its environment improvement plan for Rawalpindi for better sewerage & sanitation and clean drinking water. (DAILY TIMES 160304)

Mangla & Tarbela lose storage capacity According to officials of the WAPDA power wing, "Like Tarbela, Mangla Dam is also losing its water storage capacity due to silting," he said, adding that "Of Mangla's total 5.45 MAF capacity, 1.16 MAF has been wasted which will go up to 1.5 MAF by the end of 2010." He said, when Tarbela Dam was built, its gross water storage capacity was 11 MAF and 24% of its storage capacity had been wasted due to silting. He said it was believed that by the end of 2010, Tarbela Dam's silting would increase to 34%, meaning it would have lost 3.54 MAF. Pakistan has only 13% capacity of storing its total water in the Mangla, Tarbela and Chashma dams. According to their designs, 18 MAF water could be stored in these dams, but due to silting they had lost their 45% storage capacity. He said $5 B was the estimated cost of the Kalabagh dam, with a gross capacity of storing 6.1 MAF. If the Kalabagh dam was built, 108 101 people including 65 939 in Punjab and 42 172 in NWFP would be affected, while 11 000 Ha including 9 800 Ha from Punjab and 1 200 Ha from NWFP would be used for the dam. 77 MAF water crossed through Pakistan yearly that could be used for irrigation and power generation. Of the total 77 MAF water, 54 MAF could be used for irrigation, but due to non-availability of water reservoirs, Pakistan was using 44 MAF. (DAILY TIMES 240304)

Pakistan Water vision 2025 Under the water vision 2025, Wapda has initiated 10 HEPs with total capacity of 2817.4 MW. Besides, a number of water storage projects will be completed in three phases. The priority water sector projects under phase-I are Gomal Dam (NWFP), Mirani Dam and Mithan kot barrage at Kachhi canal (Balochistan) raising of Mangla Dam (Azad Kashmir), Greater Thal canal phase-I (Punjab) and Thar/Rainee canals phase-I (Sindh). The total cost of these projects will be $2.467 B with a construction period of five years. The feasibility study of Bhasa Dam site will also be initiated during the phase-I. Under the phase-II, Hingol Dam (Balochistan) and Satpara Dams (Northern Areas), Chashma Right Bank canal and Khurram Tangi Dam (NWFP), phase-II of the Greater Thal canal Akhori and Sanjwal Dams (Punjab), Phase-II of Thar/Rainee canals, Gajnai and Sehwan barrage (Sindh) will be completed in 3-6 years except Basha Dam which will take 8-10 years. The total cost of phase-II projects will be $8.94 B. These 11 projects will have a storage capacity of 12.79 MAF and installed capacity of 3362 MW and irrigate 1.4 M Ha. Under phase-III, Yugo Dam and Skardu Dams, Dhok and Rohtas, Naulang Dam and Khadji Dam will be completed. These projects will store 35.8 MAF and bring an additional area of 17 276 Ha under cultivation while the rest of irrigation supplies from these projects will go to the existing irrigation system. Wapda has also undertaken feasibility studies of several other dams. Bhasa dam will require demolition of a good part of Karakarum highway that is very important for defence, trade and maintaining links with China. The reconstruction of demolished Karakarum highway at an alternate site will be extremely difficult and expensive. Furthermore, the location of Bhasha dam is over 300 km away from Kalabagh site and in high mountain areas. (Pakistan.com)

Cooperation for Flood Protection Pakistan India and Pakistan, during the meeting of Permanent Indus Commission, has agreed to provide flood-warning massages to Pakistan during July 1 - Oct 10.

- **Nepal** Investigations for 5600 MW Pancheshwar Multipurpose Project has been completed jointly by India and Nepal and DPR is under preparation. Joint Inception Report for Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage cum Diversion Scheme to provide for flood control benefits in N Bihar have been finalised and the scheme for conducting field investigations and preparation of DPR estimated to cost Rs 293.4 M have been approved. Agreement has been reached with Nepal to supply real time data in respect of five key hydrometric stations located in Nepal on river Narayani, Kosi, Rapti, Bagmati and Kankai twice a day for qualitative improvement in flood forecasting on Indian side. A High Level India-Nepal Joint Committee on Water Resources has been constituted to discuss all-important issues pertaining to the cooperation in Water Resources including implementation of existing agreements and understandings.
- **Bangladesh** Joint measurements during lean season (Jan-May) for the last 4 years are being conducted to the satisfaction of both India and Bangladesh as per the Treaty on sharing of Ganga waters. Flood data regarding rivers Ganga, Teesta, Brahmaputra and Barak is transmitted every year to Bangladesh during monsoon. Flood Data of Tripura Rivers namely Gumti, Khowai, Manu and Juri is also transmitted to Bangladesh during monsoon. The 35th meeting of Indo-Bangladesh Joint Rivers Commission was held on Sept 29-30 '03 to discuss sharing of the Ganga water. A Indo-Bangladesh Task Force has been constituted for flood management in Ichhamati Basin.
- **China** A breakthrough in the India-China relations was made with the signing of a MoU for provision of hydrological information on Brahmaputra River in respect of 3 stations, namely, Nugesha, Yangcun and Nuxia in flood season by China to India for improving the flood forecasting in the NE Region. (MoWR PR 291203)
- Discussions have been initiated for extending similar facilities on the Sutlej. (PIB 070204)

Baglihar HEP The WB has sought reports from Pakistan and India on the dispute over the Baglihar HEP in Kashmir. The World Bank is a guarantor to the Indus treaty of 1960. Both India and Pakistan had deposited $5 000 each in the WB's account at the time

of the signing of the treaty that has now translated into a couple of millions. According to an official of Pakistan, "the WB has moved in the dispute and has sought a report on the appointment of the neutral expert." Pakistan's technical experts who visited the project site in Oct '03, had reported to the govt that India was violating the treaty as it had constructed low-level spillways, which are meant for manipulation of Chenab waters to Pakistan's disadvantage. The cause of contention is the project design, which, according to Pakistan, provides for submerged gated spillways, and therefore, Indian control over Pakistani waters in breach of the treaty. Pakistan alleged that the structure would reduce its share of water in Chenab by 8 000 cusecs. Launched in June '99, the 450 MW Baglihar HEP is to begin generation by 2005. Article IX of the treaty provides for settling disputes through neutral experts or arbitration if they are not resolved between the two commissioners. Under the treaty, Pakistan has exclusive rights over waters of western rivers - Jhelum, Chenab and Indus - while eastern rivers - Ravi, Beas and Sutlej - belong to India. (DAWN 041203)

Water from the Eastern Rivers According to satellite images by Ministry of Defense, the entire water of three tributaries of Ravi River from Punjab at downstream of Madhopur head flows to Pakistan. According to BBMB data, average 5 MAF water flowed from Madhopur head and Husainiwala head to Pakistan during 1980 - 2000. From this water over 1 M Ha could be irrigated and the country has lost about Rs 15 B. (*DESHBANDHU 240304)*

AROUND THE WORLD

Wet Lesotho has not a drop to drink
(New Scientist vol. 181 issue 2435 210204, page 4)

ONE of the most water-rich nations in Africa faces famine as parched crops wither in the fields. The tiny southern African country of Lesotho has the tallest dam in Africa and enough reservoir capacity to give its 2 M citizens 1500 CMs of water each - 30 times more per head than Ethiopia and almost as much as the US. But last week its PM Pakalitha Mosisili declared a state of emergency and appealed for food aid.

Why? Because almost all the water stored in the mountain kingdom's two giant reservoirs is earmarked for sale to its neighbour, S Africa. The dams, across the headwaters of the Orange River, feed S Africa's industrial heartland around Johannesburg and irrigate S African fields. Meanwhile, half the population in Lesotho's capital, Maseru, has no running water, and the country's farmers depend on rains.

China Dam should be shut down: Engineers Two prominent engineers of China have urged the central govt to close a huge dam on the Yellow river to prevent future flooding disasters in central areas. A member of the Chinese Academy of Sciences said he and former minister of water resources believe that the Sanmen Gorge Dam must be put out of operation because it was responsible for raising the soil beds of the Wei river, leading to devastating floods. A veteran water engineer said he made the conclusion, after the Wei river region suffered one of its most devastating floods in recent history in Sept '02. The flooding had affected over 5.1 M people and caused economic damage of over 8.2 B yuan (HK$7.7 B) in Shaanxi province alone. Completed in 1961 with the help of the then Soviet Union, the 106.5 m dam was designed to serve as a regional flood control and electricity production facility that could hold over 60 BCM and produce 10 000 MW. However, Yellow river sediment has filled up the dam's base, limiting its abilities. Most significantly, the back up of silt has caused the Wei River's soil bed to raise an average of 4.5 m, causing the waterway's flow rate to drop significantly.

- **China accepts the mistake** The Chinese Govt has issued an admission that one of its most heavily criticised dams was a 'mistake', which caused disastrous flooding. It was mainly caused by clogging the Sanmenxia dam on the Yellow River. The officials accepted that "the reservoir itself was a mistake." The River Wei, a tributary has flooded in many years since, but the floods last autumn were particularly severe. Over 100 towns and villages were flooded, 64 people died and 300 000 were forced to flee their homes. (SOUTH CHINA MONITORING POST 031103, THE HINDU 080204)

Lesotho bribery One of the world's leading electrical companies, Schneider Electric, was fined R10 M in the Lesotho High Court after admitting to bribery. The company avoided trial by pleading guilty on 16 counts of bribery, all relating to the construction of the Lesotho Highlands Water Project. The corruption involved around R16 M. Spie Batignolles, its predecessor in Lesotho, was among several contractors who bribed. Schneider was the third MNC to be prosecuted by the Lesotho authorities for corruption. German Lahmeyer International was earlier fined R10.6 M, and Canadian construction and engineering company Acres International R15 M. (Sapa 250204)

Bujagali Corruption A London-based lobbying firm has become the focus for an international criminal investigation into allegations of corruption by western engineering companies over a dam project in Africa. The allegations, confirmed by officials close to the investigation, include whether promises of bribes were made to Ugandan MPs by agents acting for a Scandinavian consortium over the $580 M Bujagali dam on the river Nile. The investigators have discovered evidence that suggests that in '98 the Nordic consortium Norpak power hired a UK firm, Amisa Consultants Ltd, run by Madhusudan Gheewala, a British citizen of Ugandan Asian origins that lobbied the Ugandan MPs with the promise of financial

inducements. Investigation began last year after WB anti-corruption officials passed concerns about the project to the US authorities. Since then the bank has suspended its $215 M loan. Two of the main companies involved have pulled out. (THE GUARDIAN 031103)

Bujagali's options' cost overstated A latest analysis in Development Today published from Oslo shows that the WB's economic analysis overstated the cost of Karuma, the most likely alternative to Bujagali, by a staggering $200 M. Karuma is a dam project on the Nile that would have lower social & environmental impacts than Bujagali. The project would take up 45 Ha of land, and displace 35 families. Acres International prepared the misleading economic analysis of Bujagali. In 1991, Acres first proposed Bujagali as a site for a dam project, and the Ugandan govt signed a MoU with the AES corp based on this advice. Acres thus had a vested interest in the economic analysis, in that its earlier advice would have been invalidated if the economic analysis did not confirm Bujagali as the least-cost option. In contradiction of its disclosure policy, the WB never made the economic analysis of the Bujagali project available to the public. Earlier this year, Acres was convicted for bribery in the Lesotho Highland Water Project. In Aug '03, AES, the private promoter, withdrew from the Bujagali project. The WB immediately claimed in a public statement that Bujagali was still the least-cost option for Uganda and that the WB was still committed to the project. NGOs in early Nov called on the WB to analyse all available options in a balanced way before supporting any new project. The WB has not yet responded to this letter. In Dec '01, the WB decided to co-finance the Bujagali, and raised funding through both its soft loan arm IDA and the private sector arm International Finance Corp. Since then, Bujagali has been investigated due to allegations of fraud. The WB halted its funding and the developer AES withdrew from the project and wrote off a loss of $75 M. The Ugandan govt in cooperation with the WB is now searching for new sponsors for the Bujagali project, but Karuma Falls is back as a competing project. The Norwegian consortium NORPAK owns the exclusive right to develop Karuma Falls. For many years experts have said that the Bujagali does not make economic sense, and that the WB has neglected more promising alternatives (such as geothermal power and the Karuma dam). (www.irn.org & DEVELOPMENT TODAY 191203)

$36.2 B required to fix US dams The Association of State Dam Safety Officials in US has compiled state and national estimates of the cost of dam rehabilitation. In the coming year, ASDSO will ask US Congress to establish a national dam financing solutions programme. A nine-member task committee of ASDSO has concluded that the cost of upgrading or repairing all of US non-federal dams would exceed $36 B. The committee's report states that almost one-third of this amount - $10.1 B - is needed for the nation's most critical dams, those whose failure would cause loss of human life. The states currently regulate over 10,000 of "high-hazard-potential" structures, and this number is increasing. In the past two years, at least 21 dam failures have occurred. The May '03 failure of Silver Lake dam in Michigan's Upper Peninsula caused the failure of downstream Tourist Park dam and the evacuation of over 1800 people in Marquette city. The failures resulted in over $100 M damage, including about $10 M damage to utilities, $4 M in environmental damage and $3 M to roads and bridges. The We Energies power plant, which generates half the electricity produced in the Upper Peninsula, was flooded, causing the closure of two nearby iron mines, and the layoff of about 1100 mine workers for several weeks, until the power plant was repaired. Also in May, several dams failed in N Carolina, causing the evacuation of about 75 homes and damages estimated at $12 M. The state is spending $5 M to rebuild the Hope Mills dam, which provides a critical stream crossing. (International Water Power & Dam Construction 111103)

China plans $2.8 B HEP China plans to build a $2.8 B 3600 MW HEP on the lower reaches of the Yalong River in SW during 2005-13. A 305 m dam will be built for the plant that would be able to generate 17400 MU a year. (REUTERS FOUNDATION NEWSDESK 181203)

US Court blocks $600 M privatisation A Superior Court judge in USA has declared a $600 M water and wastewater privatisation contract to be invalid because city officials had not carried out the EIA. The decision may have a negative effect on the further spread of water privatisation in the USA. The ruling was a victory for three groups - the Concerned Citizens Coalition of Stockton, the Sierra Club and the League of Women Voters - that had sued the city in Mar '03. OMI-Thames Water had been awarded a 20-year contract in Feb '03. Stockton city officials had claimed the deal would save $100 M in the 20-year period. (watertechonline.com 081203)

IHA guidelines The International Hydropower Association has proposed the use of its Sustainability Guidelines and Compliance Checklist as selection criteria for clean development mechanism and joint initiative HEPs. IHA made its proposal to delegates of the COP-9 to the UN Framework Convention on Climate Change, which met in Italy from 1-12 Dec '03. IHA guidelines are to help developers and operators deal with the environmental, social and economic problems faced in the assessment, operation and management of HEPs. Adopted in Nov, the guidelines cover IHA policy, the role to be played by govts and the decision making process. (ConnectingPower.com 151203)

Sudan HEP would displace 9500 families The $1.73 B dam at Merowe on the Nile 400 km north of Khartoum will displace over 9500 families. The 1 250 MW HEP would have ten turbines & have installed capacity that is

three times Sudan's current capacity. The first unit is supposed to come on stream in June '07, while all the 10 turbines are expected to be fully operational by '08. France's Alstom had a 250 M Euro contract to supply a hydroelectric unit. (Reuters 141203)

After 150 Years, Rappahannock Runs Free The Rappahannock River in USA runs free after 150 years after a long-planned explosion put a hole in the base of the Embrey Dam, letting trapped water break away. The blast, witnessed by 5,000 to 6,000 people, sent a cloud of brown smoke into the sky. (Washington Post 230204)

Russian Dams pose threat A check by the Russian president's Main Control Directorate has revealed that half of the 29400 dams in Russia are potentially dangerous. The report on the directorate's activities in 2003 interpreted that half of all the dams checked had terms of service nearing critical and about 1400 of them were found to be in very poor condition and posing a threat to the lives of local populations. The report also says that the situation is aggravated by the fact that the owners of the dams cannot ensure their safe operation. Of all the dams in Russia, 6 000 are state-owned, 6300 belong to municipal bodies, 14800 are privately owned and 2300 have no owner. While current annual expenditures on dam maintenance amount to 17 B rubles, the funds allocated for the purpose in 2000-2002 did not exceed 2 B per year. (mosnews.com 290304)

Chinese dams blamed as Mekong level drops The 4500-km-long Mekong river has seen record low flows since Jan '04 and unprecedented fluctuations in levels. China has built two large HEPs on the river: the Manwan and Dachaoshan. "There is an assumption that the two dams are the cause of the situation," said director of the MRC's water resources dept. The Mekong saw exceptionally low flows in 1993, during the filling of the Manwan dam. The even larger Dachaosan dam completed in 2003 could be the cause of the new low levels. Two more dams are under construction, another four are being planned. While a fifth of the river's annual flow comes from China, the proportion reaches 50-70% in the dry season. (New Scientist 250304, Xinhuanet 260304)

GOVERNANCE AND RELATED ECONOMY ISSUES

Project cost escalation over 21% According to the Govt data, there has been 21.79% escalation in costs as the original approved cost for the 515 projects being monitored Rs 1898.627 B has gone upto Rs 2312.39 B. The highest cost overrun has taken place in the 46 projects being executed by central utilities under the power ministry. The projects that were to be completed at a cost of Rs 552.39 B, will now cost Rs 698.46 B. Delay in land acquisition, law and order problems and slow progress in the execution were cited as the reasons. (BUSINESS STANDARD 060104)

WB to study AP drought districts The World Bank is undertaking a pilot study in the drought prone Ananthpur, Mahaboobnagar, Kadapa & Prakasam districts in Andhra Pradesh, to be completed by April '05. The objective is to evolve an anticipatory strategy.

- **Loan** The World Bank has approved the $220 M Second Andhra Pradesh Economic Reform Loan, to be co-funded by the DFID, UK. The first $250 M project was co-financed by the DFID for a further $100 M. (THE NEW INDIAN EXPRESS 220104, BUSINESS LINE 120204)

ADB plans The Asian Development Bank is looking at making investments of $1.7 B in the Indian public sector projects in 2004 including $40 M in Chhattisgarh irrigation project and $300 M for a Madhya Pradesh power project. In the private sector ADB is planning to invest in Power and infrastructure fund.

- **N-E** The ADB is to provide $1 B as direct assistance over 2003-6, $950 M in loans and $7 M in TA grants. Assam and Sikkim have been selected as 'focal states'. $150 M Assam Governance Loan, $200 M Urban Development Project and $200 M NE Roads Project were in the pipeline. The $200 M Power Sector Development Program loan in Assam and a TA for Fiscal Reforms in Sikkim were cleared last year. (ASSAM TRIBUNE 240104, THE ECONOMIC TIMES 280204)

Highest poverty percentage in E India The eastern parts of India have the dubious distinction of having the highest proportion of population under the poverty line. Over 40% of the population is below the poverty line in all the eastern states. 44% (40 M) of Bihar's rural population lives BPL. The proportion of rural BPL persons for UP, MP and W Bengal is 31%, 37% and 32% respectively. (THE ECONOMIC TIMES 250304)

Court Can't overlook utility for risk The Supreme Court has ruled that risk factors of sensitive plants could not be the sole ground for their closure or relocation, and the courts should keep in mind their utility to the public. The judgement was given while setting aside a Kerala High Court order asking Fertilisers and Chemicals Travancore Ltd to shut its 10000 T ammonia plant near Koch. The High Court had felt the plant was a major risk to the local population. (THE TRIBUNE 070304)

Global warming the biggest problem The Chief Scientific Advisor to the UK Govt said, "Global warming is the biggest and most serious problem faced by us. If we do not take it seriously, it will have serious consequences that will affect the generations to come." It would lead to melting of polar ice caps, rise in sea level, and as a consequence there would be dramatic change in the world map. Global temperature has risen since 1861, a period for which accurate measurements are available. Over 160000 people die worldwide every year due to the side effects of climate change. The frequencies of rapid precipitation, floods and protracted droughts will increase. (THE HINDU 200304)

RNI No DELENG/2003/9562

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Published, Printed, Owned & Edited by Himanshu Thakkar at 53-B, AD Block, Shalimar Bagh, Delhi - 110 088, Printed at Sun Shine Process, B-103/5, Naraina Indl. Area Phase – I, New Delhi – 110 028