

Dams, Rivers & People

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INDEX

Another dam, displacement without rehabilitation	2	ADB money for Bisalpur project, but not to DAM!	30
Civil Society Position Paper on WB CAS	3	Flood News: Is it the worst flood	31
Garland of Hype: Response to Suresh Prabhu		PM's task force on floods	32
Dunu Roy	4	Mockery of flood assistance in Bihar	
River Link News: SC Orders Violated	5	Dinesh Kumar Mishra	33
Bhakra at risk: Silt Delta at Gobind Sagar	6	How fishing ban helps Fish conservation in HP	
Case for decommissioning of Dumbur Dam	7	Kuldip Kumar Sharma	34
Gosikhurd Dam Oustees Protest	8	And yet fish habitats deplete in HP:	35
Villages under threat due to Parbati HEP in HP	9	Soils of India	36
NHPC faces protests over Middle Siang HEP	10	Rajasthan to legislate FOR contract farming	37
NHPC violations in TEESTA V	11	Virtual Water Trade: India among top exporters	38
Kerala PH Rejects Silent Valley Project	12	Power news	39
SC directs MP to provide land based R&R	13	Power Finance News	40
Costly Narmada Bonds	14	Power Options: Renewables in India	41
Polluted Rivers: Sutlej	15	AP HC Bats for Renewables	42
No HEPs in Banjar Valley?	16	No State is Power Surplus: Assocham	43
W Bengal's bill to imperil water bodies	17	CAG indicts Delhi, Maharashtra: Who cares?	44
Climate to cause water scarcity in India?	18	2.88% in Nepal have renewable energy	45
Water Privatisation is not the answer says UN	19	Pakistan: GMof HEP sentenced to RI	46
New Krishna Tribunal challenged by Karnataka	20	BD: UN urged to review water convention	47
SYL complications	21	Renewables can meet all Human Needs	48
No irrigation water for tail-enders	22	LARGE HYDRO IS NOT RENEWABLE	48
Irrigation projects under achieve, cost runovers	23	Bonn Renewable meeting news	49
SC: Traditional laws to get precedence	24	China Halts Big Dam project	50
Subsurface dams	25	Lesotho judge ups bribery fine on Lahmeyer	51
World Bank watershed project in Uttaranchal	26	UN's More Crop per Drop	52
BUSINESS of Pollution	27	UNEP study on pollution of Seas	53
Groundwater news	28	EIA and public hearing violations galore	54
Urban Water: World Bank loan to Karnataka	29	Publications available with SANDRP	55
		We await your responses	56

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INDIRA SAGAR PROJECT ANOTHER DAM, DISPLACEMENT WITHOUT RESETTLEMENT

Indira Sagar Project in the monsoon of 2004 has submerged over 100 000 people of Harsud town (over 22 000 people) and 120 villages in Madhya Pradesh without the basic resettlement and rehabilitation.

The project is being implemented by the National Hydroelectric Development Corp, a joint venture between National Hydro Power Corp (51% share) and the govt of Madhya Pradesh (49% share). Thus both these bodies are equally responsible for the disaster. In Madhya Pradesh, a new BJP govt took office in mid Dec 2003, replacing the Congress govt. Both the govts are equally to be blamed for the state of affairs.

There was indeed a lot of media attention with both print and visual media highlighting the tragedy. Unfortunately, all the attention came only after the

See the cover story by Arundhati Roy in OUTLOOK of 260704 (<http://www.outlookindia.com/full.asp?fodname=2040726&fname=Cover+Story+%28F%29&sid=1>) for a comprehensive narration of what is happening in ISP. Some extracts:

Yogendra Prasad, Digvijay Singh and Uma Bharati are criminally culpable, and in any society in which the powerful are accountable, would find themselves in jail. They have willfully violated the terms of their own MOU, which legally binds them to comply with the principles of the NWDT Award. They have violated the Govt of Madhya Pradesh's Rehabilitation Policy. They have violated the conditions of environmental and forest clearance. They have violated the terms of several international covenants that India has signed: the Universal Declaration of Human Rights, the International Covenant on Civil Economic & Political Rights and the International Labour Organisation Convention. The Supreme Court says that any International Treaty signed by India becomes part of our domestic and municipal law. Not a single family has been resettled according to the NWDT Award or the Madhya Pradesh Rehabilitation policy.

There is no excuse, no mitigating argument for the horror they have unleashed.

And then, under the lowering, thundery sky, Harsud... like a scene out of a Marquez novel.

A town turned inside out, its privacy ravaged, its innards exposed. Personal belongings, beds, cupboards, clothes, photographs, pots and pans lie on the street. In several houses caged parakeets hang from broken beams. An infant swaddled in a sari-crib sways gently, fast asleep in a doorway in a free-standing wall. Leading from nowhere to nowhere Live electric cables hang down like dangerous aerial roots. The insides of houses lie rudely exposed. It's strange to see how a bleached, colorless town on the outside, was vibrant on

submergence had started or was imminent. Also the media focused on the submergence of Harsud, but there was little attention on the plight of the villages. Also there was no attempt to show who were responsible for the state of affairs.

NHPC TRACK RECORD It is clear that NHPC is majorly responsible for the criminal act of submerging so many people without any resettlement. This further highlights the poor track record of NHPC. In NHPC projects like Loktak (Manipur), Chamera (HP) and Omkareshwar (Madhya Pradesh) people have been treated with equal contempt and callousness. To top it all, the World Bank has certified that NHPC's performance on social count is improving! Shows the Bank it is true colours?

the inside, the walls every shade of turquoise, emerald, lavender, fuchsia.

The people of Harsud are razing their town to the ground. Themselves. The very young and the very old sit on heaps of broken brick. The able-bodied are frenetically busy. They're tearing apart their homes, their lives, their past, their stories. They're carting the debris away in trucks and tractors and bullock carts. Harsud is hectic. Like a frontier town during the Gold Rush. The demise of a town is lucrative business. People have arrived from nearby towns. Trucks, tractors, dealers in scrap-iron, timber and old plastic, throng the streets, beating down prices, driving hard bargains, mercilessly exploiting distress sales. Migrant workers camp in makeshift hovels on the edge of town. They are the poorest of the poor. They have come from Jhabua, and the villages around Omkareshwar, displaced by the other big dams on the Narmada, the Sardar Sarovar and the Omkareshwar. The better off in Harsud hire them as labour. A severely malnourished demolition squad. And so the circle of relentless impoverishment closes in upon itself.

There are no proper estimates of how many villages will be submerged in the Narmada Sagar Reservoir, when (if) the monsoon comes to the Narmada Valley. The NCA website uses figures from the 1981 Census! In newspaper reports Govt officials estimate it will submerge more than a hundred villages and Harsud town. Most estimates suggest that this year 30,000 families will be uprooted from their homes. 5,600 of these families (22,000 people) are from Harsud. Remember, these are 1981 figures.

Extracts from the Position Statement of Civil Society Organisations on The Draft Country Assistance Strategy (2004) of the World Bank

WE, the civil society organisations, national alliances & movements, reject the WB CAS '04 draft

Inadequate Consultation and Lack of Transparency

The process leading up to the drafting of the CAS in consultation with and participation of the Govt of India has not been transparent and inclusive. The civil society has been kept in dark while the Members of Parliament and State legislatures, the elected people's representatives, have not been informed or consulted.

The access to the draft CAS was severely restricted since the draft was put only on the Bank website and withdrawn after 30 days. None of the Annexures, constituting important policy directives have been released to the public. Thus whatever access provided was also for an incomplete document.

The World Bank India Office decided the so-called Consultation dates and these were organised a mere two months before the draft CAS goes to the Bank Board on Aug 26, 2004. The participants were invited with only one working day prior notice. Prominent civil society orgs in India working on Bank's past record and accountability were not invited and deliberately left out of the Consultation process along with many others.

No lessons learnt from previous engagements CAS does not reflect critically on the WB's previous engagement in India – abysmal failure in sectors such as power, dams including large HEPs, forestry, poverty reduction, environmental and social mitigation measures, especially in the States of Orissa, Andhra Pradesh, Karnataka and Madhya Pradesh. AP, which the WB has lauded as its model investment and intervention State in India, today records among the worst human development indicators in the country. The previous CM whom the WB held up as an ally who best understood and implemented the WB's policy thrust was defeated at the polls in the national and state elections. Earlier Orissa was the WB's showpiece, but the experience there is not reflected in CAS.

The draft CAS is pushing for investments in hydroelectric generation capacity 'that can be developed with limited social and environmental impacts'. This is a very ambiguous statement at best. Will a submergence of 3000 Ha – 4000 Ha of land including substantial portion of biodiversity rich forest land be considered limited? The draft CAS says, "While for many years the hydropower business in India had a poor reputation, some major actors including the NHPC have started to improve their environmental and social safeguards practices". There is nothing in the CAS that shows what prompted the Bank to arrive at this startling

and unjustifiable conclusion. How has the social and environmental performance of large hydro in India in general and those of NHPC in particular has improved ever since they withdrew from the SSP in 1993? On the contrary, NHPC has, in fact, consistently and flagrantly violated Indian and international human rights in Indira Sagar and Omkareshwar (Madhya Pradesh) and Koel Karo (Jharkhand) projects, among others. People have been forcibly removed by police and Rapid Action Force, rehabilitation and compensation to the PAFs remain incomplete, tribal and indigenous protesters have been fired at and killed. WB financed Nathpa Jhakri and NHPC constructed Parbati are reeling under sever environmental impacts. Violations have been reported from almost all the on going HEPs of NHPC – from J&K to Arunachal Pradesh, the latest being Middle Siang HEP in Arunachal where at the second public hearing held on Aug 3 '04, many of the people present were not allowed to speak.

The CAS needs to include a component to ensure that WB addresses the outstanding social & environmental issues of its past projects. The projects and propositions in the CAS do not seem to have come out with any process to select least cost option among the various available in India. To give an example, the CAS does not even so much as mention options like renewables or demand side management.

DEMANDS The WB immediately withdraws the draft CAS 2004 for India and re-engage in extensive public consultations with the civil society, the diversity of the research community, project affected communities and other concerned during the next year.

- The translated copies of CAS with all its annexures be disseminated extensively through various available communication channels including print media and in the form of booklets.
- The draft CAS with all its annexures be placed before the Indian People, Parliament and State Legislatures and finalised only after due process of debate and consultations.

Shripad Dharmadhikary, Manthan Adhyayan Kendra, Soumitra Ghosh, NESPOL, West Bengal; Sunita Dubey, New Delhi; Ginny Shrivastava, Astha, Rajasthan; R Sreedhar, mm&P, New Delhi; Leo Saldanha, Environmental Support Group, Bangalore; Himanshu Thakkar, SANDRP; Smitu Kothari, Lokayan, New Delhi; Benny Kuruvilla, Focus on the Global South, Mumbai; Sanjay Basu Mullick, Jharkhand Save the Forest Movement, Jharkhand; Sukhdev Vishnu Premi, Navrachna, Himachal Pradesh; Ravindra Nath, Rural Volunteers Centre, Assam; Souparno Lahiri, Delhi Forum, New Delhi; W Ramanand, Citizens Concern on Dams and Development, NE; Ashok Chowdhury, National Forum of Forest People & Forest Workers; D Roy Laifungbam, CORE, Manipur; Prakash Louis, Indian Social Institute, New Delhi; Malavika Vartak, Habitat International Coalition, South Asia Regional Network, Himanshu Upadhyaya; Vimalbhai, MATU – People's Organisation, Uttaranchal; Chittarooma Palit, Narmada Bachao Andolan, Madhya Pradesh; Ravi Rebbapragada, Samatha, Andhra Pradesh

Garland of Hype

Dunu Roy (August 2004, qadeeroy@vsnl.com)

This is in response to the article by Shri Suresh Prabhu (Garland of Hope, Times of India, August 14), which well-known environmentalist has contributed and *DRP* is very happy to carry. Shri Suresh Prabhu, as others are welcome to contribute.

As a former Union Minister, Suresh Prabhu (Garland of Hope, Times of India, August 14) has obviously had access to official files and reports, which are denied to all laymen and most experts. Hence, it is indeed welcome that he has opened the doors to a public debate on the issue of interlinking of rivers (ILR). The arguments he has presented and the logic that flows from the given data, therefore, merit closer examination.

Let us first explore how the problem has been posed. Not all floods and droughts are a “problem”; they are part of nature’s cycle, just as the monsoon is. A drought is a drought, no matter how many people live in the affected area. If per capita water availability has decreased four-fold for a three-fold increase in population over half a century, then obviously population growth alone is not responsible for the presumed scarcity of water. Equally clearly, if the water available in the “deficit” Sabarmati basin is 300 cubic metres per capita then it is difficult to comprehend how a further 1400 CMPC can be brought from a “surplus” basin. Finally, if utilisable water is limited to 690 BCM, can we be foolish enough to say that we will need almost twice that amount (1180 BCM) in 2050 and then begin calling this imaginary deficit a problem? The first lesson of sustainability is to match requirement to what is available, rather than the other way around.

There can be little difference of opinion perhaps to measures such as regulating extraction and conserving water, improving efficiencies and harvesting rainwater locally. But if, according to the Central Ground Water Board, 37 BCM of ground water can be recharged locally at only Rs 245 B (billions), then what is the validity of investing Rs 5600 B in obtaining a 175 BCM from interlinking rivers? As for the artificial “discharge” (sic) of aquifers proposed by the CGWB, Mr. Prabhu does not disclose that the same CGWB has a “feasible” plan to recharge 71 BCM into the sands of the Thar desert by bringing the water over 800 km from the Sarda river.

The ILR, according to Prabhu, has several objectives. Other than the transfer from surplus to deficient basins through canals and storage “basins” (sic), the project will also generate hydel power, increase irrigation, recharge groundwater, moderate floods, and open up navigation – besides ensuring a minimum flow in the rivers. What is not discussed is how these various objectives are actually in competition with each other. The demands of hydel power generation on impounded water are often in conflict with the demands of flood

control and irrigation. Farmers require the release of water into irrigation channels in summer, when power utilities want the water to remain impounded in the reservoir. Similarly, floodwaters should be stored behind the dam during the rains, but that is also the time when dam managers want to release the waters to ensure the safety of their dams. Ground water rechargers want the floodwaters to spread over the flood plain when flood managers want to confine the floodwaters between embankments. Water “management” is not just about throwing a cluster of desires into a wishing-pot. It is about resolving the conflicts between competing demands.

The only conflict that is actually recognised by Prabhu is the one of finding a solution to displacement. He confesses that the past record (of the govt) has been deplorable. But he does not go into the reason why. Without any intelligible analysis, therefore, he throws in yet another desire into the wishing-pot. Give over the job to the “special purpose vehicles”. But then, if govts are incapable of handling even a relatively simple issue like looking after the basic needs of the people, what makes them so reliable in implementing gigantic development projects? In fact, the only actors who have really proved to be capable of rehabilitating (even marginally) the displaced, against all odds, are the displaced themselves. So why are they not being invited to the governance table?

Finally, who are the invitees? Prabhu writes that he appointed “organisations of repute” to the task force on ILR in 2002. Amongst them was the National Water Development Agency, which was set up in 1982 by the (self-confessedly incompetent) govt to “prepare feasibility studies” for ILR. In other words, the mandate of the NWDA is to prove that interlinking is feasible. To expect that it would now undertake an objective examination of its own work is akin to believing in the impartiality of the Queen in Alice in Wonderland.

Prabhu’s pleas that all studies must be put in the public domain (he did not do that when he was task force chair), that there should be a non-partisan examination and that a national consensus is needed are welcome. But half-measures are not. The “public domain” cannot be restricted to the seminar rooms of the Ministries. “Non-partisan” cannot be taken to mean only those who agree with govt. The “nation” and its “stakeholders” cannot exclude all those crores who have been and continue to be displaced, evicted, pauperised, and bludgeoned for the sake of “development”.

RIVER LINK NEWS

Supreme Court orders violated The Supreme Court has asked the Centre to furnish details on the progress made on the Court's suggestion for enacting legislation to take control of rivers to facilitate inter-linking. A Bench told the counsel for the Centre that in Oct '02, it had asked the Centre to pass a law. It seemed that no progress had been made, Bench said and granted four months to file an affidavit. The Bench wanted all the eight feasibility reports prepared so far to be put on a website. As we write this, the official website of the task forces (www.riverlinks.nic.in) does not have the feasibility study and the Task Force has clearly violated the Supreme Court order. In the meantime a new PIL has been filed in the SC pleading that the govt should be asked to renew the tenure of the task force that ended in June 04. The PIL will be heard along with the pending ILR petition in Aug '04. (THE HINDU 280404)

ILR to be reviewed The Union Minister for Water Resources said that the govt will review the ILR in its totality. He also promised to review the National Water Policy to "update it" and give it to more focus and emphasis. He said that he would look in to the observations of the ILR task force. (THE HINDU 250504)

However, in the Union Budget, in the Expenditure Section, Vol 2, there is a provision of Rs 35 crores for the National Water Development Agency to cover the Agency's work, including the preparation of DPRs and the expenditure on the Task Force. The govt needs to abolish the NWDA and save those crores for real solutions to water problems.

On August 16 and 17, the Union Minister for state for water resources informed the Parliament in response to questions that the states are not against river linking and that work on feasibility studies is on course to be completed by Dec 2005.

Financial plan The ILR has recommended across the board imposition of water charges, levy of cess and duties on select goods of mass consumption, levy of cess on foodgrains procurement and raising agriculture mandi tax as some of the measures to recover the costs. As per preliminary estimates average investment requirement would be Rs 460 B per annum over 12 - 15 years for 30 river links. The plan prepared by the ILR Task Force emphasises charging water costs from farmers. The plan recommends imposition of cess on water deficient states, which will benefit from additional water and increased irrigation potential. The Action Plan recommends that the funding of the programme be linked to the cost-recovery and charges be essentially recovered from the beneficiaries. It suggests raising part of the funds through private participation in hydropower projects and in development of canals and command areas. (THE HINDU 270504)

Inter-linking to harm fish According to studies by School of Industrial Fisheries under the Cochin University of Science & Technology, ILR will permanently alter Habitat Stability Indices of fish, which are now protected by the individuality of rivers. ILR would bring about severe alterations of habitat parameters such as type of microhabitat and vegetation governing the presence of these fishes. There is a possibility of extinction of some of the species. Of the 143 species identified, 29 are endangered, 14 critically endangered and 31 endemic to Kerala waters of which seven are undergoing drastic reduction in population. (THE INDIAN EXPRESS 270504, BUSINESS LINE 140604)

Protests over Krishna project People from W Maharashtra have started to oppose ILR that seeks to divert surplus water from the Krishna river to the Ujani dam. The project being implemented by the Maharashtra Krishna Valley Development Corp is called the Krishna-Bhima stabilisation project. Eyebrows have been raised about the actual motive behind the project, as 130 TMC water from Kolhapur, Sangli and Satara will be first diverted into the Nira river in Baramati taluka of Pune before it is routed to the Ujani dam located in Indapur taluka of Pune. Fears have deepened that almost all the water may first find its way to the lush farmlands and the cane fields of the villages in Baramati and the townships in Pune district, while water for the parched Marathwada region may remain a pipe dream. Irrigation dept officials are also expressing surprise over the speedy clearance of the project, which was flagged off without any fanfare. Officials are wondering how the funds-starved MKVDC could implement this, when several other projects undertaken by them are incomplete for want of money. "The project was started on the premise that surplus water from the Koyna and Warna dams in Kolhapur flows to Karnataka and that the water should instead be diverted to Ujani dam for use in the Latur and Osmanabad districts. However, it appears that the water from the Krishna will be utilised for Baramati and Pune," the official added.

➤ **Assembly resolution** The Maharashtra Assembly has unanimously passed a resolution for linking of rivers in the state and has demanded funds from the Union Govt for the same. The resolution says that the scheme would benefit Andhra Pradesh, Gujarat, Karnataka and Tamil Nadu more than Maharashtra. The resolution claimed that 42% of the state is drought prone. (THE TIMES OF INDIA 300504, HINDUSTAN 050604)

Bangladesh urged to study ILR Eminent people in a seminar organised by the Institute of Engineers, Bangladesh urged experts of Bangladesh to carry out "a rigorous study" on the impacts the Indian ILR Project. Speakers feared it could reduce river flows in Bangladesh, depleting fish stocks and threatening the livelihoods of millions. It could also lead to desertification of N Bangladesh and rising salinity at river mouths in the south. (NEW AGE 080404)

DAMS

Bhakra at risk: Silt delta in Gobind Sagar lake A huge silt delta of about 3 sq km area has been discovered in the Gobind Sagar lake, 12 km from the Bhakra dam, reducing its storage capacity. Earlier it was estimated that the silt delta was about 18 km from the dam. According to the BBMB, the 100 - 150 ft high delta is moving at a speed of 400 - 500 ft per annum towards to dam. According to experts, however, due to the continued deforestation and increased inflow of silt, the delta was moving at a speed about 1100 ft per annum towards dam. Once the delta reaches the dam, the storage and generation capacities would almost be finished, said experts. Sources also blame the former BBMB authorities for deposition of silt delta in the reservoir. The former BBMB authorities had been storing water in the dam even beyond the prescribed limits that led to the formation of the delta. At times water was stored in the dam up to 1688 ft against the maximum recommended level of 1680 ft. Now that the delta has been formed the heading up of water has become a compulsion for BBMB. The recent deposition of the muck along the Sutlej basin by the NTPC's Kol dam has further raised the concern. (THE TRIBUNE 250504)

People thirsty next to Bhakra 350 villages on the banks of Gobind Sagar are reeling under an acute drinking water shortage. Most of them were affected by the Bhakra dam and do not have a proper drinking water supply even after 40 years of commissioning of the Dam. Villagers depend on the *baulis* that dry up in summer. The water supply in the area has been bone of contention between the BBMB and the HP govt. BBMB claimed that after the construction of the dam the BBMB used to supply drinking water to some of the villages. The Govt, however, objected to the BBMB supply. It asked the BBMB to deposit with it the money required for the drinking water supply. The villagers lost their water supply in the process. (THE TRIBUNE 250404)

BBMB violating FCA, dumping silt in Balh Valley The BBMB that is managing the 990 MW Beas-Sutlej Link project, have been violating the Forest Conservation Act, 1980, by dumping silt into 30 km long Suketi Khad. Neither the Forest Dept nor the Ministry of Environment and Forest has ever questioned the BBMB about the violation. The BBMB started throwing silt into the Lohara and Suketi Khads immediately after starting the BSL project. This silt has rendered infertile thousands of acres in the Balh valley once considered the most fertile valley of HP. It has destroyed the aquatic life in a 30 km stretch.

➤ **Prepare CAT plan, BBMB told** The Forest Dept of HP has asked the BBMB to prepare a catchment area treatment plan to check the flow of silt in to

Pandoh dam on Beas river and to deposit Rs 7.2 M with the Forest Conservator, Mandi, for plantation in the catchment area of Suketi Khud. As per the provision of the FCA 1980, the drawing up of CAT plan is mandatory but when this project was cleared, the FCA was not enacted. This water is collected at balancing reservoir at Sundernagar where the silt is thrown into Suketi Khud. The problem has been increasing for over two decades as the silt load has been increasing in the catchment upstream of Pandoh Dam. (THE TRIBUNE 120404, 250504)

Plea to HC against Larjee HEP Residents of Batwari panchyat has passed a resolution and sent a copy of it to the Chief Justice of HP High Court to treat it as a "PIL". Panchayat is praying for appropriate action against the 126 MW Larjee HEP authorities, which is causing pollution due to which life of residents of 50 villages had become miserable. The resolution said that 90% of 126 MW Larjee HEP was under this panchayat where construction was going on for the past many years. Construction companies Shankar Narayan Constructions and Continental Constructions were using heavy machinery and blasting for mining the area. Many houses have been damaged due to blasting and 15 sources of natural water had dried up, due to dust caused by the project work. The project authorities have been dumping the muck along the Beas River in forest area up to four km length. Most of the times the muck is thrown directly into the Beas River. (THE TRIBUNE 280404)

COMMENT The muck from the Larjee HEP site would clearly end up in Pandoh reservoir, which turn would take it to Balh Valley. But there is no one make these connections in this case or in any case in any river valley in India. We require a authority, possibly for each river valley and one National River Directorate, to make such connections and monitor and control the status of rivers and river valleys. The High Court, it is hoped would do see the connections, but the hope is not very strong seeing the past experiences.

Mining in Balh Valley Despite ban On Feb 7 a notification was issued banning mining in Balh Valley, following visit of the CM in early Feb and yet mining has been increasing day by day. On March 14 he declared, following pressure from mining valley, that controlled mining will be allowed, but none in agriculture land. Illegal mining is increasing on agriculture land. According to mining dept, no mining permit was issued for 22 km long Suketi Khud and 6 km stretch of Kansha Khud. Mining damages the fields and at several places even adjoining land has been lowered 6 - 10 ft. It has lowered the water level in Suketi khud. The bed is dug more than 15 ft at various places due to which animals fall into these ditches. (THE TRIBUNE 190404)

Case for decommissioning of Dumbur Dam In 1951, cultivators constituted close to 63% of the total tribal workforce in Tripura, only 9% were agricultural labourers. By 1981, only 43% of the tribal workers were cultivators and 24% were agricultural labourers. Tribals today account for 41% of the agricultural landless labourers. This was due to the huge influx of Bengali population from erstwhile E Pakistan. The land loss was compounded by large-scale loss of tribal lands to the Dumbur HEP, also known as Gumti HEP. The pauperisation of Dumbur's once prosperous tribal peasantry contrasted with the huge benefits that Bengali urban dwellers gained by electricity and Bengali fishermen gained by being able to fish in the large reservoir. This was not lost on a generation of angry tribal youth who took up arms to fight an administration. The project disturbed the fragile ecology of the Raima Valley and introduced a permanent sense of loss into the tribal psyche. All tribal organisations strongly protested the commissioning of the Gumti HEP in 1976. But the govt crushed the protests. A 30 m high gravity dam was constructed across the river Gumti about 3.5 km upstream of Tirthamukh in S Tripura district for generating 8.6 MW of power from an installed capacity of 10 MW. The dam submerged area of 46 sq km. Official records suggest 2558 families were ousted as they had valid titles of land lost. Unofficial estimates varied between 8000 – 10 000 families or about 60 - 70 thousand people. The Gumti, Tripura's principal river, is formed by the confluence of two small rivers, Raima and Sarma. Before the dam, the hills around the project area were sparsely populated and the area was almost wholly under dense forest cover supporting wildlife and rich flora. After the HEP was commissioned, not only did almost half of the tribal families displaced by the Dam move into the hills in the river's upper catchment area, but the roads built for the project opened up the rich forests of the area to illegal logging. The project has caused huge damage not only to the ecology of the Raima-Sarma valley but also to inter-community relations in the state. Demand for decommissioning of Gumti HEP is on the rise. The power output is not economically viable due to siltation in reservoir. The state govt claims that by investing Rs 11.8 M, it has been able to restore the output to the original installed capacity of 10 MW. In view of the huge natural gas reserves now discovered in Tripura and major gas thermal power projects in the pipeline (including one with the capacity to generate 500 MW against the state's current peak demand of 125 MW), it is wasteful to invest in the Gumti HEP. Since over 45 sq km can be reclaimed from under water if the Gumti HEP is decommissioned, huge fertile tracts of flatland would be opened up for farming and resettlement of the landless tribal peasantry. At least 30 000 tribal families, perhaps the whole of the state's landless population, can be gainfully resettled on this fertile tract. This would free the hilly forest regions in the upper catchment of human pressure. (HIMAL-Nepal 0504)

Ranjit Sagar oustees angry The Ranjit Sagar Dam oustees Association is sore about the non-implementation of a Punjab Govt decision to provide the jobs to one member of each ousted family belonging to Dalhousie tehsil of Chamba dist in Himachal Pradesh. An understanding was reached between the Chief Secretaries of Punjab and HP on July 13, '98. (THE TRIBUNE 060404, 170604)

PIDB to take over Shahpur Kandi project The Punjab govt has decided to involve private investors in the Shahpur Kandi project in Gurdaspur district and hand it over to the Punjab Infrastructure Development Board. The Rs 17 B project, scheduled to be completed in four years, would be financed largely by either the Power Finance Corp or the Rural Electricity Corp taking the burden off from the state govt. The state govt has been seized with the problem of garnering funds for the project, which had remained standstill for many years. Over 10,000 employees at the Ranjit Sagar dam had been, however, opposing the govt's proposal to hand over the project to private investors fearing that they would be rendered jobless. The Shahpur Kandi project, to be constructed downstream the Ranjit Sagar dam on the Ravi river is supposed to help the J&K get its irrigation water share and augment the power production at the Ranjit Sagar dam. At present, electricity production at the dam is nearly one third of its installed capacity of 600 MW. In addition, the Shahpur Kandi project itself would have an installed capacity of 168 MW. The state govt has so far spent Rs 1.17 B, mainly for acquiring the land. (THE TIMES OF INDIA 160404)

Karanja dam oustees denied basic amenities The Karnataka Govt's special package for over 20000 people displaced by the Karanja Dam remains a mirage with these persons denied even basic amenities. Though the Govt has resettled the villagers of Sangolagi, Dakulagi, Sindabandagi, Ranjolakheni, Athivaala and Boothagi, basic amenities such as roads and drinking water are still not provided. For the last some months, the villagers have been demanding their due, including alternative land grant, job for one member of every displaced family, a special rehabilitation package and waiver of cooperative loans. In Feb, the water resource minister had conceded 12 of the villagers' demands, including the special package. Even the submergence of the villages by the backwaters in rainy season has not been addressed. The district administration only adopts ad hoc measures every year. (DECCAN HERALD 020504)

Uttaranchal seeks more aid for Tehri The Chief Minister of Uttaranchal has sought Rs 2.75 B from the Centre as part of special package for the rehabilitation of people from the 125 villages affected by Tehri Dam. The project work has been going on for the past two decades and has seen steep cost escalation. Starting from Rs 2 B, the cost now stands at Rs 60 B. (BUSINESS STANDARD 070604)

Gosikhurd dam oustees' demands Oustees of the ongoing Gosikhurd Dam in Maharashtra took out a protest march from Ghatumri village to the dam site on May 31, '04 seeking to know for how long the Maharashtra Govt would deny them justice. Ghatumri, the first village to be submerged by the dam, is yet to get what it was promised. Nearly 100 000 people, as per the revised estimates, would lose land and home to the dam. Revenue officials had excluded dozens of families in every village in affected area from the list on the pretext that were not in revenue records, said Vilas Bhogade, the convenor of Gosikhurd Prakalpgrast Sangharsha Samiti. This happened despite the fact that the people are living in these villages since ages. Oustees are now demanding a fresh survey to be carried out by the Govt for correct estimates. Agitated by the inexplicable delay in redressal of their grievances, the agitators also demanded the SDM to convene a meeting of all the concerned officials to redress problems of the oustees every month in the affected villages. (THE HITAVADA 020604)

Rengali Dam threatens man and beast in Orissa It is an area where mangrove forests thrive, where the waters are home to saltwater crocodiles and Olive Ridley turtles and where man and beast co-exist. The Rengali irrigation project includes a dam over the Brahmani River and the irrigation canals. Experts say it will badly affect the mangroves of Bhattarkanika sanctuary in the Kendrapada district by diverting the flow of fresh water and increasing salinity. The mangrove forests spread over 200 sq km are rich in biodiversity. Besides, the Gahirmatha beach in Bhattarkanika is known as the world's largest nesting ground of endangered Olive Ridley turtles. So far, 59 km of the canals has been built. The govt is now planning to increase it to 79 km by June 2005. It is claimed that on completion, the project would create irrigation potential for 235 500 Has in Angul, Dhenkanal, Cuttack and Jajpur districts. The Samal Barrage is to divert a huge quantity of water for irrigation and thus reduce the water flow in the Brahmani River. The situation will worsen during summer. Saline ingressions is expected to occur up to 75 km upstream, affecting the flora and fauna. Constant fresh water flow throughout the year has resulted in ecological changes. Sundari trees, with other associated trees, have flourished towards the seaward side. Yet all this could change. Estuarine crocodiles may leave the core sanctuary area and migrate upstream since saline water areas will increase. The Wildlife Society of Orissa has suggested that a detailed study of the project's effects on the mangroves and crocodiles be undertaken to reduce the adverse impacts. (IANS 120604)

NHDC Plans The NHDC is to start 3 new HEPs in MP: Narsinghpur (60 MW), Hoshangabad (55 MW) & Handia (tbd). The feasibility reports of the 2 HEPs have been given to the govt. (BUSINESS STANDARD 070404)

HYDRO PROJECTS

PowerMin claims doubted As per Power Ministry, 2590 MW hydel capacity has been added during 2003-4. It claimed that this is double the best ever-capacity addition of 1300 MW achieved in the past. CERC & the PMO had questioned the claims, saying the actual addition is 2090 MW. (THE ECONOMIC TIMES 170404)

NHPC MoU Ministry of Power and NHPC on March 31 '04, have signed a MoU. As per MoU, NHPC plans to generate 10500 MU during 2004-5 and ensure 93% capacity index. The gross profit has been projected as Rs 8.97 B. The NHPC is expected to employ a capital of Rs 130.96 B and earn a gross margin of Rs 12.42 B and is expected to recover 92% current dues from the concerned SEBs. The Govt of India has allocated Rs 1.7 B to the HEP sector as budgetary support in the 10th plan. Out of which Rs 1.4 B has been earmarked for NHPC. (BUSINESS STANDARD 090404)

HEP Commission proposed The proposed 11-member committee headed by the powersec would work towards quick clearances from the environment and finance ministries, a single-window clearance. It will have the administrative and financial powers to sanction HEPs up to 300 MW. Getting environment, forest and wildlife clearance can take time – up to 37 months for the environment clearance and 20 months for the forest and wildlife ones. Then, pushing it through the Pre-Public Investment Board, the PIB and the CCEA can take two years. (THE STATESMAN 180404)

NTPC plans The NTPC is planning to install eight new HEPs with total capacity of 1861 MW in Uttaranchal. It has already taken up Lohari Nagpala and Tapovan Vishnugad. The Corp has taken responsibility to develop 5361 MW HEPs. In Uttaranchal a 630 MW Garba Tawaghat HEP is proposed on Kalinadi, while three projects would be established on Goriganga River including Sirkari Bhayol Roopsia (210 MW), Bhang Bogudiyar (200 MW) and Bogudiyar Sirkari Bhayol HEP (170 MW). A 276 MW HEP is proposed in Goriganga at Khasibada. The NTPC is interested in two HEPs on Bhagirathi River too, which are Gangotri HEP (55 MW) and Harsil HEP (180 MW). A 140 MW project at Badrinath is proposed on Alaknanda River. Two HEPs in Arunachal Pradesh would be on Lohit River, namely Hutong HEP (950 MW) and Kalai HEP (2550 MW). (DANIK JAGRAN 110404)

Uttaranchal NTPC HEPs The CM signed an agreement with NTPC for the 4X150 MW Loharinag-Pala HEP (a run-of-the-river scheme on the Bhagirathi in Uttarkashi district) to generate 1939 MU per year at 90 % dependability and the 520-MW Tapovan-Vishnugad project a run-of-the-river scheme across the Dhauliganga in the Alaknanda valley in Chamoli district to generate 1586 MU a year. (THE HINDU 250604)

HIMACHAL PRADESH: NHPC Parbati HEP: villages under threat Work of Parbati HEP in HP in Suind village, Sainj valley has been affected due to some cracks that have reportedly appeared on the hill on which it is being constructed. There are cracks within 400 m of the hill, near the site of the proposed powerhouse. The company engaged in construction work did not inform project officials and scientists of the geographical dept about cracks being developed. About 20% of the estimated weak portion of the hill sunk. According to experts, if the rest of the portion slides, the debris will fall directly into river Sainj and flow of the river could stop, putting the area under threat of being submerged. Suind and Shillah villages could be completely destroyed while the debris could also affect people in the Raila and Saharan villages. (THE HINDUSTAN TIMES 210404)

NHPC Chamera-I oustees seek R&R 192 families ousted by the Chamera HEP I in Chamba dist have sought the release of their compensation package, as decided by the govt in Nov '02, and in view of the verdict given by the Himachal Pradesh High Court recently in their favour. The state level high-powered Rehabilitation Committee of the state govt had decided to provide compensation of Rs 0.3 M each to 192 families ousted by the project and Rs 0.25 M each to 120 families ousted by the stage-II. (THE TRIBUNE 190604)

Nathpa Jhakri violets environmental norms Authorities in HP are investigating whether the Nathpa Jhakri HEP, funded by the World Bank, has violated environmental norms. The HP pollution control board has asked the govt-owned Sutlej Hydropower Corp why the projected height of the HEP has been raised from 60 to 65 m without the approval of authorities. The company has also been asked to explain what would be the effect of raising the dam on the surrounding environment. The board has said it wants to know why minimum water discharge levels into the Sutlej River were not being maintained. The Sutlej River is being diverted into a 26 km-long tunnel, the longest in the world. (BBC News 090404)

SJVN plans After the commissioning of the 1500 MW Nathpa Jhakri HEP, the Sutlej Jal Vidyut Nigam is keen to execute seven more projects to raise its capacity to 4000 MW including 439 MW Rampur HEP and 402 MW Shongtong-Karchham project. Khab-1 (450 MW) and Janri Thopan (2X240 MW) on Dhauliganga river in Uttaranchal were also in pipeline. The Uttaranchal govt has entrusted two projects to SJVN for detailed investigations. SJVN claimed that the matter regarding raising the level of Nathpa dam from 62.5 m to 67.5 m was under consideration.

➤ **WB to finance SJVN?** The SJVN unfolded Rs 130 B investment plans. The CMD said that the corp would take up projects totaling 2500 MW for which it would necessitate a debt component of over Rs 90 B. It proposes to tap various avenues, including the World

Bank for funding the projects. The Rampur HEP would be built with an investment of Rs 25 B. The WB had evinced interest to part finance the project. (THE TIMES OF INDIA 280504, THE HINDU 170604)

Pact for Malana-2 Power The Power Trading Corp has signed a 40 year MoU with the Punjab State Electricity Board for sale of power from the proposed 100 MW Malana-II HEP being developed in Himachal Pradesh by an independent power producer. (THE TRIBUNE 090504)

NTPC violates job norms The HPSEB Project Engineers Association has accused the NTPC, which is executing 800 MW Kol Dam project on the Mandi - Bilaspur border of giving step-motherly treatment to the project engineers. Under the MoU between the NTPC and the state govt, the NTPC would recruit 30% engineers from HPSEB. At present the strength of executives had gone to 140, but only 11 HPSEB engineers had been provided jobs. (THE TRIBUNE 290404)

J&K CEA clearance The CEA has given its nod to 44 MW Rs 6.75 B Chutak HEP in Kargil dist of Jammu and Kashmir and 45 MW Rs 6.31 B HEP in Leh dist, both to be executed by NHPC. Another Rs 4.8 B would be invested in transmission lines. (THE TIMES OF INDIA, BUSINESS STANDARD 040504)

Ongoing HEPs The J&K Power Development Corp has approved availing of term loan from various financial institutions like Power Finance Corp, Rural Electrification Corp, Housing and Urban Development Corp and banks for funding the Baglihar HEP. The funds have been tied up to meet the balance requirement of Rs 24 B. This includes Rs 6.3 B agreed by the Union Govt to be provided as central assistance. A major programme under the 10th plan for renovation and modernization of existing power projects at an estimated cost of Rs 1.5 B was approved in the state. The projects include Lower Jhelum HEP, Upper Sindh HEP-I, and HEPs at Sumbal, Ganderbal, Hunder, Sumoor, Chenani-I, and Bazgo. The funds have been tied up with Power Finance Corp and Union Ministry for Non-Conventional Energy Sources. The CM stressed on early modernization and renovation of the multipurpose 3.75 MW Parnai project. It was informed that pre-feasibility report of 14 power schemes have been prepared and posted to the MNES for financial assistance. The MNES has already sanctioned Rs 140 M for completing the languishing projects. Of this Rs 35 M have already been received. (DAILY EXCELSIOR 270504)

NORTH-EAST SC clears Subansiri HEP The Supreme Court has given a green signal to the construction of the 2000 MW Subansiri HEP in Arunachal Pradesh. A three-judge bench directed the Govt to give clearance to the project with the environmental safeguards suggested. (BUSINESS LINE 220404, Order of the Court in Forest Case Update One)

NHPC faces protests over Middle Siang At a public hearing Middle Siang project on June 9 '04, concerned NGOs and members of the public from various corners of Arunachal Pradesh and other parts of the NE region raised serious objections to the way the NHPC is functioning in the region. The Pollution Control Board of Arunachal Pradesh and the office of the Deputy Commissioner of W Siang District organized the Public Hearing at the district headquarters of W Siang in central Arunachal on the Siang Middle (Siyom) HEP. The town house, Along was packed with over 800 people including the *gaonburas* from the affected villages in their red coats, and public eager to know more about the project and the proceedings of the hearing. During the hearing, a few persons like Jarjum Ete, president of the Center for Environment, Development and Gender Empowerment and spokesperson and former president of the Arunachal Pradesh Women's Welfare Society Itanagar, Domin Loya of the NEFA Indigenous Human Rights Organisation, and Horsen Ete, secretary of the Siang Valley Bachao Committee shared their understandings and information of the process of the mandatory public hearing as part of such large development projects. At the very outset, the speakers mentioned that the experiences of existing NHPC projects in the region, especially the Loktak project in Manipur and Teesta-V project in Sikkim, were far from the impressions conveyed in the promotional films that were shown. These representatives from the non-governmental sector informed the participants about the processes of a public hearing, the mandatory 30 days' notice of date, prior announcement of venue, time, names of panelists. The public access to the documents like the Application and Questionnaire of the NHPC, Environment Impact Assessment and Environment Management Plan in this case executed by Water and Power Consultancy Services, the Detailed Project Report, the Executive Summary of the EIA & EMP or the DPR which must be made available to the concerned public 30 days ahead of the hearing were also clearly explained to the public by them. These documents, especially the executive summary of the EIA and EMP should be translated into local languages and dialects for the benefit of the local, affected and concerned people, they said. The NGO representatives also raised questions about the independence and authenticity of the sources of the report since some serious misinformation about the land rights and fishing rights of the local indigenous community, and terrestrial ecology had been noted in the EIA, a copy of which the NGOs could get only two days before the hearing after much running around. NGO representatives also noted that the EIA and EMP field surveys were totally inadequate as they were conducted only in three seasons, leaving out the longest and most important monsoon season in the project area. During the day it also came to public knowledge that even the members on the panel of the public hearing were not aware of the established

mandate and objectives of such a hearing as required by the EIA Notification 1994 amended on June 13, 2002 of the Central Ministry of Environment and Forests, nor had any of the panel members seen the relevant documents in full. They also did not seem to be aware about the discrepancies in the documents submitted by NHPC to the Ministry of Environment and Forests. Two *gaonburas* from Bogu and Payum said that the land of the people were the only real asset left for future generations and they did not want to part with their land because the compensation money cannot sustain their families for too long. Taponyaying, *gaonbura* of Bogu village said, "Let us forget about this dam, and let us live in peace." Summing up the public opinions at the end of the hearing Jarjum Ete came down heavily on the panel members for conducting the hearing in violation of established guidelines of the Ministry of Environment and Forests. She said that such a public hearing should have been organized by the State Pollution Control Board, and not by NHPC, the project applicant. (ASSAM TRIBUNE 120604)

In the meantime we learnt that the World Bank has agreed to consider funding the Middle Siang HEP. The World Bank has not funded any new hydropower project in India in the last sixteen years and this departure from the trend is clearly Neither Just, nor Justified.

The Aug 3 public hearing again so many violations and many of those present were not even allowed to speak. A number of organisations including Rural Volunteers Centre, Brahmaputra-Barak Watch, NEADS and CORE have demanded a fresh EIA and fresh public hearing.

Kameng HEP cleared The Public Investment Board has cleared the 150 X 4 MW Rs 24.969 B Kameng project in Arunachal Pradesh with a debt equity ratio of 70:30. The project to be implemented by NEEPCO in W Kameng district, 92 km W of Itanagar is to generate 3592 MU. (THE TIMES OF INDIA 110504)

Teesta project faces protests A group of NGOs have sought a closure look at the Teesta Low Dam III, proposed along the Teesta River in Kalimpong sub division of Darjeeling district in W Bengal. The project is to be completed during the 10th Plan, as is the Teesta-V in Sikkim and TLDP-IV in N Bengal. Seven HEPs, five in Sikkim and two in N Bengal along the Teesta basin, are in the pipeline. Demanding that the EIA and the clearance of the Environment and Forest ministry be kept in abeyance, the groups have sought a review of the notification process or an inquiry by a parliamentary standing committee to look in to the process of granting environment clearance to the project. In a fact finding report concern has been raised over the cumulative impact of the series of 10 dams in the Teesta river basin, rich in forests and biodiversity. (THE HINDU 090604)

NHPC Violations in Teesta V In 2002, the Dept of Forest, Environment & Wildlife, govt of Sikkim, dragged the National Hydroelectric Power Corp to court for serious legal violations in the Teesta Stage-V HEP. Two years have gone by, yet little has changed on the ground. And the violations continue. Teesta Stage-V was the first project taken up in a proposed six-stage cascade plan to harness 3635 MW of hydropower, all within 175 km of the river in Sikkim. Teesta V is a run-of-the-river scheme, involving a dam at Dikchu, which will raise the water level upstream before it's diverted through a 17.5 km-long headrace tunnel to the powerhouse at Balutar. The scheme is being projected as "environmentally benign". This perception conveniently ignores the impact of several features intrinsic to this design. The project involves extensive tunnelling in a geologically fragile landscape, the environmental and social impacts of which are grossly underestimated. In May 2004, the villagers of Amdara, situated above the dam site, started moving out of their damaged homes. The tunnelling also makes necessary the removal of huge quantities of muck and rock debris. Its disposal has been handled very poorly and this is one of the prime legal violations in the project. The project received clearance from the Union ministry of environment & forests in 1999 and an agreement between the govt of Sikkim and NHPC for the project was signed in Aug 2000. Since early 2001, the DFEW started detecting violations. Dumping of huge quantities of excavated muck and debris into the river, on the river banks and in surrounding reserved forests by NHPC are among the most serious. These are a violation of state forest laws as well as the mandatory conditions of clearance granted under Central laws such as the Forest (Conservation) Act, 1980, and the Environment (Protection) Act, 1986. Continued non-compliance by NHPC despite repeated summons/notices/reports forced the DFEW to file a petition in the court of the district judge (E & N) Sikkim (Civil Suit No. 28 of 2002) against the company and its contractors in late 2002. In Nov 2002, the court issued an ad-interim injunction restraining the company from violating the law. Till today, the DFEW has filed several contempt petitions since NHPC has failed to comply with the orders. The ministry of environment & forests verified the violations and in Sept 2003, gave a show-cause notice to NHPC for violations of environment and forest laws, thus supporting the state govt's action. In July 2003, a swollen Teesta river took away huge quantities of waste and dirt blocking its course near the powerhouse site, scouring the riverbanks in the downstream stretches. One morning in May 2004, the bridge at the village of Lum (located in the Dzongu area, a legally notified reserve of the Lepcha tribe) collapsed after indiscriminate dumping of waste downstream of the Dikchu dam site. In addition, the narrowed river course caused the scouring of the riverbank. One of the mandatory clearance conditions requires the company to ensure thorough examination and adequate

treatment of all labourers to be engaged in the project by health personnel before issuing them work permits. These are only some of the violations and resultant impacts that have begun to show up. They clearly indicate a need for the several state and Central level monitoring committees to conduct a comprehensive review of the project's activities and ensure full compliance of all conditions before work is allowed to continue. (THE STATESMAN 260604)

Tipaimukh A move by the govt Manipur to implement the 1500 MW Tipaimukh dam project mooted in 1955 will displace at least 60,000 people and submerge hundreds of ha forests and cultivable land. The US \$129.10-B project has been mired in controversy since it was conceived. People have threatened to launch a series of protests against the project, which is likely to displace thousands of tribals in the districts of Churachandpur and Tamenglong in Manipur. Recently Union Minister of Heavy Industry Mr Santosh Mohan Dev expressed interest in proceeding with the project. The proposed 162.8 m high earthen-rock filled dam will have a reservoir capacity of 15.5 BCM and will be located 500 m downstream of the confluence of the Tuivai and Barak Rivers in Manipur's Churachandpur district, bordering Assam and Mizoram. A Neepco engineer reveals, "The reservoir capacity of the dam would be 75% higher than the Bhakra." Independent experts like Dr R.K. Ranjan Singh, a member of the Manipur Association of Science and Society, caution that the project site is located on a major seismic zone that has already experienced five major earthquakes. The Manipur govt, which had earlier rejected the project, signed a MoU with Neepco last year. Hundreds of villagers had taken to the streets last year to demand the scrapping of the agreement. Charges U Nobokishore of the Center for Social Development in Manipur, "The entire plan was made without consulting tribal people residing in the project area." The tribes of Zeliangrong Nagas and Hmar are likely to be the worst affected. The surging waters of the dam are likely to destroy five lakes that are considered sacred. Says Aram Pamei, secretary of the Manipur based Naga Women's Association, "People in this region are mainly involved in agriculture and horticulture. But with the construction of the dam, 67 villages will be denied their source of livelihood. Out of the 67 villages, 16 will be completely submerged, as will the low lying areas in 51 other villages." There are also apprehensions that higher water levels in the monsoons will submerge 60 km of a national highway. Points out the head of the ecology dept of Assam Central University, Dr Abhik Gupta, "The dam will pose a serious threat to the ecology of Churachandpur, one of the 25 such biodiversity hotspots in the world." The forests under threat are the habitat of several endangered species and rich in orchids, medicinal and herbal plants. (southasia.oneworld.net, 300604)

KERALA Public hearing rejects Silent Valley project

Kunti is the only flowing tributary of the Bharathapuzha River. All the other tributaries have been dammed and do not flow after Dec. The 64.5 m high and 275 m long dam is planned across the Kunti River originating from Silent Valley, just outside the border of the National Park where the river flows down rapidly towards the Mannarkkad plains. The forest loss due to the project is claimed to be 22.16 Ha apart from the land to be acquired for powerhouse in human settlement area in Karapadam. 4.72 Ha private land also would be submerged. The 84 sq km catchment of the project area includes 79 sq km of the Silent Valley National Park. The rapid Environmental Impact Assessment for the Rs 2.471 B 70 MW project was carried out during January - May '03. The public hearing of the proposed Pathrakadavu HEP based on the rapid EIA by Environmental Resource Research Centre, Trivendrum was held on 21 May 2004 at Mannarkkad. According to the study, the proposed HEP will severely reduce stream flow in Kunti and would be the death of Bharathapuzha river. All other tributaries are already dammed and diverted for irrigation through 11 dams in the 6186 sq km catchment area of 209 km long Bharathapuzha river. The recurring severe drought in Palakkad is a testimony to the state of Bharathapuzha. The downstream population depends on Kunti for domestic drinking water and irrigation purpose. The survival of Silent Valley would be at stake because the dam site is proposed in the southwest buffer zone of the National Park that are already under severe stress due to forest fires. Money already for conservation and research studies in the National Park will go waste. Irreparable damage would be caused through easy access for the 1100 odd work force at the dam site. The cost of power would be Rs 6 - 8 per unit. The KSEB is still unable to purchase power at Rs 4 per unit from already commissioned thermal power stations in the state. So who will fund the proposed HEP? Report of the Joint Committee set up by Govt of India and Kerala in 1982 for Silent Valley estimated annual run off of Kunti River as 293 mcm- the rapid EIA in 2003 puts the same at 498.25 mcm (based on 5007 mm annual rainfall). Even if entire rainwater of 84 sq km of catchment area of project drains through the river, the maximum run-off expected is 420 MCM. (Chalaky Puzha Samrakshana Samithi 170504, SAHARA TIME 290504)

Athirappilly HEP The State Pollution Control Board OF Kerala has recommended Athirappilly HEP for clearance to the Ministry of Environment and forests, thus sabotaging the recommendations of the Public hearing panel constituted by the Board itself as per the High Court verdict. The court had ruled for public hearing on the case filed by Chalaky Puzha Samrakshana Samithi against the clearance given to the 161 MW HEP by the Ministry. The panel constituted by the Board conducted the public hearing and had recommended for another public hearing. The report

given by the ten-member panel consisting of the Member Secretary of PCB, District Collector, Science Technology and Environment Director had pointed out that generally people had expressed their objection to the project. Since the Environment Impact Assessment was not comprehensive and was prepared in a hurried manner the panel had recommended for another public hearing after a fresh comprehensive EIA was made public. But the high level meeting held on March 24, '04 has sabotaged the recommendations to hold a fresh Public Hearing. (*Malayala Manorama* 120604)

NEWS FROM THE NARMADA VALLEY

More hurdles for Maheshwar S Kumars, the promoters of the 400 MW Rs 22.33 B Maheshwar HEP have been asked by the Lenders to clear their mounting interest defaults and infuse the promised equity capital into the project, prior to any move towards financial closure. The lenders, including IFCI, IDBI, PFC and the SBI, have also asked for a cost revision exercise before finances can be tied up. The project has been hanging fire since the exit of a number of parties including the US based Ogden energy. S Kumars has been scouting for a strategic partner or for a domestic FI to plug the Rs 3.5 B equity gap. The project was initially supposed to have a debt-equity ratio of 70:30, but would now have a higher debt component of 85%, following the issue of debentures to cover up the equity gap. The initial equity portion of Rs 7.5 B would come down to Rs 3.5 B including the Rs 1.03 B already brought in by the S Kumars group, which is much lower than the Rs 1.85 B equity it was actually supposed to bring in. The Rs 18.83 B debt component is to be financed by a consortium of 14 banks and FIs through a mix of rupee-term loans and the proposed debenture issue. (BUSINESS STANDARD 050404)

Demand to scrap Maheshwar HEP The Narmada Bachao Andolan has demanded that the Maheshwar HEP should be scrapped. Citing a CAG report, NBA said the Power Finance Corp had put Rs 1.4 B (Rs 993.2 M in principal and Rs 395.4 M interest on it), extended to the project, in bad accounts. The PFC disbursed the amount ignoring the pre-disbursement conditions that S Kumar's should infuse their full equity in the project. The NBA also alleged that the PFC had provided the amount in an inappropriate manner. A sum of Rs 5.6 B has been extended as loans whereas expenses of nearly Rs 1.5 B have been verified, said NBA. The CAG report also refutes as unacceptable the PFC management explanation that it had merely followed the same pre-disbursement conditions as that of IFCI, the lead financial institution of the consortium, and insists that the PFC "should have safeguarded its financial interest by ensuring compliance of the pre-disbursement conditions... in view of the reservations of its Board of Directors about the financial position of the promoter group as regards its capability to invest in equity." This is not the first time that CAG has indicted

public agencies for misuse of public money, waiver of norms and failure to collect dues in connection with the Maheshwar Project. The CAG Reports of the years ending 1998 and 2000 had noted that the S.Kumars are yet to pay the state agencies - MPEB and the NVDA for the properties that they took over from these agencies in 1992. (BUSINESS LINE 040604, BUSINESS STANDARD 090604, NBA PR 030604)

SC Directs MP to Provide Land-based R&R The Supreme Court has heard a petition by Sardar Sarovar Dam affected families from Madhya Pradesh. It refused to stay the construction up to 110 m, despite the crying evidence of utter lack of rehabilitation in the submergence area. It did however make clear that Govt of MP must comply with the provisions of the NWDT Award and past Court rulings to provide full land-based rehabilitation to all Project affected families. It ruled that the cash compensation in lieu of land-based resettlement was unacceptable. The case was filed by PAFs of Picchodi and Jalsindhi villages who were affected at the 95 and 100m dam levels, who are still not been rehabilitated despite being affected long back. The Court's judgement comes after a March 16 decision by the Narmada Control Authority giving clearance to further construct the dam from its present height of 100m to 110m. The clearance came after a protracted struggle by the NBA challenging the false claims of rehabilitation and thus the legality of a further height increase. While Gujarat and MP both claimed to have completely rehabilitated all PAFs, Maharashtra admitted that rehabilitation was incomplete. Nonetheless, under pressure from Gujarat and MP to give a green light for further construction, Maharashtra signed a letter promising to resettle the balance PAFs before submergence. MP accounts for 193 of the 245 villages affected by the dam and the bulk of the 40,000 affected families, and it is here where the greatest travesty of justice is occurring. There are thousands of families who have been left off the govt's list for a variety of reasons including land titles that haven't been cleared up, major sons (who are entitled to land) who haven't been counted, faulty level surveys, and the unwillingness of the govt to recognize the traditional but untitled lands of adivasis.

➤ **Oustees launch stir for land** Over 200 tribals from the nine villages affected by the SSP have launched a *bhoomi Hakka* agitation by occupying the denuded forest land in Nandurbar district of N Maharashtra. The displaced tribals were trying to pin down the govt that has failed to resettle them despite repeated assurance and to get the land based resettlement. (NBA PR 170404, THE TIMES OF INDIA 100504)

NCA asks R&R plan for 121.92 m! The Narmada Control Authority has directed the concerned States to draw up a time-bound plan for the resettlement of project-affected families by Nov 2004 to take further the dam height up to 121.92 m. The directive was issued by the NCA at its first-ever meeting held at Kevadia near

the dam site in Gujarat in May 2004. The Madhya Pradesh and Maharashtra would have to resettle about 10,000 PAFs in their respective states to enable Gujarat to raise the dam height to 121.92 m by June 05. (THE INDIAN EXPRESS 120504)

Huge public rally of Beda dam oustees Several hundred men and women affected by the Upper Beda dam in Khargone district of Madhya Pradesh, and belonging mainly to the adivasi Bhil and Bhilala, as well as Banjara communities held an impressive public rally at Khargone. The affected people protested against the state repression on and the confinement of 124 oustees in Khargone jail, 47 of them women. They demanded that the jailed protestors should be unconditionally released, and all work on the Upper Beda dam and the acquisition of their lands should be stopped until they were settled with irrigated agricultural land in the command area of the dam. After the rally, the Beda dam oustees who had been in jail for the last 6 days were unconditionally released. The NBA and the people of the Beda area fighting for their lands, waters and forests announced that the state govt must show them suitable and adequate agricultural land in the command area. After the memorandum for the Chief Minister was handed over to the Collector, village leaders of the Beda dam area expressed their resolve to stake their lives but to oppose the dam at any cost, unless the question of their livelihoods was resolved first. The people of the Maheshwar dam area were also present in large numbers to express their solidarity to the struggle. The Ministry of Social Justice and the NABARD had both responded to the people's demands and written to the state govt seeking clarifications on the matter of rehabilitation. Plans were being worked out to institute a public investigation by a team of individuals of high credibility to examine whether the clearances and sanctions for the dam were obtained on the basis of fudged land figures and non-factual documents. It may be noted that nearly 1100 ha of land in 14 villages, mostly inhabited by adivasis, will be submerged in the Upper Beda dam, one of the 30 large dams in the Narmada valley. The affected people have fought valiantly since 1997, to stop this dam and its impending destruction. In 1999, after a protracted fast, the state govt even passed an order to explore and implement alternatives in lieu of the dam and instituted a committee for this purpose. However, it soon reneged on the order. In late '03 the NABARD sanctioned a loan for the Rs 870 M dam. The activists' demands include halting the dam's construction and setting up a joint mission of villagers, representatives of the federal and state govts and funders to examine the issue. (NBA PR 280504, One World South Asia 250504)

SNIPPETS FROM POST SSP GUJARAT

No irrigation benefits from SSP yet The recent decision by the NCA to allow Gujarat govt to raise the height of Sardar Sarovar Dam to 110.64 m has led to

spate of questions regarding benefits. Last year whatever irrigation could be achieved was done by pumping out waters from the Main Canal using diesel motors, since the command area has not been developed for irrigation. Yet, a further increase in the height of the dam was sought, in the name of irrigation. To complete the 66 000 kms canal network, it would require Rs 170 B (an amount equal to three times the annual state plan) and the progress made on this front is like the first step in the marathon. The fixation on getting the height of the dam raised leaving the irrigation network unfunded has exposed the state govt.

➤ **Assumptions awry** The SSP is already finding its key planning assumptions going awry. A key planning assumption was that Water Users' Associations would construct water distribution systems in the Village Service Area. In the first part of SSP command of 0.45 M Ha, 1145 WUAs have been registered; however, none of them has constructed the distribution system. As a result access to Narmada water is governed by the ownership of diesel pumps and pipes, and by local power relations. While in the monsoon last year almost 20 000 cusecs water was reportedly flowing in the Main Canal, the state govt had the network to utilize only 10000 cusecs. The area reportedly irrigated was 55000 Ha, that too only by pumping water from Main Canal through diesel pumps. This is because no Command Area has yet been developed to take waters through field channel to farms. Experts opine that now with higher Dam, Gujarat may have a huge quantity of water stored behind the Dam wall, still it doesn't know how to utilize 26000 cusecs with the non-existent Command Area. According to Agenda Notes of NCA's Environment Sub Group meeting that was held on Dec 26 '03, the proposal of phase-1 command area - comprising of 0.45 M Ha farmlands in Vadodara, Narmada, Bharuch, Panchmahals and Kheda districts - is yet to be sanctioned by the Union Water Resources Ministry. That means none of the command area is ready for irrigation. And yet the govts had pressurized the meeting to give permission for raising the Dam height to 110.64 m under the plea to begin benefits. It will not only submerge 150 plus villages - partially or fully - but will also cause serious problems of waterlogging due to lack of drainage.

➤ **Increased height of SSP is not fruitful** The Gujarat Govt convinced the R&R And Env subgroup of NCA to grant permission to raise the dam height on two grounds: an urgent need for hydro power and the fear that delays in construction were causing high cost overruns. The riverbed powerhouse will produce 1200 MW installed capacity only when the dam has reached its full height of 138 m and that too only during the monsoon. But RBPH is not even ready. At the present height 110.64 m, the 250 MW canal head powerhouse can produce a maximum of 90 MW during the monsoon and, and mostly no power at all in the non-monsoon period. Three other dams that are required in this balance of water flows – Narmada Sagar,

Omkareshwar and Maheshwar – are not operational. Without them it is impossible to maintain the Sardar Sarovar reservoir at 110.64 m. There are missing links between the main canal and the branch canals. According to Irrigation Dept officials of Gujarat, of the available 26000 cusecs of water at present height, not even 10% is being utilised for irrigation effectively because the command area development has been neglected. Moreover, the basic survey of vast tracts of Saurashtra, Kutch, North Gujarat and Central Gujarat, still remains to be done. Even if inflation stays at the present rate, in 2010 the required fund would have crossed Rs 250 B. Money lent by the ADB for the purpose of earthquake rehabilitation in Kutch has been diverted to the construction of the Narmada pipeline to take water from Sardar Sarovar to Kutch & Saurashtra. (NBA PR 070404, indiatgether.org 0404, FRONTLINE 210504, THE TIMES OF INDIA 180604)

Mounting costs of SSP After having spent Rs 140 B in the past decade, the Sardar Sarovar Narmada Nigam Ltd will have to incur huge expenditure over the next four-five years to complete the project. It is claimed that work on 0.4 M Ha has been completed and before the monsoon of 2005 around 0.3 M Ha of the command area will be ready. SSNNL MD said that 144 km of the canal network upto Kadi is ready and in few months times another 210 km will be ready. SSNNL has estimated its total expenditure for 2004-5 at Rs 57 B. "A special provision of Rs 17 B has been made for prepayment of the deep discount bonds issued in 1993. Another Rs 23 B would be spent on project. The remaining Rs 17 B will go towards servicing of regular debt," said director (finance) at SSNNL. Allocation of 0.86 MAF of water has been made to provide drinking water to 135 urban centres and 8,215 villages, 45% of total villages in Gujarat, for 18 M people currently and 40 M people by 2021.

➤ **Costly Narmada bonds** The SSNNL has announced its intent to prepay the 20-year Deep Discount Bonds. The move could save the Nigam about Rs 62 B, but has been poorly received by the bondholders. The bonds were issued in Nov 1993 at a discount price of Rs 3600 and interest of 17% payable in slots of 7, 11, 15 and 20 years. The prepayment attempt validates the accusations that the SSP is a financially ill-conceived project. The CAG report for the year ending March 31, '01, for Gujarat has come down heavily on the SSNNL, "The SSP was approved without outlining the source of raising funds and cost element towards borrowing. The company borrowed in ad-hoc manner and cash flow was not worked out accurately... The company needs to take immediate steps to revise cost estimates of the project, plan and coordinate resources of funds in the most economical manner and avoid unnecessary losses." Prior to 2000-1 when 6% of the DDB bondholders redeemed their bonds, the SSNNL had taken out a new issue of Rs 10 B in Sept '99. This was oversubscribed and the SSNNL retained Rs 10.64 B. The decision of the bondholders will affect

not only the progress of the SSP but may also the state of Gujarat's economy. If SSNNL succeeds in this task, it will have to fork out Rs 17 B as against the initial collection of Rs 2.43 B in 1993. Otherwise, it will have to shell out a Rs 78 B in 2014. Out of 6,71,014 deep discount bonds and 4,85,266 bond holders as of March 04, nearly 94% are individuals. While the DDBs have the put option — which enables depositors to withdraw their deposits before the maturity date — they do not have the call option, whereby the company can prepay its dues ahead of the scheduled date of maturity. The SSNNL Investors' Grievances Redressal Forum filed a petition in the Delhi High Court and forced SSNNL to cancel a bondholders' meeting. Why should most bondholders agree to forego such high returns? (BUSINESS LINE 200504, THE TIMES OF INDIA 070604, 080604)

CAG on Gujarat CAD The CAG has raised few pertinent points on the CAD in several irrigation schemes in Gujarat. Monitoring cell required to be set up to keep a close watch on CAD activities were not created in any of the 37 irrigation projects. The state govt failed to construct the field channels to the extent of 23% (1992-3) and 80% (1997-8) for 37 irrigation projects, even after spending 43 - 46.08% in excess of the original estimates. According to a report from SSNNL, 2417 km of minor canals are yet to be built between Bharuch and Vadodara. For an efficient penetration, the region should have at least 4500 km long minor canals for the command area alone. This is only possible if the 272 km long distributaries are in place to feed these minors. (EPW 080504)

SSNNL tourism plan SSNNL is planning to invite investments of over Rs 1.7 B for development of tourist facilities through private participation at the damsite. The Nigam will seek approval of the Gujarat Infrastructure Development Board. "The Nigam has worked out 11 packages to be proposed in the first phase. This include water parks, hotels, golf courses, botanical garden with cottages and camping facilities, theme park with cottages and trekking facilities, cottages near wildlife reserves, boating decks, view point restaurant and visitors' centres. (THE BUSINESS STANDARD 180504)

Centre, NABARD funds? The NABARD will largely fund the Rs 62 B Sujalam Sufalam project of Gujarat. "The state's contribution will be Rs 5.62 B. The rest will come through the central govt," said the Union finance minister. (THE TIMES OF INDIA 130404)

Gujarat wants grants The Gujarat CM has urged the Centre to convert loans given to the state to tackle the 2001 earthquake into grants. A WB loan of \$1 B and \$500 M of the ADB were made available to Gujarat. He also drew the attention of the Finance Minister towards delay in SSP resulting in cost overrun and loan interest and sought a special grant of Rs 116.75 B to write off this debt. (www.webindia123.com)

ISSUES ABOUT RIVERS

Ravi changing course The Ravi River, which flows along the Indo-Pak border in Amritsar and Gurudaspur districts, has become a source of misery for many residents of the border belt. The river is changing course and has already eroded thousands of acres of fertile land in the past few years. The left bank of the Ravi, downstream of Madhopur headwork, is in India while most of its right bank falls in Pakistan. Floods in this river have remained a major challenge and have devastated large parts of fertile lands in its basin, besides causing loss of human life and livestock. Pakistan has been allegedly waging a "proxy river war" with India by constructing spurs, studs and bandhs in a bid to divert the natural flow of the Ravi towards India. According to the Bakshish Singh, Sarpanch of Makaura Pattan, the river has changed its course towards the village by cutting hundreds of acres in the past few years and if the govt didn't come to their rescue, villagers would have to shift to safer place. (THE TRIBUNE 270504)

POLLUTED RIVERS

Sutlej Due to the diversion of water in canals, the Sutlej becomes a small stream after Nangal Dam. From here onwards starts chemical pollution of the Sutlej. The flyash dumps of National Fertiliser Ltd at Nangal have been constructed on the banks of Sutlej. The polluting industrial material flows into the river destroying its ecology in a stretch of 10 - 20 km. Here water of the river is turbid and according to the Punjab Pollution Control Board no aquatic life is present in its bed. However, with two more major tributaries – Swan and Sirsa – joining at Ropar, the water flow increases only to be stopped at the Ropar barrage. At the Ropar barrage, the stored water of the Sutlej is transformed into an international wetland area that has become a halting place for thousands of migratory birds. Here the flyash dumps of the Ropar Thermal Power Plant have been constructed on the banks of the river. The residue of the ash dykes flows in the form of Ghanauli drain polluting the river. From Ropar the Sutlej enters Ludhiana district where it used as the drain to carry industrial waste.

> The two major seasonal rivulets – Kali Bein and Chitti Bein –originate from the semi-Shivalik hills in Hoshiarpur district. These are most polluted seasonal rivulets of Punjab. They carry sewage of towns like Dasuya, Tanda, Bholath, Kapurthala, Sultanpur Lodhi, Jalandhar, Nakodar, Banga and Phagwara and carry polluted and toxic industrial waste directly to the Sutlej with which these converge near the Harike barrage, which also sees confluence of the Beas and Sutlej. In fact, Sutlej waters are so polluted that Rajasthan govt has written to Punjab PCB to check pollution of Sutlej waters as it is affecting the people of the desert state who receive the water through India Gandhi Canal. (THE TRIBUNE 280504, 290504)

Beas in HP The Beas River, originating from Rohtang in Himachal Pradesh, gets polluted, because of release of untreated sewage and sullage of some towns and localities of the Kullu and Kangra valleys. The river flows about 500 km in the hill state where it passes by a large number of major towns like Kullu, Manali, Mandi and some towns in the Kangra valley. The river flows about 170 km in Punjab after it enters the state through the Pong Dam and culminates at Harike in Ferozepore district. The factories in HP have no facility to treat their effluents. (THE TRIBUNE 290504)

Gomti According to CGWB, the water of Gomti River in Uttar Pradesh is not fit for drinking due to chemical pollution. The Board checked the river's water at different places and said that the pollution level of water has crossed beyond the limits. The dissolved oxygen level in water should be at least 4 mg/lit but the Gomti has only 2.6 mg/lit. Chemicals like chloride, Nitrate, Fluoride, Sulphate calcium are also present beyond permissible limit. (RASHTRIYA SAHARA 050504)

Periyar at Eloor The Eloor village in Kerala's Ernakulam district is one of the toxic hotspots of the world. Villagers used to take water directly from Periyar River earlier. Now the air and soil, wells and ponds – everything is polluted in and around Eloor. The Eloor-Edayar region, about 20 km from where the Periyar meets the Arabian Sea, is the industrial hub of Kochi, where about 250 industries exist. Many of these industries are 50 years old and use highly polluting technologies. The industries draw large amounts of fresh water from the Periyar and discharge back in to it concentrated toxic effluents after little treatment. According to a study conducted by 'Greenpeace', the incidence of several diseases has increased among the 40 000 people living in Eloor panchayat. The study points out that the HIL, a Govt of India enterprise, has been manufacturing pesticides, including DDT and Endosulfan, at its Eloor plant since 1956. The plant located adjacent to a wetland, apparently discharges its effluents in to an open creek. The water sample from here contained over 100 organic compounds, 39 of which were organochlorines, including DDT and its metabolites, endosulfan and several isomers of hexachlorocyclo hexane. (THE HINDU 090504)

Orissa Govt blamed for river pollution The Parliamentary Committee headed by Janeshwar Mishra has blamed the Orissa Govt for the polluting of rivers and other water bodies in Orissa. The committee, which has nine Rajya Sabha members, suggested that the industries located in Rourkela, Talcher, Sukinda and other places in Orissa be asked to install effluent treatment plant within specified period. The major industries such as NALCO at Anugul, Steel Plant at Rourkela, Mahanadi Coalfields at Sambalpur, NTPC plant, FCI plant, and Orichem plant at Talcher, Orissa Cement Ltd at Rajgangpur, and L&T factory at Kansbahal were directly discharging millions of liters of

untreated effluent to river Baitarani and its tributaries. The committee was constituted on the petition of Brahmani Anchal Suraksha Parishad. The committee said that no municipality, including that of the state capital, has installed effluent treatment plants for treating sewerage disposal, including hospital waste. These are being discharged directly in to differen water bodies including the Brahmani and Mahanadi. The Union Ministry of Environment and Forests has identified major rivers Mahanadi, Brahmani, Baitarni as highly polluted and brought them under the purview of the National River Conservation Plan. The Centre in 1995 had sanctioned a scheme worth Rs 99.3 M for the towns of Talchar, Dharmshala and Chandbali under the Brahmani Conservation Plan, but the state govt did not submit a DPR for the release of the funds and funds were lying unutilised at the Centre, report said. (NATIONAL HERALD 100604)

LAKES, GLACIERS, WETLANDS, MOUNTAINS

No HEPs in Banjar Valley? The Gushiani region the Banjar Valley of Kullu district will be an environmentalist's paradise, with the state govt having taken a conscientious decision not to allow any HEP in the region and ensure that no ecological degradation takes place. Sources said applications had been received to set up power projects at Palchan, Tirthan - I and Tirthan - II, Pradhi, Banogi and Bather --but there was resentment from people, as it was felt that natural environs would be damaged. They wrote to the govt stating that the region is perhaps the only area left in the state, where rainbow and spotted trout still abound naturally and that as the projects are coming up on streams and not rivers, the ecology of the area could be devastated. (THE TIMES OF INDIA 040604)

HP S&T council to prepare natural resource atlas The State Council for Science and technology of Himachal Pradesh will undertake preparing an atlas, documenting natural resources, socio-economic environment and identifying problems, for which location specific technology intervention would be suggested. The Union Ministry for S&T had sanctioned Rs 1.4 M project to be undertake in all 12 districts. One of the important objectives of the project would be identify natural problems like cloudbursts, landslides, earthquakes, flood and drought and the areas prone to it. (THE TRIBUNE 080604)

Model predicts Himalayan Melt, drying rivers Scientists have developed the first model that shows the impact of melting glaciers on Himalayan rivers, Brahmaputra, Ganges and the Indus. The model for the next 100 years shows how in the initial years, alarm bells would have got drowned by the rivers gushing thicker. This is because the melting glaciers would increase the volume of water entering the rivers. Increased flow means the glacier is depleting and slowly dying, drying up the very source of the river.

Satellite data had shown the glaciers had decreased by 10% in the W Himalayas and 30% in the E Himalayas. In March '02, UK's Dept of International Development commissioned a project called SAGARMATHA (Snow and Glacier Aspects of Water Resources Management in the Himalayas) to assess the impact of deglaciation on the seasonal and long-term water resources in snow fed Himalayan rivers. After sporadic efforts, this marks the first regional effort involving, India, Nepal, Pakistan, Bangladesh and Bhutan. Some of the institutes involved are University of Stanford, Manchester, University of Wallingford, UK and ICIMOD, Kathmandu, Nepal. Some of the key findings are:

- In the Upper Indus, the study shows initial increases of 14% and 90% in mean flows over the next few decades, which will be followed by decreasing flows by 30% and 90% of baseline in the subsequent decades of the 100 years scenario.
- For Ganga, the response of the river near the glacier in Uttarkashi is different from downstream of Allahabad. At Uttarkashi, flows peak at 120 - 133% of baseline within the first two decades and then recede to 50% of baseline after 50 years.
- Near the Brahmaputra source, there is general decrease in decadal mean flows for all temperature scenarios as glaciers are few in the area and flows recede as the permanent snow cover reduces with increasing temperature.
- The catchment in the E Himalayas, which benefit from high precipitation of the summer monsoon every year, are less vulnerable to impacts of glacial melt than those in the West, where the monsoon is weaker. (THE INDIAN EXPRESS 270404)

Appana Kere lake is contaminated A century old lake in Gulbarga (Karnataka) called Appana Kere, spread across 11 Ha, has helped the retention of groundwater level in the borewells and open wells in and around the area. Now, wastewater from the city flow directly in to this lake. Due to chemical contamination and decrease in the oxygen content during April and May, thousands of fish die every summer. This is also affecting the water in 20 000 borewells. The water in the borewells is now full of fluoride and calcium. (DECCAN HERALD 130404)

Project for Dal lake approved The Jammu & Kashmir Govt has approved Rs 2.7 B for the preservation and restoration of the Dal lake in Srinagar. The project would make the adoption of approved sewage treatment technology by houseboat owners and Dal dwellers compulsory. (THE TRIBUNE 130504)

Proposal for Kerala water bodies The Kerala Nadi Samrakshana Samithy, a State-based NGO, has prepared a draft River Protection and Water Conservation Act. The draft aims for "meeting the basic human needs of the present and future generations and to promote equitable access to water". It suggests that the Govt may constitute a State River Authority and River Boards in the State. The chairperson of the River

Authority should be a person who is or has been a High Court judge. The authority should have the powers to take all measures it deems necessary for protecting and improvement of the river system, the quality of water in water bodies and preventing pollution. It should also have the powers to lay down conditions for drawing of water for drinking and agricultural purposes and to restrain any construction or other activities that may adversely affect river morphology. The draft also suggests that each river board coming under the authority be headed by a person who is or has been a district judge. Any person violating any rule, regulation and direction issued by the Authority or the Board should be punished with an imprisonment of two years with fine. (BUSINESS LINE 250504)

W Bengal to tap foreign funds for wetlands The W Bengal Govt is planning to tap foreign funds for conservation and improvement of the E Kolkata Wetlands, declared as a Ramsar site, the State Environment sources said. Currently 12741 Ha was under this eco-system on the eastern fringes of the city. Of this, 60% was wetland with the remaining being agricultural land and settlement. (BUSINESS LINE 070604)

W Bengal's proposed bill to imperil water bodies Experts are upset about the proposed W Bengal Protection of Water Bodies Bill 2004, which could leave the state high and dry. Once enacted, the bill would legalise filling up of water bodies less than 4 Ha in size. Section 2(i) of the proposed legislation defines a wetland as a water body measuring 4 Ha or more. Further, section 7(1) of the bill says the water bodies bigger than 4 Ha cannot be filled up or water cannot be drawn from them without the prior permission of a "competent authority" or "local body". Section 7(2) provides for a public hearing before such an act. But experts say that there can be unjustifiable destruction even after a public hearing. According to Section 15 of the bill, "No court shall take cognizance of any offence punishable under this Act, except on complaint made by a competent authority, or a police officer not below the rank of a sub inspector". A former judge of Kolkata High Court, Justice B P Banerjee says, "The proposed law does not even allow an individual the right to judicial scrutiny". (DOWN TO EARTH 300604)

Death of lake in Bangalore's backyard Hessarghatta lake in Bangalore, once the venue for prestigious yachting clubs and water source for parts of the city, is drying up. The bed of this once 71-ft deep water body in Bangalore's outskirts has risen by 31 ft. The Bangalore Water Supply and Sewerage Board, has actually aggravated the problem by sinking borewells and pumping water out of the lake. Local farmers say the groundwater level in the area has dropped to 600 ft while exotic migratory birds that used to visit Hessarghatta for an annual visit now keep away. Three years of drought encroachments in the Arkavathi catchment area, clogging of feeder canals, and

subsequent severe silting have left the lake sprawled across 1400 Ha parched and gasping for life. Apart from BWSSB, the other five agencies that are responsible for death of lake are Urban Development Dept, Nelamangala Planning Authority, Bangalore Development Authority, Directorate of Municipal Administration, and Bangalore Region Development Authority. The State Govt in its notification of Nov '03 says the six agencies are responsible for "implementing necessary measures to prevent alteration of drainage course or impediments to the flow of water along the Arkavathi and Kumudavathi rivers". But in hundreds of places along the bank of the rivers these norms are being blatantly flouted. (THE NEW INDIAN EXPRESS 010604)

WATER SECTOR

Climate change to cause water scarcity in India

According to report by the Ministry of Environment and Forest and submitted to the United Nations Framework Convention on climate change, the change in the global climate due to increase in the emission of green house gases can lead to severe water scarcity, rise in sea level and adversely affect weather, river basins, rainfall and forestry in India in the next few years besides enhanced demand for electricity. The emission of green house gases by India was about 3% of global green house gas emission, yet its population will have to pay heavy costs due to large amounts of gases emitted by the developed countries. India is a party to the UNFCCC, which was adopted in 1992 and came into effect in March 1994. (THE TRIBUNE 210604)

MDG targets missed A global campaign launched two years ago brought pledges to halve the number of people who do not have access to clean water by 2015. Six agencies, including Water Aid, Green Cross International and Oxfam, say the global situation is getting worse rather than better. The World Summit on Sustainable Development in 2002 resulted in a global pledge to halve within 13 years the number of people lacking access to drinking water and basic sanitation. As ministers gather in New York to attend the first follow-up meeting since that summit, six international agencies say the latest data indicates the effort is failing badly. They say most of the world's 22 main industrial countries did not increase as promised their financial provisions for improving global water supplies; the result is that overall aid has declined. And the aid that is provided, the report warns, is often done so on political grounds rather than based on need. The US, for instance gives most of its water development aid to Egypt, Jordan and the Palestinian territories and very little to Africa. The report criticises poor countries like Ethiopia, Sierra Leone, Kenya, Indonesia and Guinea for giving little or no priority at all to water supply development. Countries including Afghanistan, Pakistan and China face the prospect of acute water shortages by 2025. (BBC News 190404)

Water scenario in Kerala In Kerala, the land of 44 rivers and backwaters and with over 3000 mm of annual rainfall there was the worst drought in Feb-March '04. Since 1980 Kerala has suffered seven years of deficient rainfall and another 5 years of below normal rainfall. The State Govt estimates that it has lost Rs 28.44 B due to this year's drought. Kuttanad in Alapuzha dist has 1100 sq km of wetlands but its 1.8 M people don't have clean drinking water. 15 HEPs including the Idukki, produced 7305 MU in 1998-9, 4819 MU in 2002-3 and in 2003-4 an all time low of 4314 MU is expected. Kerala had an estimated forest cover of 44.4% in 1900. Independent studies and satellite images show the forest cover came down to 14.7% in 1983 and is 9% now. But the state gov't, which regards the plantation as forests, says the cover is 27%. Kerala has a high vertical slope and average breadth of 50 km. Because of this 41 of 44 rivers originating in the W Ghats empty in to Arabian Sea in less than 48 hours after a rain. Kerala has an estimated 77.35 BCM of fresh water, nearly 40% of the water resources go as run off. This means 42 BCM of water available. The state needs 49.7 BCM for irrigation, domestic use, industries and other purposes annually. When Kerala was formed in 1956, the total cropped area was over 2 M Ha. Paddy was the dominant crop, accounting for about 35% of this area, coconut at 21%. A paddy field holds water for roughly 90 days, and most districts of Kerala grow it twice a year. This helps in groundwater recharge. In 1975 the area under rice fell to 30% of the total cropped area (0.881 M Ha). Till 2002-3, Kerala had spent Rs 32.45 B on irrigation. About Rs 22.2 B (68%) of this was on major and medium projects. When Kerala began planning its irrigation projects, planners and engineers wanted to convert the maximum agricultural land possible in to paddy fields. Only 59% of the rural population and 79% of urban population get treated drinking water. In several rural areas one tap caters to 250 people, which means treated piped water reaches 10 - 15% people. KWA estimates it would need 6675 MLD of drinking water in 2010 and 8772 MLD in 2020 if supply were to be given to the entire population. There are 31 irrigation projects, two reservoirs for storing drinking water. KWA has 1655 schemes, supplies 1700-1800 MLD. (Down To Earth 310504)

National Water Conference The National Water Survey of 30 states and 144 river valleys that started on Dec 23, '02 came to an end at Chitrakoot on May 19 '04. The executive committee of National Water Forum passed a unanimous resolution (see Box below) in which it opposed Ken-Betwa link and river-linking project. 'A Report on National Water Survey' was released by Dr G D Aggarwal. The National Water Literacy Campaign traveled over 0.2 M km. During the Yatra and thousands attended meetings and pledged to conserve water. (RASHTRIYA JAL BIRADARI PR 220504)

Chitrakoot Water Declaration

- a. Water is the basis of life: it is the gift of nature; it belongs to all living beings on earth.
- b. Water is not private property. It is a common resource for the sustenance of all.
- c. Water is the fundamental right. It has to be conserved, protected and managed. It is our fundamental obligation to prevent water scarcity and pollution and to preserve it for generations.
- d. Water is not a commodity. We should resist all criminal attempts to commercialise, privatize and corporatise water. Only through these means we can ensure the fundamental and inalienable right to water for the people all over the world.
- e. The water policy should be formulated on the basis of this outlook.
- f. The right to conserve, use and manage water is fully vested with the local community. This is the very basis of water democracy. Any attempt to reduced or deny this right is a crime.
- g. The production and marketing of the poisonous products of Coca Cola, Pepsi Cola and other corporates lead to total destruction and pollution and it also endangers the very existence of local communities.
- h. The resistance that has come up in Chitrakoot and in various part of the world is the symbol of our valiant struggle against the devilish corporate gangs who pirate our water.

We, who are in the battlefield in full solidarity with the Adivasis who have put up resistance against the tortures of the horrid commercial forces in Chitrakoot, exhort the people all over the world to boycott the products of Coca Cola and Pepsi Cola.

Community solutions A 2-day National Water Convention by *Rashtriya Jal Biradari* and *Tarun Bharat Sangh* concluded in the capital on June 26, 2004. The conference came after the conclusion of *Rashtriya Jal Yatra* (National Water Tour). The convention was attended by state level Jal Biradari NGOs from 16 states, representatives of the govt and past policy makers. The message that the convention gave out to the govt was that revival of the traditional water harvesting structures is the key to solving pertinent problems of drought and floods. The convention brought to light success stories and struggles of state participants in different parts of the country. Conference stressed the need to replace the ILR task force with one on sustainable holistic water management. An integrated approach regarding land-use, water and forests is seen as an urgent need. The different water privatization models being tried across the country were strongly criticized. Participants from Chattisgarh told the audience about their struggle against the privatization of Sheonath river. Privatization of wter supply in Tirupur, Tamil Nadu was also criticized. There are strong signals that the present govt wants to devolve power and authority to the local agencies. Such devolution of control over local water bodies and forestland and

transfer of ownership to the gram sabhas was felt as an important need of the hour. The participants also suggested that responsibility of infrastructure upkeep by cooperatives of beneficiaries would be a positive step. The participants suggested that water projects should be monitored and preferably implemented by self-help groups of beneficiaries. There was also a discussion on the role that Central and State ground water boards can play in improving prospects of success of water harvesting initiatives across the country. These bodies should be directed to make ground water records available to the public. The conference stated that floods are natural to the river and participants suggested that revival of over 60,000 ponds and tanks in Bihar would provide for water storage for dry months and also prevent floods by storing excess river water in depressions. The *Biradari* demanded that water be considered a community resource, the water policy of 2002 be reviewed and a new water policy be evolved through a public dialogue. The *Biradari* stressed on the need for better agricultural practices in rural areas and rooftop rainwater-harvesting techniques in urban regions. Community control over local water bodies and national campaigns to revive traditional integrated resource management systems in both drought and flood prone areas is a sustainable means of solving water problems. (Jal Biradari PR 260604)

Procedure for environmental clearance simplified

The Union Ministry and Forests has simplified the procedure for granting environmental clearances by adopting "good practices" in regulatory procedures such as environmental clearance, forestry clearance, coastal zone regulation, genetic engineering approval committee and animal experimentation. As part of the "good practices", a standing timetable of meetings of regulator/ experts committees has been set up. The committees will meet on fixed day each month, when all listed cases would be taken up. The list of application to be considered will be available on the Ministry's website at least 15 days prior to the meeting. The final decision will be put up on the website the next working day after the minutes are finalised within five working days. (THE HINDU 220604)

WATER PRIVATISATION

Privatization is not the answer, says UN United Nations Secretary General says in a new report that privatization has generally failed. The report counters the World Bank privatization panacea. The report details the shortfalls of privatization, but the UN is partly to blame for the push for private sector solutions. At the UN World Summit on Sustainable Development in '02, the UN adopted an agenda under pressure from the water corps, the WB, and the US that promoted public-private partnership, contrary to previous recommendations. The latest report is a turn in the right direction, but more is needed to counter the privatization pressure. The report opens the door to

private sector reforms, but Water for All urges the UN to take a strong stance against the multinational corps that currently monopolize the water market in contempt of those who need access to affordable water. (citizen.org)

Govt guidelines The Govt has ventured into controversial terrain by articulating a strong preference for privatisation of water supply and sanitation services. Detailed guidelines embracing all forms of private sector participation while providing the overall framework for Central support are now in place. Prepared by Ministry of Urban development & poverty alleviation, the document claims that joint ventures with international private firms will help add capacity. According a conservative estimate, the size of the emerging water market in India is \$ 2 B. The guidelines have been circulated to state Govts and indicate intent to explore a combination of strategic, financial engagements to catalyse urban reform, where hybrid contractual agreements will be more the norm. Private sector participation can range from simple service and management contracts to increasingly complex performance-based management contracts, asset leases, concessions and asset divestitures with the govt. As per the ministry, Concession Agreements are best suited to solve the supply problems in most Indian urban areas, but won't be feasible in the short term, given the prevailing market conditions. Private sector involvement will therefore be introduced in phases under well-designed management or lease contracts. According to the guidelines, management contractors should have the right and responsibility to use resources optimally, improve service quality and prepare the ground for effective forms of PSP. It is recommended that their role be considered at an interim stage as the sector moves towards concession agreements. (THE ECONOMIC TIMES 090404)

INTER STATE DISPUTES

New Krishna Tribunal challenged by Karnataka On April 2, the centre has appointed a 3-member tribunal to resolve issue of the sharing of the Krishna's 350 TMC surplus water between Maharashtra, Karnataka and Andhra Pradesh. The tribunal is headed by Justice Brijesh Kumar (SC) and comprises Justice S P Srivastava (Allahabad HC) and Justice D K Seth (Kolkata HC). The Karnataka Govt claimed that the Center's move to set up a new tribunal for relocation of Krishna river waters under the scheme B of the Bachawat Award was a violation of the Inter-State Water Dispute Act. The then Minister for Agriculture H K Patil has charged that the Centre issued a notification to set up the tribunal and acted in a partisan manner favouring Andhra Pradesh. He said the state was allocated 734 tmcft of water under the Bachawat Award in 1974. Of the 734 tmcft, the state govt has decided to release 5 tmcft of water to Tamil Nadu to meet the drinking water requirements of Chennai. Andhra Pradesh and Maharashtra were the other signatories to

the Award. The new Tribunal should look into sharing of surplus Krishna waters under scheme B. Instead of restricting the terms and reference to the surplus waters, the Centre had referred the Andhra Pradesh demand for utilising the unutilised share allocated under scheme A. The Centre should not have unilaterally included it without holding negotiations with the states concerned under the provision of the Inter-State Water Dispute Act. (THE HINDU 150404)

Kolhapur's loss if Almatti height is raised The tribunal will finalise Karnataka's long pending demand to allow increasing the height of the Almatti dam from 519 to 525 m. The Almatti dam height issue threatens to spark a dispute between the Kolhapur and Solapur districts of Maharashtra since the latter stands to gain from the height rise while Kolhapur will lose. If the height of the dam raised, the Takre Mhaisal lift-irrigation project in the district will be completely submerged. The water from the dam will reach Akkalkot and Magalveda through the Indi canal, but will be at the cost of the Kolhapur farmers. Andhra Pradesh is currently using 1300 TMC Krishna water as against the 700 TMC awarded it by the earlier Krishna water dispute tribunal in 1976. (THE TIMES OF INDIA 110404)

Eradi for rivers on Union list Justice V Balkrishna Eradi, who heads the three member Eradi tribunal, expressed that in the overall interest of the country, river should be removed from the list of state subject and treated as a Union list. The Eradi Commission had been formed in 1986 to solve the river waters dispute between Punjab and Haryana. As per the existing provisions of the constitution since rivers are a state subject, it would be difficult for any govt to implement the proposed River-linking project. (THE TRIBUNE 230504)

J & K - Punjab Punjab has breached the agreement over supply of water of River Ravi to J&K canals. Since the control remains with the Punjab Irrigation authorities, they release the irrigation water at their own will and also in violation to the agreement made during Indus Water Treaty in 1960. For the last 5-6 years problem has aggravated specially during summer. Hardly 50% of the agreed water is being released by Punjab. According to state officials, the irrigation problem in entire Kathua district and parts of Samba sub division is created with the non-cooperative attitude of the Ranjit Sagar dam authorities and Punjab irrigation dept. Shahpur Kandi barrage, which Punjab Govt had agreed upon to construct to ensure better supplies to J&K canals had not been taken up despite the fact that power project construction has already been completed. According to the J&K officials, the Punjab authorities are required to release 480 cusecs. Ravi-Tawi irrigation project too is affected due to the indifferent attitude of Punjab. Punjab has agreed to release 1100 cusec of water from Ravi for this canal but that remains only on papers. (DAILY EXCELSIOR 240504)

PIL against Punjab's control over headworks A PIL has been filed by Mr D M Singhvi, a retired Chief Engineer of the Irrigation Dept of Rajasthan, in the Jaipur Bench of Rajasthan High Court challenging the control of Punjab over the headworks of Ropar, Harike and Ferozepore and the 'arbitrary' manner in which the water is released to Rajasthan. The Court has issued notices to the Power Secretary of the Govt of India, the Chairman of the Bhakra Beas Management Board and the Irrigation Secretaries of Punjab and Rajasthan. The PIL says that the very control over the headworks was in violation of the provisions of the Punjab Reorganization Act 1966. As provided in the Act, the Govt of India had constituted the BBMB, which along with its other responsibilities was supposed to exercise control over headworks under its purview, but that has not materialised till today. It was the continuance of control over headworks that Punjab was having and exercising in a willful manner and did not release the due share of water as per agreements to Rajasthan, it is claimed. An agreement on the distribution of waters of the Ravi & Beas also later signed in Dec 1981, in the presence of then PM, Indira Gandhi. According to the details of distribution given in the petition, the share of Rajasthan from the Ravi-Beas was 8.6 MAF, while that of Punjab, Haryana, Delhi and Kashmir was 4.22, 3.50, 0.20 and 0.65 MAF, respectively. (THE TRIBUNE 250604)

India, Pak on Baglihar India and Pakistan on June 22 reached "close to an agreement" on and "resolution" of the Baglihar HEP in J & K. The Indian delegation was led by V K Duggal, Secretary, Water Resources, while the Pakistani side was led by Ashfaq Mahmood, Secretary, Water and Power, of his country. Speaking to the media after the day-long discussions, they said both countries had discussed ways and means to resolve "technical concerns" relating to the project. The 450-mw HEP on river Chenab in J & K has fallen into controversy with Pakistan saying it will deprive its farmers of water and is not in conformity with the 1960 Indus Water Treaty. The project at Baglihar village, about 30 km from Batote on Jammu-Srinagar National Highway, was conceived in 1998. Already 40% work is complete with Rs 6 B spent. Pakistan has disputed the design of the project and has threatened to take it for international arbitration if the Indian Govt does not change its design. (DAILY EXCELSIOR 230604)

SYL SC order The Supreme Court on June 4, directed Centre to construct the unfinished portion of part of Sutlej Yamuna Link canal in Punjab to facilitate sharing. Allowing Haryana's application for implementation of court's Jan 15 '02 order for construction of the SYL in the territory of Punjab, a Bench of Justice Ruma Pal and Justice P V Raddin in its judgement ordered the Union Govt to appoint a Central Agency for the execution of the work. The SC rejected Punjab's counter suit challenging the Jan 15 '02 order by way of which the state was to construct the SYL canal by Jan

15 '03. It also imposed a cost for filing the suit on Punjab. The court directed to Union Govt to appoint a special committee of officials with representatives from the both states to supervise the construction work. The Punjab Govt was directed to hand over the land on which the unfinished canal was to be built, to the Central Agency. The Punjab Govt said that it would file a review petition. The Union Minister for Water Resources told the Punjab CM that the Ministry was "duty bound to honour, implement and execute the order of the Supreme Court (to construct the SYL canal through Punjab) in letter and spirit".

Punjab files review plea in SC The Punjab Govt on July 3 moved the Supreme Court seeking a review of its June 4 judgement. The Punjab Govt contented that the Court did not have the jurisdiction to decide on the matter as it was a water dispute within the meaning of Article 262 of the Constitution, which fell within the exclusive jurisdiction of the Inter-State River Waters Dispute Tribunal. The petition said that the construction of SYL canal could not be allowed as it formed part of the 10-point Rajiv-Longowal Accord of which 9 points remain unimplemented. The petition comes a day after the Central Govt entrusted the construction work to CPWD. The petition was rejected on August 23, 2004.

Haryana contests Punjab resolution The Haryana Agriculture Minister described the resolution passed by the all party meeting in Punjab on June 12 as "wholly incorrect". The resolution had said that Punjab, a riparian state, was being unjustly deprived of its right to use the Ravi-Beas waters by their transfer to the Yamuna basin areas of Haryana, which was non riparian and a non basin state. He said the Sutlej river waters to Haryana were first allocated by an order of the Union Govt on March 24, 1976, which was made pursuant to Section 78 of the Punjab Reorganisation Act, 1966. The surplus water was allocated to the basin states on Jan 29, 1955, in anticipation of the Indus Water Treaty signed on Sept 19, 1960.

Badal wants previous water pacts annulled The SAD President said that all previous agreements on the distribution of waters among Punjab, Rajasthan and Haryana should be annulled as these have been forced upon Punjab. The agreements he referred to include:

- On Jan 29, 1955, Rajasthan was given 8 MAF of water from Punjab Rivers.
- On March 29, 1976, Mrs Indira Gandhi, the then PM, gave 3.5 MAF to Haryana and 0.2 MAF to Delhi.
- On Dec 31, 1981, Mrs Indira Gandhi reallocated water among Punjab, Haryana and Rajasthan and later laid the foundation stone of the SYL canal in April '82.
- Under the Rajiva-Longowal accord, a decision was taken to complete the SYL canal. On Jan 30, 1987, the Eradi Commission increased the share of Punjab and Haryana (3.5 MAF) by "inventing fresh data" regarding river waters.

Rajasthan resolves to protect its share An all party meeting presided over by the Rajasthan CM, on June 28 resolved to unitedly protect the state's share in the inter-State river water treaties. Convened in the wake of a resolution passed early June by the Punjab Assembly saying that the State would not share the waters of its rivers with other states. The Rajasthan Assembly on July 1 passed a unanimous resolution asking all concerned to respect the river water treaties and asserting that Rajasthan would by all means protect its allocated share of 52.69% of the total flow of the river under the 1955 agreement on Ravi Beas waters.

Punjab Annuls all water pacts A special session of Punjab Assembly on 12 July unanimously passed the Punjab Termination of Agreement Bill, 2004, thereby "knocking down" the very basis on which the Supreme Court had passed its order on construction of SYL on June 4. The Bill annuls the Dec 31, 1981 agreement between Punjab, Haryana and Rajasthan signed by the three CMs in the presence of the then PM Mrs Indira Gandhi and also all other agreements relating to the Ravi and Beas. Under the 1981 agreement, flow series were changed from 1921-45 to 1921-60, which had the result of increasing the availability of Ravi-Beas waters from 15.85 MAF to 17.17 MAF. The allocation of water was: Haryana 3.5 MAF, Rajasthan 8.6 MAF, Delhi 0.2 MAF and J&K 0.65 MAF and Punjab 4.22 MAF. Under clause-IV of the agreement, Punjab and Haryana withdrew their respective suits from the Supreme Court. The present utilisation of Haryana is about 5.95 MAF, about 4.33 MAF from Sutlej and about 1.62 MAF from the Ravi-Beas water through the existing systems. From the total surplus availability of 11.98 MAF of the Beas water, Punjab has been allocated 2.64 MAF. The availability of the Ravi-Beas water, 17.17 MAF assumed as on Dec 1981, has been reduced to 14.37 MAF, as per the flow series of 1981-2002. Haryana has been given 4.65 MAF under the Yamuna agreement of May 12, 1994, which is to be further augmented by the Sarda Yamuna link.

No plan to stop existing water flows The Punjab CM clarified that Punjab has no plans to stop or reduce the existing flow of river water to Haryana and Rajasthan through the new legislation. He quoted the Section-5 of the Termination of Agreements Bill 2004 and said it fully protected the current utilisation of the Ravi, Beas and Sutlej waters by the neighboring states.

A black law, says Haryana Cabinet The Haryana cabinet, under the chairmanship of CM took a serious note of the Punjab Termination of Agreements Act 2004 and described it as "a black law marking the nadir of legislative impropriety". A resolution adopted by the Council of Ministers has urged the Union Govt to ensure that swift and firm executive, legislative and constitutional action is taken to prevent the "recurrence of such maverick attempts to subvert the Constitution and the economic and social fabric of the country".

Haryana CM wants water nationalised Haryana CM called for nationalisation of rivers and water resources as had been done in case of mines and minerals to strengthen the national fabric of the country and for its equal distribution and optimum management.

Centre asks Punjab to submit SYL canal record The Union Govt has asked Punjab to hand over to it all the relevant record with regard to the SYL canal. It has sought written assurance from the state Govt that no part of the land acquired for the canal was involved in any legal case. The Central Water Commission has been coordinating with the CPWD, the Punjab Govt, the Haryana Govt and other Govt agencies concerned with regard to the canal work. A large part of the canal was constructed in Punjab's boundary till 1990. But the work on the canal had to be abandoned in July 1990, following the killing of two officers of Punjab Irrigation Dept, which had been constructing the canal. Before the killing of officers 30 labourers working on the canal were killed near Phabat village, near Kharar and another place in 1988.

Centre moves SC on SYL The Centre on July 15 moved the Supreme Court for fresh direction on the SYL canal issue after finding itself in a difficult situation to implement the Court order for constructing the canal in the wake of Punjab unilaterally terminating all water accords since 1981, including the sharing of Ravi-Beas waters with Haryana and Rajasthan.

President refers Punjab water law to SC President Dr A P J Abdul Kalam sought the Supreme Court's opinion on the Punjab Govt's decision to annul all water sharing treaties with its neighbouring states after the Union Govt sought a Presidential reference on this issue under Article 143 of the Constitution. The Chief Justice has now to place the matter before a constitutional bench for its opinion. The Centre decided to exercise the option of a presidential reference after mulling over it for 10 days and discussing it at length in the Cabinet Committee on Political Affairs. (THE TRIBUNE 050604, 140604, 150604, 130704, 140704, 160704, THE HINDU 050604, 100604, 290604, 020704, 040704, 150704, 170704, THE INDIAN EXPRESS 190704, THE HINDUSTAN TIMES 210704)

IRRIGATION

No water for tail-enders A study by Development Support Centre and supported by Planning Commission on dams and several major irrigation projects including in Gujarat, indicates significant non-availability of water among people at the fag-end of irrigation commands. The problem could be more alarming because it has been neglected and dubbed as 'tail-end problems' by the authorities. In the case of Rs 1.1 B Dharoi project with 45000 Ha command area with 40 000 farmers, 37% of the beneficiaries, located in the 'tail-end' of the command area, and 27% non-tail-enders, were deprived of irrigation water even when there was sufficient water in the dam. In the case of the Mahi

irrigation project, the average deprivation was 7% among 'tail-enders' and around 20% in the middle. The study revealed that the tail-enders' problem was not a phenomenon confined to the tail end of the main system, but was spread throughout the irrigation project. The study also found that even when there was water in the system, parts of the command area remained unirrigated because of bad construction and inefficient management. The NGO studied 10 major projects including Mathachi Wadi project in Maharashtra, Vanivilas Sagar project in Karnataka, Parambikulam Aliar project in Tamil Nadu. (THE INDIAN EXPRESS 270404)

Irrigation works under achieve According to a Planning Commission report, irrigation projects in the past few decades have covered less than half of what these were intended to achieve. In some cases the projects have not seen the light of the day even after 25 years after they were conceived. The report titled "The status of ongoing major and medium irrigation projects spilled over to the Tenth Plan" says that of the 20.2 M Ha irrigation potential that is envisaged to be created in the 380 projects, only 6.937 M Ha of the potential has been created by the end of ninth Plan. These would still require an investment of Rs 900 B. 35 of these projects were started in the 5th Plan (1974-79). Among the 380 projects, over half started during and before the 7th Plan. The combined cost estimates of the 380 projects was originally put at Rs 586.12 B and has now gone up to Rs 1 683.23 B. (THE ECONOMIC TIMES 110604)

Massive cost overruns The cost of 21 selected irrigation projects has shot up from Rs 106.26 B to Rs 642.19 B, but states haven't bothered to get Central clearance for the escalations. Some of the instances:

- In W Bengal, the Teesta Barrage was cleared in 1975 and the original cost was Rs 690 M, the cost now is Rs 20.68 B. No revised estimate has been submitted.
- The SSP was cleared in the 6th Plan with an initial cost of Rs 46.55 B. Today, the project has spent Rs 126.73 B and cost has increased to Rs 308.23 B. There has been no communication about revised estimates.
- The Indira Gandhi Nahar Project-II was approved in 1972 and the original cost was Rs 890 M. The current cost is nearly Rs 40 B.
- Karnataka's Upper Krishna Project- I was cleared in 1963 and the original cost was Rs 580 M. The latest unapproved cost is Rs 56.1383 B. The second part of the project was launched in 2000 at a cost of Rs 23.58 B and costs have already gone up to Rs 29.54 B.
- Work on the Rs 150 M Dhansiri project in Assam began in 1975. The current cost is Rs 3.55 B.
- Two of the oldest projects are in Andhra Pradesh. The Nagarjunasagar project was cleared in 1961 and the original cost was Rs 910 M. The current cost is Rs 11.84 B. The Rs 400 M Sriramsagar project-1 was cleared in 1964. The current cost is Rs 26.63 B.
- Bihar's Rs 130 M W Kosi Canal was approved in 1961. Current cost is Rs 9.04 B. (THE STATESMAN 040504)

AP Plans The Andhra Pradesh govt has formulated a Rs 25 B plan together with the LIC for financing irrigation projects. The CM said the state would spend Rs 60 - 70 B on irrigation projects during 2004-5. He said the state would spend close to Rs 90 B every year on irrigation projects over the next five years.

➤ **Life Irrigation Schemes** The Minister for Lift Irrigation has Okayed 18 LIS with an outlay of Rs 400 M, financed by the NABARD. The project is expected to cover about 6 389.48 Ha in Adilabad, Guntur, Khammam, Krishna, Kurnool, Nizamabad, Prakasham, Vizianagaram and W Godavari districts. The NABARD will provide loan of Rs 324.5 M, the share of the state govt is Rs 67.2 M. In the entire state, 231 schemes under the minor irrigation sector have been initiated, targeting an irrigation potential of 77 937 Ha.

➤ **Incomplete projects** The new state govt has announced a two-pronged strategy to complete the 26 pending irrigation projects on a 'fast track' basis to benefit 0.704 M Ha and stabilise the existing ayacut of 1.66 M Ha. As per this strategy 8 projects will be completed in 2 years covering 37 000 Ha of new ayacut and 0.44 M Ha of old one. They are Vamsdhara-II, Somasila, Telgu Ganga and the first generation lift schemes of Godavari (Devadula), Pushkaram, Tadipudi, Alisagar and Gupta. 18 other projects to irrigate 0.68 M Ha and stabilise 1.22 M Ha to be completed in 5 years are Pulichintala, KC Canal Modernisation, Sriramsagar-II, Sriram Sagar Flood Flow Canal, Srisailam Left Bank Canal, Veligonda, Bhima, Kalwakurthy, Galeru-Nagari, Handri-Navi, Penna Ahobilam Balancing Reservoir, Janjhavathi, Thotapalli Barrage, Gundalkamma, Ramathirtha, Rururaghavendra and Nettempadu.

➤ **Austria to fund Godavari projects** The Austrian Govt is willing to provide a Rs 30 B 'Cash & Kind' loan assistance to irrigation projects. In the first phase, the AP Govt proposes to tie up the help for the Devdula and 350 MW power project at Dummagudem in Khammam district. In the second, three more projects in Yellampalli, Singareddypalle and Polavaram will be taken up. (BUSINESS STANDARD 270504, THE HINDU 040604, BUSINESS LINE 020604, 180604)

Boost for minor irrigation in MP The NABARD will focus on minor irrigation projects during 2004-5 in Madhya Pradesh. NABARD has sanctioned Rs 17.07 B for 516 projects, which will irrigate an additional 0.5 M Ha. Of the 516 projects, 288 had been completed. NABARD had sanctioned Rs 2.77 B in 2003-4. The cumulative sanction to the state has been Rs 4.81 B for completing the 516 projects. The disbursement under the rural infrastructure development fund-IX was Rs 3.92 B during 2003-4. (BUSINESS STANDARD 290404)

Rs 20 B plan for MP The Water Resource Dept of Madhya Pradesh has prepared a plan for integration development and repairs of dams and canals, to be supported by the World Bank. The WB has given a formal approval and asked the dept to prepare a project

with an estimated cost of around Rs 20 B. With the project, 30 districts would get additional irrigation through modernisation, repairs and maintenance. The project includes schemes on Chambal, Sindh, Betwa, Ken and Tones rivers. (CENTRAL CHRONICLE 180404)

Bihar's Pending projects Total cultivable land in Bihar is 6.839 M Ha, while the irrigation facility is available for 1.632 M Ha. Rs 77.63 B is required for incomplete small irrigation projects and Rs 86.405 B is required for medium and major irrigation projects in Bihar. Several proposals are under consideration before the centre. The Rs 28.865 B shallow tubewell project to irrigate additional 2.05 M ha is expected to increase groundwater use from 38% to 85% is pending before Union Agriculture Ministry. Planning Commission has provided Rs 255 M for this. The Rs 1.339 B project for rejuvenation of *Ahars* and *Pynes* to reestablish irrigation in 0.15 M ha is under consideration before Union Water Resources Ministry since three years. Rs 8.116 B National Tubewell project is under consideration before the water resources ministry. This project is aimed to create additional irrigation capacity in 0.16 M Ha and to reestablish irrigation in 0.184 M Ha. The Participatory on Farm Development Project of Rs 23.276 B had been sent to Union Water Resources Ministry in Dec 2000. This includes Sone Command (Rs 8.173 B), Gandak Command (7.973 B) and Koshi Command (4.492 B). A Rs 13.4 B project for reclamation of salinised land in Gandak command is pending since 1999 before the Union Agriculture ministry. The project is to benefit Muzaffarpur, Vaishali, E Champaran, W Champaran, Saran, Siwan, Gopalganj and Samastipur districts. The agriculture growth rate of the state (3.33%) is higher than the national rate (2.83%). On completion of pending major and medium projects 5.353 M Ha would get irrigation benefits. These projects include W Koshi Canal, Durgawati Reservoir, Tilaya Diversion, Upper Kiul Reservoir, Sone Canal restoration, Jamania Pump Canal, Bateswar Sthan Canal, Punpun Barrage, N Koel Barnar reservoir, Bansagar Reservoir (All major), Munahara Barrage Scheme, Batane Reservoir, and Odhni reservoir (medium). (DANIK JAGRAN 270504, 280504)

Punpun project incomplete The project to irrigate about 20 000 Ha in Central Bihar could not be completed due to lack of sincerity of the govt. Punpun-Morhar-Dardha irrigation barrage was planned at Hamidnagar in Aurangabad dist. Different canals including right main canal of 40.235 km, 9.6 km long Kinjar distributory and 44.024 km long Punpun branch canal were planned. The initial total cost of the project was Rs 207.8 M in 1980, which went up to Rs 1.013 B in 1995. Land required for the project is 613.81 Ha. The land required for the barrage would be 75.81 Ha in Aurangabad. 357 Ha land in Aurangabad would be acquired for canals. (HINDUSTAN 090404)

Maharashtra The state Finance Minister announced that Rs 20 B would be raised from Negotiated loans

from financial institutions for irrigation projects in the backward regions of Vidarbha Marathwada, Khandesh and Konkan. The state has provided for Rs 33.44 B for Vidarbha of which Rs 26.5 B would be raised by bonds and remaining allotted in budget. (THE HITAVADA 040604)

WATER OPTIONS

SC: Traditional laws to get precedence over CPC In a significant decision in 62 year old dispute between two villages on a water source, the Supreme Court has laid down that traditional community laws would get precedent over the Civil Procedure Code in such case. The dispute arose between Sai clan of Kongkhum village and Pongen clan of Mangmetong village in Mokokchang district of Nagaland over the access to the source of water and the ownership of two acres on which it exists. The Court directed that none of the members of the two clans "shall restrict access to anyone of the two village communities to the common water source." The dispute of village community, particularly relating to access to land having water source is not a traditional civil litigation as is handled by ordinary civil courts under the CPP," a bench of Justice Shivaraj V Patil and Justice D M Dharmadhikary ruled. (THE TRIBUNE 170504)

Women's empowerment in Orissa The women of Bartunda village in Orissa's Balangir district, who trounced the drought, ultimately emerged as successful landowners. Anapurna, the first self-help groups with 20 women made their first bidding for the land in 1997. In the next few years, using the savings, they got released over 42.4 Ha of mortgaged land belonging to 110 residents in the village. Since 1989, these groups have been saving one handful of rice everyday. By 1999, their assets were worth Rs 4.5 M, which included some financial help from other agencies. With lands in their control, the women were now aiming at a second crop for the year. Going back to rainwater harvesting system that worked in the 1930s, the women were keen that irrigation could be done through these traditional methods. Drought and change of ownership had ruined the 1081 odd structures, which supplied water to over 60% of the farms. Today, after much effort, the irrigation facility works on one crop for every released land. The SHG managed to pay Rs 15 000 to lease a pond, which can be used for fishery and irrigation. The women have mended a two-km road that links the village to the main road. Women of Bartunda pioneering effort have inspired neighbouring villages as well. Group savings and a small loan from the Balangir Anchalika Gramya Bank helped 21 women release over 13.35 Ha of land from moneylenders. Today the movement involves 315 women across 23 villages. These groups have grown to about 1600 with over 24000 members who are proud to have capital close to Rs 10 M. (DOWN TO EARTH 300404)

Fresh water system from 18th century in Pune The underground duct, commissioned by Peshwa Bajji Rao-

It in 1749, functions even today. It is quite an intricate system comprising two lakes, dams and canals. During monsoon, the smaller of the two lakes, Ambil Odha, gets water from a canal called by the same name. This water is blocked by a 600-ft long stone dam and seeps into the larger second lake, the Katraj. Here it is checked by a 1000 ft long stone dam. Katraj is also serviced by many natural springs. In 1879, the Pune municipality took over the city's water supply system and from then began a gradual decline in the use of Katraj system. In 1880, the municipality built a dam on the Khadakwasla Lake that has since become the main source of Pune's domestic water supply. In 1881 only 967 of 12271 houses in Pune city used water from the Khadakwasla lake, which came through taps. But by 1915, Pune city was supplied 75 MGD of the water by Khadakwasla dam through two open canals, while the Peshwa underground canal system supplied only 0.7 MGD. In 1933, civic authorities diverted the Peshwa canal water to a lake in the Swargate area through a pipeline. After this, the Katraj lake was able to supply 6 MGD to the Swargate lake during monsoon. In 1970, the Katraj lake waters were being supplied to the residents living in two eastern suburbs. In fact even today, farmers tap water from the underground canals, as do many in the old city areas. (Down To Earth 310504)

Students develop solar desalination plant The students from Sriram Engineering College, Perumalpattu, have developed a model of a solar desalination plant. The model has a projected capacity of converting six liters of seawater into drinking water everyday. (THE HINDU 300404)

RAINWATER HARVESTING, SOIL CONSERVATION

UN help for watershed development sought India has sought technical assistance from the UN FAO for ascertaining the feasibility of covering the entire rain-fed land with watershed development (WSD) projects in 10 years. 60% of the total arable land lacks irrigation facilities. This will not only help prevent the run-off but also curb further erosion and degradation of land. The 10th Plan group had suggested a perspective plan for developing 88.5 M Ha of rainfed land through WSD in 20 years. The ongoing WSD has treated 29.2 M Ha at a cost of Rs 101.5 B since the inception in the 9th Plan. (BUSINESS STANDARD 070504)

Eco-restoration of Chenab, Jhelum in J&K In view of the gradual decrease in the water level in river Jhelum, Chenab, Tawi and Ujh, the J&K Ministry of Environment & Forest has formulated a project to enhance water flow in the rivers and to improve catchment areas. The project is part of National Afforestation programme. 480 sites for micro watersheds have been identified. There will be 203 such watersheds in Jhelum South, 58 Jhelum North and 218 in Chenab. In addition, about 60 more micro watersheds have been sanctioned by Centre. (DAILY EXCELSIOR 170504)

Subsurface dams An estimated 690 BCM per annum surface water is available in India. The govt has taken up construction of big irrigation projects across rivers to provide canal water at high costs. The displacement and ecological disruption caused by these projects has turned many communities against them. There is an alternative - we must tap more of the runoff that occurs below the surface. This groundwater runoff is estimated to be 432 BCM, roughly two-thirds the quantity that is above ground. Groundwater was sparingly harnessed in the past by individual farmers who dug shallow wells to lift water manually or by animal power. During 1950-98, the net area irrigated in India has increased from 6 M to 12.5 M Ha by shallow wells and from virtually nil to 18.5 M Ha by deep wells. In the process, India has emerged as the largest user of groundwater in the world. And although the quantum so far harnessed - around 150 BCM - accounts for only 35% of the utilisable groundwater, there has been such decline of groundwater levels that it has been felt inadvisable to increase groundwater exploitation any further. But the real flaw arises due to the present practice of extracting groundwater from upland rocky areas through multitude of deep bore wells resulting in local groundwater depletion and steep decline of water levels. The major portion of the unutilised groundwater, which couldn't be extracted by these bore wells, is joining the sandy alluvium beneath the multitude of streams and rivers to finally join the sea. This unutilised groundwater could be easily extracted through wells in the beds of streams and rivers on a sustainable basis without any danger of groundwater depletion. Under Indian conditions, there will be 0.6 BCM of groundwater runoff on the average for every BCM of utilisable surface runoff. Most of the surface runoff flows in such a short period under the influence of heavy precipitation and could be used only through construction of huge reservoirs. Groundwater beneath a riverbed, in contrast, flows so slowly and uniformly that most of it could be exploited fairly easily through wells. Construction of subsurface dams across the multitude of streams all along the coastal tracts will prevent substantial fresh groundwater presently joining the sea without at the same time submerging any new land. The water so saved could be diverted into some canal networks. These dams also prevent seawater intrusion along the coast where there is intensive use of groundwater in the streambeds. As a subsurface dam only blocks the groundwater that was flowing earlier and any surplus water after saturating the upstream sand freely flows downstream, there will be practically no additional load in the upstream of the subsurface dam. But in the case of conventional dams, the weight of the water column in the reservoir is quite high. As such, the risk of setting off small quakes is much lower for subsurface dams than conventional dams. Such maximum utilisation of available water through an essentially groundwater-oriented storage and supply mechanism would meet the entire water needs of most river basins. (indiatgether.org May 04)

Water audit The Groundwater Surveys and Development Agency has launched a "water audit" project aimed at ensuring participatory water management in a village each in 349 talukas of the state and involve villagers in measuring the rain and groundwater levels and let gramsabha decide water use. People in the selected villages would be helped to set up a rain gauge. Observation wells to determine the groundwater levels will be identified and the villagers will be asked to keep a daily record of the rainfall and groundwater levels. (THE TIMES OF INDIA 260504, THE HITAVADA 130604)

Watershed development in Bihar With the help from Union and state govt, NABARD is to fund watershed development in Banka, Munger, Aurangabad, Rohtas, Bhabhua and Newada districts. The plans are to develop 80000 Ha degraded land under the Rs 600 M scheme to be completed in 5 - 6 years. The NABARD has totally disbursed (including all schemes) Rs 967 M in 2003-4 to Bihar, while the last year it disbursed Rs 821 M. Rs 479.7 M has been disbursed in 2003-4 for irrigation and HEPs. (HINDUSTAN 010504)

Watershed project in MP, Rajasthan A \$2 M project supported by the Sir Dorabji Tata Trust, International Crops Research Institute for the semi arid tropics and ICAR started in '02 covered watershed development in 13 villages in Guna and Dewas districts in Madhya Pradesh and Bundi district of Rajasthan in first two years. In the next 3 years it plans to expand to over 100 villages. (THE HITAVADA 050504)

WB watershed project in Uttaranchal The World Bank has approved a \$ 69.6 M credit for the Uttaranchal Decentralized Watershed Development Project to be implemented over 7 years and cover 9200 villages. The proposed project will cover about 300 000 Ha in the middle Himalayas ranging from 700 m to 2000 m above sea level. The Project has three main components. The first one will finance participatory watershed development and management by promoting social mobilization and community driven planning at the village level. In addition to govt staff, NGOs will also be contracted to assist in participatory planning. This component will promote transparency by providing a budget envelop to each village govt which will be used to prioritize, implement, operate and maintain village development and watershed investments. The second component will fund initiatives to enhance livelihood opportunities to farmers including improved technologies and practices for agriculture and horticulture, and creation of a pilot agribusiness fund to identify sustainable development of niche market opportunities by linking up farmers with private sector entrepreneurs. This component will also fund small income-generating micro-enterprise activities and training for especially vulnerable groups, such as seasonal workers, women and landless farmers. The third component will fund institutional strengthening of

Gram Panchayats and local community institutions, including the training of elected officials, self-help groups and community organizations in project related activities. Project coordination and monitoring will also be funded under this component. The Watershed Management Directorate will implement the project. (<http://web.worldbank.org>)

WATER POLLUTION

Water poisoning risk According to a Planning Commission-World Bank-UNICEF study released early last year, of the 1.42 M habitations, about 14% or 0.2 M habitations have reported that the water is affected by quality problems, including presence of high levels of arsenic, fluoride, iron and other metals and also salinity. It estimates that about 66 M people in 17 states are at risk of fluoride poisoning and about 14 M are exposed to arsenic poisoning. (THE ECONOMIC TIMES 230404)

Villagers affected due to thermal plant Pollution caused by the Tau Devilal Thermal Power Station in Panipat district in Haryana has forced over 10 000 residents of the five villages in the vicinity of the plant to look for new homes. The release of the flyash waste by the thermal power plant has been polluting groundwater, agricultural land and atmosphere. The 860 MW plant spews out a large quantity of ash waste that is dumped in the 20 km area situated in the middle of these villages. After 20 years of the plants functioning, hundreds of tonnes of ash waste up to 30 ft high has collected in the dumping ground. The matter worsens as ash is mixed with water in the thermal plant to carry it into dumping ground through pipes. Now the contaminated water of dumping ground has been mixed with groundwater consequently, the drinking water has been polluted. (THE TRIBUNE 210604)

Industrial pollution in Gujarat According to the Sectoral Environment Report submitted by the Union Ministry of Environment and Forests to the World Bank in Aug 1997, Gujarat, Maharashtra, Andhra Pradesh and Tamilnadu together comprise 60 % of the hazardous waste generated in the country. This report observes, "Vadodara district generates the highest percentage of solid waste in Gujarat. It also noted that the bulk of the generated hazardous waste is not safely handled, treated and disposed, causing threat of serious contamination of groundwater resources, possibilities of health and vegetation impacts due to airborne emission of toxins and damage to the land ... Disposal of untreated mercury-contaminated effluent from caustic manufacture have contaminated large tracks of land in the Nandesari estate." Avnesh Sharma's Ph.D. thesis on "Environment Impact Assessment along the Effluent Channel from Vadodara to Jambusar and its confluence with Mahi Estuary at the Gulf of Cambay", establishes hard evidence about alarming increases in concentrations of zinc, chromium, cadmium, iron, mercury, nickel, lead and copper,

chorides, sulphates, nitrates at J point (the confluence of effluent channel with Mahi estuary). Based on soil sample tests, Sharma found 100-250 times higher concentrations of these heavy metals in the top layer of soil when irrigation is done by channel water or contaminated well water. Vegetables grown along the effluent channel were tested to find high concentrations of these heavy metals. Alarmed by over two decades of most disturbing ecological disaster, human right activists, lawyers, judges, NGOs came together under the banner of the Indian People's Tribunal to investigate environmental degradation in above-mentioned industrial areas. The IPT report *Who bears the cost?* on Industrialisation and Toxic Pollution in the Golden Corridor of Gujarat - now forms a basis for further investigations, local campaigning and public interest litigation. (Indiatogether.org 040504)

Poor water quality in Karnataka A GIS based study on 'Drinking water quality assessment in rural Karnataka' found groundwater in the entire state contaminated with bacteria and excess fluoride. The study conducted by the World Bank assisted Karnataka Integrated Water Supply & Environment Sanitation Project found total dissolved salts, total hardness, and iron and nitrate levels in excess of permissible limits. The fluoride level was 1.5 - 4.5 mg/ltr in Bangalore Urban, Koppal, Bellary, Gulbarga, Devengere, Dharwad, Gadag, Chitradurga, Tumkur and Bijapur. Fluoride content over 4.5 mg/ltr was reported in Gulbarga, Bellary, Koppal and parts of Bijapur. Total hardness exceeding the limit of 600 mg/ltr was found in Bangalore Urban, Bangalore Rural, Bijapur, Bagalkot, Belgaum, Chitradurga, Dharwad, Gadag, Koppal, Bellary, parts of Mysore, Mandya, Tumkur and Kolar. 48% of the sampled villages have reported the presence of bacteria (E Coli) indicating improper sanitation. (THE INDIAN EXPRESS 020404)

Business of pollution The new threat to drinking water comes from chemicals, pesticides and other toxic compounds. Municipalities do not check for these, and the guidelines they follow for water treatment are not mandatory. The unsafe water supplied by municipalities has brought great business to private companies, which offer all kinds of water treatment solutions. Water treatment is an upcoming business in developing countries. As water gets more and more contaminated, treating it has become an industry. According to a Delhi based consultant firm, India's environmental service market is worth \$2.5 - 3 B, of which treating wastewater alone is worth \$1.5 B. The total market for household water treatment in India is estimated at Rs 7 B. A market very lucrative to multinational companies, which do not have a household water treatment market in their own country. Watching the success of some companies, many new ones have joined the bandwagon. The unorganised sector has about 200 companies, which manufacture household gadgets for

purifying water. Ceramic based candle filters, ultra violet disinfection, resin filters and membrane filters are some of the devices, which these companies offer. The latest reverse osmosis based filters have been launched, as pesticides in water have become a big challenge. Conventional treatment cannot treat pesticides. If one uses activated carbon and membrane technology together then pesticides can be removed from water, say experts. There is another concern, most membrane technologies remove the minerals required by human body. The experts say that these technologies are only delaying the problem by a few years. The pollutants remain in the environment. What we need to do is minimise use of toxic compounds and protect our water sources. Once water resources are polluted, it is very difficult to clean them. (DOWN TO EARTH 150404)

Dying units cause water pollution Large numbers of dying units in Panipat district in Haryana are releasing polluted water in the open area and has been causing pollution of surface, ground water and contaminating agricultural land. Not only that, the water level in city has gone several feet down following excessive use of water by about 500 dying units. It has resulted in the acute shortage of water in several parts of the city. A few years ago, the Supreme Court had directed the authorities to relocate the polluting industries, away from the residential areas. But so far the administration has made no serious efforts to shift these units. (THE TRIBUNE 220604)

BOTTLED WATER

Contamination increases bottled water market Over 7000 people die every day from contaminated water and food. The worldwide markets for water and wastewater investments and operations increased by 16% to \$ 312 B in 2004 and is expected to grow to \$ 625.7 B in 2015. Since the World Summit on Sustainable Development in 2002 the problem of contamination has increased even though the investments worldwide is 30% higher. The bottled water markets reached \$ 25 B in 2004 and will grow to \$ 85 B by 2015. Asia is showing the highest growth rate. China alone counts for over \$8 B and will be soon the world's biggest market with over \$ 25 B plus bottled water business. The wastewater markets count for 60% of the total water market. (hkc22.com 150404)

COKE CAPTURES GROUND WATER

Plachimada rejects Coke application The Coca-Cola company's controversial plant at Plachimada in Kerala has been again hit with the perumatty Panchayat, where the plant is located, turning down its appeal for a fresh five-year licence from April 1, 04. The company had halted its operations on March 9, 04 after the High Court upheld a State Govt order restricting it from drawing groundwater from the plant area till June 15, 04 in view of the severe drought in the district. According to

Panchayat president, the local body had set three pre-conditions for allowing the multinational to continue operations including that the plant should not draw groundwater from the region. The company was asked to ensure that the sludge being discharged from the plant did not have toxic substances. It should also ensure that the coke products also did not contain toxic elements. (DAILY EXCELSIOR 010404)

Ex CJI faces contempt case A contempt of court petition has been filed against the former Chief Justice of India B N Kirpal for his remarks against a Kerala High Court order. The court has recently refused to stay the Kerala Govt's directive, restraining Hindustan Coca-Cola Beverages Private Ltd from drawing groundwater at its Plachimada plant in Kerala's Palakkad district till June 15. Justice Kirpal said that the HC should have imposed restrictions on groundwater extraction instead of supporting the govt ban. An advocate of Palakkad has filed the case. He is the counsel of Perumatty panchyat, too, which is waging a legal battle against Coke. Justice Kirpal is a member of Coke's India Advisory Board. (DOWN TO EARTH 300404)

GROUND WATER

Water crisis in major cities In a recent study of 27 Asian cities with population over 1 M the World Bank says that two Indian cities -- New Delhi and Chennai are the worst performing centers in terms of hours of water availability per day. Mumbai is the second worst performer and Calcutta, the fourth. Delhi and Kolkata fall in the flood plains of Yamuna and Hoogly respectively. In these cities due to the over exploitation of ground water the fresh water aquifers are intruded by polluted river water which enters these aquifers and makes the water unpotable.

➤ Compared to other Indian cities Kolkata is more delicately poised. Its main fresh water aquifers are 30 - 100 mts below ground. Natural recharge from rainwater is not possible due to the presence of clay in the top layer. The freshwater aquifer is sandwiched between saline and brackish quality water. According to an Assembly report, arsenic contamination in groundwater has assumed menacing proportions in W Bengal as nine districts including Kolkata are severely affected.

➤ In Chennai the groundwater is extracted from sedimentary formations and contribution from hard rock at shallow depth. The crystalline basement is shallow and is about 10-12m. The Gondwana sediments are not suitable for large-scale development of groundwater due to poor yield.

➤ In Mumbai, groundwater quality varies drastically, mainly because of the filled up creeks. The creeks between the islands were filled up by debris, hence the water level in these area are shallow and saline. In rest of the Mumbai the groundwater is extracted from deeper borewells, which are drilled in Basalt formation, the fractured and jointed basalts are the main yielding formations.

➤ Chennai and Mumbai are located in the coastal area and due to over exploitation of groundwater seawater intrusion is taking place.

➤ In Delhi the subsurface formation has an alternating layer of sand, clay and sandyclay formations. While the sand formation yield freshwater the clay and shale yield poor quality water. More over in most part of Delhi, the freshwater aquifer overlies the saline aquifer. According to CGWB the Chemical quality of ground water varies with depth and space. In alluvial formations, the quality of groundwater deteriorates with depth, which is variable in different areas. Brackish groundwater mainly exists at shallow depths in NW, W and SW districts with minor patches in N and central districts. (From Water Forum 070404, Bengal Newsletter 2001)

Sinking groundwater in cities According to a draft report funded by DFID on depleting groundwater levels in Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Karnataka and Tamil Nadu, the need is a consistent legislation for regulation with community participation. 25% of the Rajasthan's wells ran dry every year and 50% of its aquifers were in critical condition. In Maharashtra, 69% of the irrigation requirement was being met by groundwater. Borewells were being sunk to a depth of 1000 ft at Coimbatore district in Tamil Nadu. The Central Ground Water Board has recorded a yearly 2.5-3 m drop in groundwater levels of Ahmedabad's urban areas, as the rate of exploitation of aquifers is 123%. (DOWN TO EARTH 150404)

GROUND WATER CONTAMINATION

Plants purify water poisoned with arsenic As per US scientists water contaminated with arsenic can be cleaned by growing a species of fern called the 'Pteris vittata'. The plants reduce the concentration to below the safety limit of US EPA in less than a day. The procedure, called phytofiltration, could provide a cheap way to remove arsenic from water. (THE HINDU 200504)

AP villagers crippled by fluoride Excess fluoride in villages in Nalgonda district of Andhra Pradesh has turned the groundwater into a slow poison, crippling at least 10 000 people and leaving hundreds of thousand in constant misery. The seriousness of the problem can be measured by the fact that the groundwater has 10 - 12 ppm of fluoride in contrast to a maximum permitted level of 1.5 ppm. In the villages hardly 100 kms from Hyderabad there are many living examples of the havoc caused by fluoride. People with paralysing bone diseases, stooped backs, crooked hands and legs, deformed teeth, blindness and other handicaps are a common sight. But the govt shows no seriousness towards solving the problem. This problem has been there for ages. The typical underground rock formation with fluoride is the root cause of the problem. Local people have been demanding supply of water from the River Krishna, which flows 100 kms SE. (BBC May 04)

URBAN WATER SUPPLY

WB loan to Karnataka The World Bank has approved a \$39.5 M loan to Karnataka for the urban Water Sector Improvement Project that would benefit 0.2 M residents in the cities of Bangalore, Gulbarga, Belgaum and Hubli Dharwad. The project supports launching of urban water sector reform process, and in demonstrating that continuous, efficient and sustainable water service provision can be achieved. The project has two main components: Technical assistance to support the Karnataka Govt's sector reform agenda and to prepare follow-on investment projects; and physical investments in the three urban local bodies to improve bulk water supplies and demonstrate the feasibility of continuous and safe water supply in pilot areas. In addition to focusing on statewide urban water policy network, the technical assistance component would also focus on a business model for privatisation. (DAILY EXCELSIOR 100404, BUSINESS LINE 120404)

Haveri River Verda, the only source of water for Haveri city, usually goes dry every year by March. Even after the commencement of the Tungbhadra water supply project, the city continued to reel under acute water shortage. Keeping in mind the water shortage, the govt had envisaged a plan about a coupe of years ago, to supply water to Haveri from river Tungbhadra. However, for the first time, the riverbed of Tungbhadra dried up completely on commencement of the new scheme. Though the authorities of Bhadra dam, about 100 km upstream released one TMC of water in February, it could hardly meet the requirements as farmers along the river pumped the water for irrigation. The Karnataka Water Supply Board then built a temporary barrage on the river to store water. But the neighbouring villagers wrecked the barrage, resulting in huge losses. (DECCAN HERALD 130404)

Krishna water for twin cities The Hyderabad Metropolitan Water Supply and Sewerage Board has completed stage-I of the first phase of the Krishna Drinking Water Supply Project. KDWSP was conceived over two decades ago, but the pace of work increased a year ago. The massive Rs 26 B project, to be executed in three phases, envisage supply of 270 MGD of water to the twin cities and neighbouring nine municipalities. While the phase-I, comprising two stages is to be completed by 2005, phase-II is to be completed by 2011; phase-III is to be completed by 2021. In each phase, 90 MGD will be added to water supply system of HMWSSB. The actual cost of stage-I came down to Rs 8.2 B from earlier estimated Rs 10 B. For the stage-I, HUDCO had sanctioned a loan of Rs 3.5 B, while the State Govt had granted Rs 3 B. In addition, HMWSSB had raised Rs 3.5 B through loans and issues of bonds.

➤ **Villagers wait** The 404 thirsty villages in Nalgonda and Ranga Reddy districts have to wait for 18 more months. The Rural Dept has to pay Rs 2.15 B to the Hyderabad Water Supply & Sewerage Board to supply

Krishna waters to these villages. The villages will have to spend another Rs 1 B for laying pipelines and pumps for their need of 40.2 MLD water. The water board has so far taken no interest in laying pipelines in these villages. About 0.555 M people living in 172 villages in Nalgonda district (all fluoride affected) and 232 villages in Ranga Reddy district are waiting for water. (BUSINESS LINE 150404, DECCAN CHRONICLE 280404)

Delhi wastes 45% water According to a report from NGO Tapas, Delhi wastes 45% of its potable water due to pipeline leaks, stealing and transmission losses. This could be reduced if the pipes are changed and orders of the High Court followed. Delhi needs 800 MGD; the Delhi Jal Board has an installed capacity to treat 650 MGD but can actually supply only 400 MGD. The rest of the need is met through fast depleting groundwater.

➤ **Leakage reduction** The New Delhi Municipal Council has requested BWSSB to replicate the leakage reduction project in New Delhi. The BWSSB will be floating tenders on behalf of NDMC and will be responsible for reducing water leakage in key areas, which include the Parliament House, the President's residence, PM House and other VIP areas. In Bangalore, the project is being funded by Japan Bank for International Cooperation and is being implemented by Thames Water Asia Pvt Ltd, Singapore and Larsen & Tubro, India. In Delhi, the execution, supervision and monitoring will be done by the BWSSB. The objective is to reduce the leakage by 70%, whatever the original level of leakage. In terms of revenue, the BWSSB is spending Rs 480 M to reduce leakage from 40000 connections. The 500 MLD of additional water saved from the leakage reduction will be sold for an additional revenue of Rs 80 M per year. At this rate, the cost on the project will be recovered in less than six years.

➤ **Tehri water** The Tehri Dam, which is expected to supply 635 MLD water to the Delhi will not be able to provide water till Dec. The Tehri Hydro Development Corp is awaiting clearance for the tunnel closure from an inter-Ministerial committee under the Ministry of Environment and Forests. According to the officials of the ministry, the present conflict with Uttaranchal govt is the settlement of the cost of rehabilitation of Tehri residents. According to sources, the THDC had recently written to the Uttaranchal Govt seeking its consent to close the tunnel and is awaiting response. The Delhi Jal Board is a 5% shareholder in the Rs 55 B Tehri project and is expected to get 200 cusecs from the dam.

➤ **Further, following the accident in early Aug 04 at the Tehri Dam killing over 30 people and damage to the crucial portions of the project, the tunnel won't be allowed to be closed this year.** (THE HINDU 280404, THE INDIAN EXPRESS 090604, DECCAN HERALD 100604)

Crisis in Darjeeling According to the city civic authority, against an average demand of 1.62 MGD, the average yield is 0.712 MGD. The city water supply system, built in 1915 to cater to 15000 people, has

"hardly been upgraded". Since 1915, the main source of supply has been the 26 water streams in the Sinchal Wildlife Sanctuary catchment area. Meanwhile the population has gone up to 0.13 M. About 20 000-30 000 people travel to the hill everyday. The Municipal dept is looking for additional 1.5 MGD water. Despite the successful completion of the first phase of Rambhi water supply project, which provides 0.15 MGD water, the second phase had to be abandoned due to lack of funds. (THE ECONOMIC TIMES 050404)

Bhopal: Rising water tax, dwindling supply The people of Bhopal pay the highest water tax in Madhya Pradesh but they do not get clean and safe drinking water. There are about 0.106 M water connections in the City, besides there are 50 000 illegal connections. The number of commercial & industrial connections is 8000. For a population of 1.6 M, about 135 MLD water is being supplied from Kolar project, 115 MLD from Upper Lake and 25 MLD through wells, bavadis and tubewells. The water supply pipelines were laid when Bhopal had a population of 0.2 M. Rs 1 B would be required for the replacement of the dilapidated pipelines and the loan has been sanctioned by ADB. But the ADB has imposed the condition that the amount would be given only after the Kolar augmentation Scheme becomes operational. BMC officials said that in the past they used to get Rs 6.8 M annually from the PHE for the maintenance of pipelines. But the amount has been reduced to Rs 3.5 M. (CENTRAL CHRONICLE 180404)

ADB loan to Bisalpur project Bisalpur-Jaipur water supply project for Jaipur city has cleared the financial obstacle. The foundation for the Rs 11 B project was laid in 1999. The PHE dept is working on this project from 10 years. The state govt has cleared the first phase of the project on Oct '99 and it was planned to bring water in '06. The ADB has agreed to give loan of Rs 4.8 B through Rajasthan Urban Infrastructure Development Project, now to be completed by '08. The ADB had put the condition that the water tariff should be increased. (DANIK BHASKAR 290404)

Chennai The sudden depletion of water has put a question mark over the launch of the ambitious project to supply drinking water to Chennai from giant borewells that will be sunk in several villages near Neyveli. Initially, the Govt had proposed the multi-million Chennai Water Supply Augmentation Project-I to supply drinking water to Chennai by tapping water from Veeranam Lake situated in Sethiathope. Sidelining the CWASP-I for now, the govt was currently focussing on the new project under the drought relief scheme. It is in the process of installing 45 giant borewells in villages located between Panruti and Sethiathope along the Kumbakonam – Chennai road. About 2 MLD water would be extracted from each borewell. The pipeline and other infrastructure being laid for the CWASP would be utilised for the Rs 320 M project. The Vadakuthu Panchayat president said about 30 ft of

groundwater had been depleted after the test runs were carried out. He said the cashew crop is raised in about 30000 Ha in the district. The cashew crop, banana and sugar cane raised in over 3600 sq km would be affected as a result of tapping water from the region.

➤ **Kolavoy water** The Tamil Nadu Govt has cleared the proposal to bring water from Kolavoy Lake for Chennai. As part of this long-term project, surplus water from Kolavoy Lake in Chegalpet dist will be transported to Chennai. The Metrowater Board expects to draw up to 20 MLD when this is completed. Many experts have raised apprehensions about the quality of Kolavoy water, which they believe is highly unsuitable for consumption even after treatment. It is heavily polluted by the sewage of Chengalpet town. This is also a concern raised in the feasibility report of the Public Works Dept. The cost estimate for the infrastructure to draw 20 MLD from Kalavoy Lake is Rs 100 M. the requirement for the treatment plant at Mangalam and pumping water into the New Veeranam pipelines is about Rs 40 M. (THE INDIAN EXPRESS 270404, 080604)

Mumbai loses Rs 300 M due to pilfering The water demand is 4000 MLD. BMC supplies 2950 MLD, out of which about 550 MLD water is not accounted due to illegal diversion. 2000 MLD of water is metered. 350 MLD supplied especially in old buildings and 40 MLD supplied in municipal schools and staff quarters are unmetered. This means that there is no account of 550 MLD of water. (THE FREE PRESS JOURNAL 300404)

Italy's support for Bengal Italy has extended financial support to various projects covering solid waste management in 14 towns and drinking water supply projects in 13 towns in W Bengal. The proposal comes in the aftermath of the ongoing implementation of similar such projects funded by DFID (UK) amounting to about Rs 7 B for 40 municipal bodies within Kolkata metropolitan area. (BUSINESS LINE 250504)

Plan for HP capital The Himachal Pradesh Govt is formulating a Rs 3 B long-term plan to solve drinking water problem of the state capital and surrounding areas. According to Chief Minister, water would be lifted from river Sutlej, Pabbar and its nearby sources and brought to the town by gravity scheme. In addition a Rs 480 M augmentation scheme to lift water from river Giri for which funds would be provided by the HUDCO was also being implemented. (THE TRIBUNE 310504)

Plan for Jammu The J & K Govt has secured a Rs 2.44 B loan for improvement and upgradation of water supply system. Work on the project scheduled to begin in Sept is expected to be completed in three years. A plan for augmentation and equitable distribution in all seven zones of Jammu city was awarded to Water and Power Consultancy Services Ltd, which has prepared a detailed project report proposing the tapping of Ranbir Canal water against the earlier proposal for lifting water from the Chenab. The project will be taken up in two

phases. The first phase will be during 2004-15 and the second 2016-31. 100 cusecs raw water shall be lifted to a water treatment plant near Gurapattan village, which will have a capacity to provide 38 MGD in phase-I and additional 30 MGD in phase-II. (THE TRIBUNE 160604)

FLOODS

Centre, Bihar dispute The embankment built on Lakhandehi River in Muzaffarpur dist is creating insecurity for the 22 villages. The embankment built in 1997-8 had breached within three years and major part of these villages came under floodwaters. The State Govt said that the repairing of embankment is Centre's responsibility, while Centre claimed it as state's issue. The residents of these villages have filed a PIL in Supreme Court and the SC has sent notices to the Centre and the State. (HINDUSTAN 050404)

Assam On June 25, '04, five persons died and over 0.1 M people rendered homeless in nine districts. Over 75 villages were affected due to Brahmaputra. According to a report by state revenue dept over 5245 Ha have been affected by the flood, including 2178 Ha of cropland.

➤ By July 12, 20 districts were affected. The road-rail communication remained cut as railway tracks and national highway were submerged. 2.05 M people were affected and 0.4 M houses damaged in 1794 villages. The death toll has gone upto 13. Assam CM released Rs 600 M and sent SOS to PM Manmohan Singh.

➤ Fresh breaches were reported from Solangi and Satrang in Sonitpur district, the latest among the 65 breaches so far. Most of the embankments were constructed in the 60s and experts say they have crossed their life expectancy. According to the CM, 70% of the embankments have lost their utility and would need a massive inflow of funds for reinforcement.

➤ By July 14, Brahmaputra and its tributaries have caused at least 100 breaches. At least 6400 villages across 24 district are affected. Over 5 M people were homeless, around 0.275 M people have taken shelter in the 1300 temporary camps set up by Assam govt.

➤ By July 16, death toll reached 52 and affected nearly 7.5 M people. In one of the worst ever floods, 25 of the 27 districts remained under water.

➤ By July 19, the death toll was 77. Panic prevailed in Dibrugarh as the 22 km embankment protecting it from the Brahmaputra developed leaks. Heavy downpour in the hills of Arunachal Pradesh and catchment areas of the Brahmaputra had inundated large areas in Upper Assam. Three districts of upper Assam, Tinsukia, Dibrugarh and Dhemaji were affected.

➤ Over 10 M people and 8283 villages have been affected. Numbers of relief camps 1681. The number of inmates in relief camps are 1.644 M. Total crop area affected is 2.087 M Ha, while crop area damaged is 1.011 M Ha. Numbers of houses destroyed by the flood: 313 107 and deaths: 107. The estimated damage to roads, bridges, Govt properties are Rs 2.242 B.

➤ During PM Manmohan Singh's visit to flood affected area in Assam, The Chief Minister of Assam estimated the damage by flood to be around Rs 30 B. He said, "Brahmaputra has crossed the highest danger mark for the first time since 1980." The flood have damaged 562 km of roads on NH 31 – the lifeline of North-East – while at least 20 km of NH 37 have been submerged in Morigaon district for three days, disrupting the link between Guwahati and Upper Assam districts. At least 450 bridges including one on NH 31 have been either washed away or submerged. The water level of the Brahmaputra was at 51.43 m on July 21 against the highest flood level of 51.37 m recorded in 1988. At least four wildlife sanctuaries (Kaziranga National Park, Manas Tiger Reserve, Pabitora wildlife sanctuary and Orang National Park) have been totally submerged.

➤ July 24: 12 M people in 10,067 villages in all the 27 districts of Assam have so far been affected. The flood has claimed 135 human lives. It has affected a crop area of 775 034 Ha. About 0.2 M houses have been fully damaged and 0.4 M houses damaged partially.

➤ July 30: The Govt has sought Rs 68.82 B from the Centre to repair the damage to its infrastructure as well as to help about 2 M people rebuild their houses damaged in floods. The death toll is 220.

➤ The Centre released Rs 1.81 B under three different heads: Rs 540 M had been released under the Calamity Relief Fund, Rs 460 M under the National Contingency Calamity Fund and Rs 810 M by the Ministry of Water Resources, as sanctioned on July 12.

➤ Flashflood in Arunachal Pradesh completely damaged the Bordikorai Irrigation Project in Assam's Sonitpur district affecting a Population of 17500 people in 17 villages. River Bordikorai washed away three-km of area of forestland and damaged the main canal of the Project. The Rs 470 M project was commissioned 20 years ago.

Meghalaya July 14: Over 4000 people in 32 villages are affected by the floods in Meghalaya's Garo Hills.

Tripura The death toll risen to three even as many villages were inundated, rendering thousands of people homeless. The Assam Agartala national highway was cut off from rest of the country due to landslides and waterlogging at Ranirbazar in W Tripura district while Sai Radhanagar, Subhashnagar, Katakhal and Orient Choumuhani areas remained waterlogged.

Arunachal Pradesh July 18: Flood has affected over 0.1 M people. Half of Pashighat, the oldest town in the state, in E Siang dist and many villages under Chowkham, Namsai, Mahadevpur, Sonpura and Piyong circle in Lohit dist have been inundated. The breakdown of the Deopani powerhouse has affected the power and water supply systems in lower Dibang valley.

➤ Bridges and roads in the Mebo circle were badly damaged as water submerged 10 villages and half of the district headquarters town of Palighat, over 0.15 M people have been affected, 10 people have died.

Manipur Over 800 people all residents of the Phikomai village have become homeless after the entire village sank in third week of July after a series of landslides rocked the area following incessant rains for over a week. A stretch of one km of National Highway-39 also disappeared, cutting of roads links with the rest of India. (BUSINESS LINE 250604, 160704, 170704, THE HINDU 260604, 270604, 130704, 190704, THE TIMES OF INDIA 120704, THE INDIAN EXPRESS 140704, 200704, 210704, 220704, 250704, TEHELKA 310704, HINDUSTAN 250604, RASHTRIYA SAHARA 220704, ASSAM TRIBUNE 250704)

Bihar June 22: due to rising level of different rivers in N Bihar over 0.4 M people were affected. Madhubani, Darbhanga, Sitamarhi, Banka, Bhagalpur and other districts were severely affected. The Bhutahi Balan River overflowed and over 0.15 M people were affected in Madhubani district. 25 villages were submerged at Kusheshwar Asthan Block in Darbhanga district due to rising level in Kamla Balan and Koshi River.

➤ July 11: Over 2 M people of 1250 villages were affected in N Bihar districts. Indian Air Force joined the rescue operations where country boats were unable to tackle the turbulent current of the rivers. 25 people and over 1000 cattle have died. Railway tracks in Samastipur inundated and movement of trains stopped. Shivhar & Arariya dists too are severely affected.

➤ July 15: Over 40 persons have drowned in Muzaffarpur district and over 30 M people affected by the flood in 17 districts.

➤ The Centre has released Rs 305.25 M from the Calamity Relief Fund for relief operations in the 18 flood affected districts. Bihar had been allotted Rs 818 M in CRF for current fiscal. Together with the state share of Rs 101.75 M, Rs 407 M will be available.

➤ July 27: According to Disaster Management Dept, total 452 people have died. The maximum deaths have been reported from Darbhanga (109). While Samastipur (91), Sitamarhi (68), Muzaffarpur (52), Madhubani (47), Shivhar (18), Bhagalpur (13), East Champaran (9), Khagaria (9), Araria (7), Madhepura (7), Supoul (5), Katihar (5), Purnia (5), Saharsha (4) and Kishanganj (3) have also badly affected.

➤ Prime Minister Man Mohan Singh had visited Bihar on the July 27 and it seems, he has given Rs. 1.15 B for relief operations. Any further grants would be made only after the visit of the Central Team. The PM said another Rs 4 B was available with the state for drainage schemes and for strengthening embankments. While the state govt demanded Rs 70 B package. (DESHBANDHU 230604, HINDUSTAN 250604, 180704, 270704, THE HINDU 120704, 170704, RASHTRIYA SAHARA 120704, 160704, BUSINESS LINE 280704)

W Bengal Coochbehar, Jalpaiguri and Darjeeling districts had been flooded. Teesta, Torsha and Jaldhaka posed danger. About 25 000 people in Jalpaiguri district had been forced to stay indoors as rivers inundated surrounding areas and cultivated lands. Hundreds of houses in Alipurduar in Jalpaiguri district were submerged. (BUSINESS LINE 120704)

Task Force for permanent flood solution The PM announced the formation of a high-powered task force to report to the Central Govt within six months the ways to a permanent solution to the flood problem. The high-powered Task Force would evolve a holistic view of the flood situation and suggest short, medium and long-term measures. The PM also announced that a central team would soon visit flood-affected area to assess the damage. Once the report of the central team and high-powered task force were made available, the Centre would sanction more funds. (BUSINESS STANDARD 210704)

Flood relief The Centre has announced Rs 2.12 B for flood affected Assam and Bihar. Centre has released Rs 460 M for Assam and Rs 300 M for Bihar. The Centre has sanctioned 50000 T of wheat and rice for Bihar. (DESHBANDHU 130704, HINDUSTAN 230704)

Dam burst in Bhutan A dam burst in Bhutan and the menacing rise in water levels of Brahmaputra and its tributaries due to incessant rains worsened the flood situation in Assam. Barpeta, Nalbari, Chirang, Bongaigaon, Kokrajhar and Kamroop districts were severely affected. (THE TIMES OF INDIA 120704)

Bangladesh July 12: water entered the Sylhet International Airport. 14 have been killed in Sylhet, Sunamganj & Rangunia districts. 3 M are marooned.

➤ July 18: Nearly 2 M people in Dhaka's suburbs have been affected. The situation in the districts of Sirajganj, Bogra, Sherpur, Narsingdi, Munshiganj, Jamalpur, Pabna, Manikganj and Sunamganj worsened.

➤ July 25: The floodwaters entered in Centre and S and about 30 M people have affected. Over 12 M people affected in capital.

➤ The UN has warned of a humanitarian crisis with 300 are dead. 40% of Dhaka is under water. The WFP had made plans to distribute 3 000 T rice.

➤ July 27: Death toll almost 400. About two thirds of the low lying nation is under water in the worst floods in 15 years. (THE TRIBUNE 130704, 170704, 280704, THE HINDU 190704, BBC 280704 NEW AGE-BANGLADESH 220704)

Nepal July 12: 21 were killed and thousands homeless. Landslides also blocked a major highway cutting off Kathmandu from the rest. The floods have severely affected central and E Terai, where over a hundred villages were inundated killing 100s of cattle. (THE TRIBUNE 130704)

Taiwan Worst floods in 25 years. 19 dead. 10 000 stranded including 200 engineers and worker at five HEPs. Nine others missing.. (THE HINDU 060704)

China The situation worse in Central and S China. Death toll 439 on July 28. Over 45 M affected. 21600 injured. (RASHTRIYA SAHARA, THE INDIAN EXPRESS 290704)

Mockery of flood assistance in Bihar

Dinesh Kumar Mishra (On 280704)

The data of the losses due to recent floods in Bihar up to July 26 '04, which was provided by the Dept of Disaster Management, Govt of Bihar:

No of Districts affected –	19
No: of Blocks Affected	192
No: of GPs affected	2552
No: of Villages Affected	8901
Population Affected	21.20 M
Flood Affected Area	4.916 M Ha
Crops Damaged Over	1.342 M Ha
Value of Crop Damage	Rs 2.7233 B
Houses Damaged	0.510 M
Value of Houses Damaged	Rs 1.4626 B
Loss of Public Property	Not Available
Human Lives Lost	452
Cattle Lives Lost	1669
No: of Boats Deployed	6062
Grains Distributed	55,950 Qt.
Cash Dole Distributed	Rs. 20.6 M

The loss data indicate that all the N Bihar districts barring erstwhile Saran is under the floods. Bhagalpur, in their records, means Naugachhia. This is only the first round of floods and some rounds are still due.

The affected area is reported to be 4.916 MHa, which is slightly more than (4.75 MHa) the area affected in 1987, reported to be the worst flood of the last century. In that year southern districts were also affected while in this year, the floods are limited to N Bihar only, so far. This suggests that 91% of the total area of North Bihar is affected by the floods, which, obviously, is not the case. The affected population in 1987 was 28.682 M. It is impossible that when the flood affected area is more this year, the affected population should be less, after accounting for the population rise in the past 15 years.

The crop-damaged area is 1.342 MHa and is valued at Rs. 2723.282 M, implying that the loss is Rs 2030 /Ha. This is a ridiculous figure because it needs Rs 2250/ per Ha only for transplanting paddy. We have to add the cost of seeds and sowing to reach a legitimate figure. Further, what the state means by crop loss? The sum suggested does not match even the input costs on the agriculture and the loss to the farmer is that of his final yield and not the input costs. It is also to be noted that in most of the districts, the transplanting was done with the help of diesel pumps at the farmer's own initiative. The state will not replenish such losses but why should it not include the realistic investments?

The number of houses damaged till July 26, '04 was 0.51 M valued at Rs 1462.26 M. This suggests that the average cost per house is only Rs. 2870. This is much short of the cost of a 10 ft x 12 ft hut made of bamboo struts and thatch. It must be added here that both these

building materials for the poor have become a scarce commodity now.

Number of boats deployed for moving people to safer places is reported to be 6062. Divide this figure by 21.2 millions of affected people and the boat availability comes to about 3,500 persons per boat. That gives a fair idea of how many people were moved to safer places.

The amount of grains distributed is 5595 T over a population of 21.2 M. This gives a per capita availability of 265 grams per person. Even if one assumes that only the people BPL were served with the grains, the per capita availability will only be to the extent of half a kilogram. It is unwise to calculate the availability of airdropped food as its impact is very focused and limited to a very small area. However, airdropping of food is quiet glamorous and is of high advertisement value for the state and it will be of interest to find out the handling cost of such supplies in relation to the impact it makes. Moreover, why this supply is to be airdropped when everybody knows that the places like Kusheshwar Asthan to Naugachhia via Khagaria needs such supplies every year?

Distribution of polythene sheets was made to some 2,31,776 families implying that only 1.159 M of population could get some cover over their heads. It also means that only 5.5% of the affected population was covered under this program.

The cash dole given by the Govt responds to less than a rupee per person.

When it was told by the Water Resources Dept, time and again, that all the arrangements were made to protect the embankments and annul erosion, why should the floods in the state take such an ugly turn?

The usual carrots of constructing dam in Barahkshetra are dangled once again. An informed debate is needed over this issue since all the Govts since 1947 have done the same. Recently, Priya Ranjan Dasmunshi (June 5, '04 at Kishangunj), Central Water Resource Minister completed the formality by announcing that negotiations are on with Nepal. The main trouble this year has arisen because there is nobody available to pass the buck of floods. Earlier, it was so easy to chant that the center is responsible for the floods in the state and the center used to safely say that the floods are a state subject.

How Fishing Ban helps Fish Conservation in HP

Failure of monsoon forced authorities to extend ban period on fishing in Himachal waters

Three man-made reservoirs viz. GobindSagar, Pong and Chamera constitute an important fisheries resource of Himachal Pradesh. By applying judicious conservation & management measures, it has been possible by the state fisheries department to develop a lucrative fishery of over 1580 T valued over Rs 46 M annually in these reservoirs. About 3000 fishermen families, mainly uprooted reservoir's oustees are getting full time vocation through fishing and ancillary activities in these water sheets.

For enhancement and sustainability in the reservoir's fish landings, series of scientific and welfare measures are being taken by the department which *inter alia* include provision of subsidies, intensive seed stocking, observance of catch limit/ mesh size and above all strict observance of two month's 'fishing ban' from 1st June to 31st July--- synchronizing with the spawning season of reservoir fishes. The two months ban on fishing facilitates spawning migration of fishes and allow them to move to suitable eco-grounds for releasing eggs.

For effective implementation of 'Close Season', *financial assistance* is provided to all reservoir fishermen during the ban period under the central and state sponsored '*close season assistance schemes*'.

The current year failure of monsoon and sharp drop in the water level of all the state's reservoirs virtually stalled the fish mating and breeding operation in the water bodies. The cumulative rainfall during the entire fish-breeding season i.e. June-July (observed also as 'Close Season') was pitiful 9.0 cm compared to average 100 cm in normal years. The water spread of the reservoirs also shrunk 35 and 45% in case of GobindSagar & Pong reservoirs respectively. Since rains are *sine quo non* for inducement of fish breeding in carps as such failure of downpour stay put the breeding process and initiation process of egg resumptions in gravid specimen. Needless to emphasise that the process of natural breeding of available brood stock is crucial for sustainable commercial fishery in any existing water body as the stocking or transplantation of farm-reared seed plays only a supplementary role.

There was a strong apprehension that with the lifting of 'Close Season' from 1st August and start of regular fishing season, the innumerable mature and ready-to-breed specimen with bellies loaded with eggs would be wantonly caught & killed. And if this happens this would reflect drastically and adversely in the reservoir fish landing during the subsequent years.

Factoring in, all the above considerations, the state Govt. took a decision of extension of 'ban' period on

fishing upto 15th August. And during the extended 'close season' period the fishermen would be given 'close season' assistance @ Rs 550/- pm as an incentive.

The state Govt. decision was very well vindicated by the nature, as the continuous precipitation and heavy downpour during the first week of August triggered the breeding operation in the reservoirs and reports of repeated full and profound breeding of Indian Major Carps started pouring into the headquarter of fisheries department. With completion of breeding process, the state's 3000 fishermen are now assured that fish catches would ascend during the coming years.

Effective Ban in HP An effective 'Close Season' is one that allows the fish to reproduce relatively undisturbed and for the young to grow to a reasonable size before they are exposed to the fisheries. Imposition and observance of close season in open waters is always considered a meaningful tool in the promotion of sustainable fisheries,

Regrettably in many of the states of the country 'close season' in fishery waters is only on paper. On the contrary fishermen become more aggressive and indulge in wanton destruction of brood stocking moving in shoals for breeding or feeding sojourn. Huge stock of mahseer, Hilsa, carps is decimated merciless during the breeding movement.

Himachal Pradesh is first state in the country, which has shown its seriousness in the observance of close season in reservoirs for protection & promotion of fish wealth. The authorities use both reward & punitive methods. Under a contributory scheme all fishermen are provided financial assistance during the periodicity of close season of two months viz. June- July. A long side HP Fisheries Act 1976 under proviso 7 B which state that if a person kills or catches fish during the close season, he shall be punishable with imprisonment for a term which extends to two years or with fine which may extend to Rs 3000/- or both. Further offence is cognizable & non-bailable.

Heartening to add that with the strict imposition of ban period since 1987-88, the fish catches of Gobind Sagar steered year after year. From a level 337 T valued at Rs 2.4 M during 1987-88, it reached 1202 T valued at Rs 26.2 M during 2002-3.

Kuldip Kumar Sharma (kuldip50@rediffmail.com) (Working on ecology & Fish Dynamics of reservoirs for over 2 decades, Kuldip Kumar has been Instrumental in implementing number of welfare schemes for reservoir fishers as well as steering of fish production of the order 600 T valued Rs 46 M in Himachal Pradesh)

FISHERIES

MP Plans To increase fish production in Madhya Pradesh, several banks have joined hands. They have prepared a Rs 36 M pilot project to convert 200 Ha of marshes into commercial fish farms in the Seoni, Malwa, Sohagpur and Babai areas of the Hosangabad dist by March '05. But farming activity will continue till 2007-08. The project will cover irrigation canals, nullahs and waterlogged areas. The state has over 226 000 Ha of reservoirs under pisciculture with another 63 000 Ha as ponds in villages. Of this, 116 000 Ha is under the Matsya Mahasangh and 72 000 Ha under fish farmers' cooperative societies. The state fisheries dept owns 11 000 Ha of reservoirs. (BUSINESS STANDARD 130504)

Depleting fish habitats in HP There has been a sharp depletion of fisheries and degradation of riverine resources, mainly due to the setting up of HEPs in Himachal Pradesh. The setting up of big HEPs like Nathpa Jhakri in Shimla and Chamera in Chamba has virtually destroyed the original habitats of fish, resulting in damage to the fisheries wealth. (THE TRIBUNE 250504)

Haryana Schemes for fish farming The Haryana Govt has framed two schemes for the development of fish farming in the waterlogged, saline and alkaline areas where land is not suitable for agriculture. A decision to implement the scheme in 19 Ha of waterlogged areas of Faridabad, Gurgaon, Jhajjar, Jindm Bhiwani, Hisar and Sirsa districts was taken by the CM. The expenditure would be borne by the Union and the State Govt on 75:25 basis. Rs 0.125 M par Ha had been prescribed for the development of waterlogged areas under the scheme, out of which 20% would be grant and the rest would be borne by the farmer. (BUSINESS LINE 150604)

Orissa Plans Orissa, which has been importing fish from neighbouring Andhra Pradesh to meet the fish demand, plans to achieve self-sufficiency in fish production. State Director of Fisheries said the state hopes to increase inland fish production by around ten times by strictly implementing the reservoir fishery policy. The policy was accepted by the cabinet last year and was being implemented this year. At least 152 reservoirs spread over 24 districts out of the total 1442 in the state had been taken up by the fishery dept this year. He said the fish production is projected to increase to 19 748 T at the rate of 100 kg per Ha from the present 1830 T at the rate of 9.3 kg per Ha. He said fishing rights of all reservoirs up to 40 Ha had been transferred to respective Gram Panchayats for leasing them out to primary fishermen cooperative societies and self-help groups. As per the new policy, a lease value of Rs 300 would be collected for minor and Rs 200 from medium and major reservoirs per annum at the beginning of the season. (DAILY EXCELSIOR 170604)

DROUGHT

Kerala Farmers in the drought hit areas of Kerala having up to 2 Ha will not have to pay land tax for one year, the Chief Minister has announced. All farmers who had lost over 50% of their crop would be eligible for compensation irrespective of their incomes. In the case of paddy, compensation would be provided if 25% of the cultivated area had been destroyed. The moratorium on revenue recovery of defaulted loans from financial institutions would be extended by one year. (THE HINDU 080404, 140404)

Rajasthan guidelines for drought relief The Govt of Rajasthan had recently launched drought relief works in three of the 32 districts and has issued guidelines for taking up relief works. The relief works have been confined to Bhilwara, Rajsamand and Udaipur districts. The relief works helping in rainwater harvesting in the monsoon, enhancing the groundwater table and improving agricultural productivity will be accorded the highest priority. The govt orders have specified that the relief works would first be started in those villages where crops have been damaged continuously for the past several years. The works would be of such nature, which can be completed within a stipulated time frame. The works will also be taken up on priority in the villages where no public work under any other schemes is currently in operation. (THE HINDU 240504)

Maharashtra The Prime Minister sanctioned drought relief worth Rs 5.01 B from the National Calamity Contingency Fund, including a cash grant (Rs 2.01 B) & 0.3 MT of wheat valued at Rs 3 B. (THE HINDU 290504)

AGRICULTURE**Major foodgrains producing states (2000-1)**

SN	States	Area M Ha	Production, MT	%of Total	Yield Kg/Ha
1.	Uttar Pradesh	20.10	42.32	21.60	2105
2.	Punjab	6.28	25.32	12.92	4032
3.	Anadhra Pradesh	7.29	14.53	7.42	1995
4.	West Bengal	6.24	13.83	7.06	2217
5.	Haryana	4.29	13.25	6.76	3088
6.	Bihar	7.25	12.06	6.16	1662
7.	Karnataka	7.79	10.95	5.59	1406
8.	Maharashtra	13.32	10.08	5.14	757
9.	Rajasthan	11.36	10.04	5.12	884
10.	Madhya Pradesh	9.85	8.93	4.56	907
11.	Tamil Nadu	3.94	8.90	4.54	2262
12.	Orissa	5.24	4.98	2.54	950
13.	Assam	2.89	4.17	2.13	1443
14.	Gujarat	3.15	3.68	1.88	1169
15.	Chhatisgarh	4.57	3.65	1.86	799
16.	Jharkhand	1.84	2.01	1.03	1095
17.	Uttarnchal	1.01	1.73	0.88	1712
18.	Others	3.37	5.49	2.80	
	All India	119.78	195.92	100.0	1636

(SOURCE: Union ministry of Agriculture, Government of India)

Neglect of Indian agriculture The Agriculture in India contributes 25% of GDP, provides 56.7% of employment, sustain 69% of population, produces all

the food and nutritional requirements of the nation and important raw materials for some major industries, and accounts for about 14% of exports. The population dependent on agriculture is very high and it has gone up from 270 M to 690 M since 1947. Investment in agriculture has all through been very low. In spite of the Reserve Bank of India's directive to the banks to ensure a minimum of 18% credit flow to agriculture, never has it crossed the 15% mark. For the past two decades, there has hardly been any central Govt investment. Investment by states has also shown a continuous decline. The existing irrigation systems courtesy poor maintenance has degenerated. Only 40% of agriculture has irrigation and 60% is still rainfed. The total subsidy amount to Indian agriculture is less than 5%. A major portion of this benefits the inefficient fertiliser, sugar and farm machinery and equipment manufacturers. By international prices, Indian agriculture has always been negatively subsidised. The subsidies on power and irrigation constitute a hollow façade. First of all, power supply is highly erratic and inadequate. It is calculated on a residual basis, that is what is not consumed by other users is debited to agriculture. (THE ECONOMIC TIMES 290604)

FICCI for hiking Plan allocation to farm sector The federation of Indian Chambers of Commerce and Industry task force on agriculture has suggested that to achieve 8% GDP growth, agriculture would need to grow at least at 4% per annum. This will require very large investments as unfortunately over the last few five-year Plans the share of the agriculture and allied sectors in Plan investment has declined. There was need for public investment of over Rs 1000 B in agriculture and allied sectors during the 10th five year Plan, up from Rs 589.33 B provided in the Plan. It has also been suggested to the Govt to promote setting up warehouses close to the farms and introducing the warehouse receipt system. The task force suggested the early completion of nearly 400 incomplete irrigation projects languishing for 15 years that would cover 21.5 M Ha and investment in minor irrigation programmes, including optimal use of water through micro/sprinkler/drip irrigation system. (BUSINESS LINE 030604)

Soils of India According to information compiled by the Nagpur-based National Bureau of Soil Survey and Land Use Planning under special mandate from ICAR, the 120 M Ha of the 142 M Ha under cultivation in India are degraded. Launched in 1976 across six centers, the soil-mapping programme covered all the states and some districts. The NBSS has created a databank guided by 40 different parameters – including pH level, water holding capacity, texture, depths, stoniness, microbe content, salinity, mineralogy, irrigability – to determine the quality of various kinds of soils. India has 30 agro-ecological regions, 60 microclimatic parts and 1659 groups of soils. (THE INDIAN EXPRESS 020404)

Planning Commission accepts Johl report The Planning Commission has accepted the report of the Johl Committee on diversification for implementation in Punjab. The report was submitted in the beginning of the last year. The Planning Commission has reduced the proposed area for diversification from 1 M Ha to 0.66 M Ha. The committee had proposed transfer of 1 M Ha from rice-wheat paddy rotation to other less water-consuming crops. The committee had stated that the Union Govt would make a net saving of Rs 37.2 B even after paying Rs 12.8 B annually to farmers opting for diversification. The Committee had suggested each farmer opting for the scheme should be given Rs 12500 per Ha per annum for not sowing wheat and paddy. The village panchayat should work, as nodal agency to implement the scheme, should be given Rs 250 per Ha as implementation cost. (THE TRIBUNE 070504)

Surplus land can't be restored to farmers The Supreme Court in a major judgement that might affect farmers in Punjab, has ruled that any land declared surplus with a land owners under the Punjab Land reforms Act, 1972, and vested in the state, cannot be restored back to him or her due to death or birth in the family, which might alter the land's surplus status. (THE TRIBUNE 230504)

Bengal starvation deaths The W Bengal CM has ordered an inquiry into reports of starvation deaths in the State. In Amlasole village on the Bengal- Jharkhand border in W Midnapore dist, five people, all tribals aged 30 – 67 were reported to have died of starvation over the last five months. A PIL was filed in the Kolkata High Court in this connection, demanding compensation of Rs 0.5 M each to the family of the deceased. (BUSINESS LINE 120604, THE TRIBUNE 150604)

Suicides by Andhra farmers Over 44 farmers committed suicides in a week in different districts in Andhra Pradesh due to mounting debt in Khammam, Anantpur, West Godawari, Krishna Dist, Nellore, Mahabubnagar district, Karimnagar and East Godavari districts. While the CM unveiled a compensation package for families of debt-ridden farmers who had committed suicide to prevent the recurrence of such incidents while announcing financial tie-ups for time bound completion of key irrigation projects. Under the Rs 0.15 M package for each bereaved family, Rs 50 000 will be set aside for "one time settlement" of debts, while Rs 0.1 M, will be deposited a joint account in the name of the kin and local Mandal revenue officer, to help the affected family recover financially. The Govt has also constituted a four member committee, comprising the revenue Divisional Officer, deputy SP, local MLA and local sarpanch, to identify debt-ridden farmers in their areas and prevent them from taking their lives by extending the financial package and also through counseling.

➤ 161 farmers have committed suicide in AP since May 14 when New CM took charge. Official statistics

show that 137 farmers ended their lives on accounts of debts and crop failure. Five more committed suicide due to failure of borewells, and in the remaining 19 cases other reasons were cited. While the govt has cited 'natural calamities such as successive droughts and pest attacks' as one the cause for the suicides, figures show that agricultural production actually rose last year.

➤ Six farmers from Khammam, Tirupati, Adilabad, Eluru and Guntur districts ended their life due to heavy debt on June 17. In Khammam a 50-year-old farmer, Ravuri Veerabhadram, had taken 4 Ha on lease last year and had repaid debts of Rs 90000. He still had to clear Rs 28000. A 35-year-old farmer, V Govinda Naidu, in Tirupati ended his life as he could not repay debts of Rs 0.25 M he had taken from private moneylenders to cultivate his 2 Ha as crops failed and crippled under heavy debt. Mounting debts drove two cotton farmers, Gangaih-34 of Vijapur village and Tulsiram-22 to suicide In Adialbad district. A tenant farmer, Kalapamula Satyam-60, of Chinayalamilli village in Ungutur Mandal of W Godavari dist committed suicide. A 44-year-old farmer Rangsetti Nageswara Rao ended his life in Chilakaluripet mandal of Guntur Dist. He used to grow paddy in 4 Ha of leased land and had borrowed over Rs 50 000 from moneylenders, which he could not repay. (THE HINDU 220504, 230504, 240504, 260504, 280504, 100604, 180604 THE INDIAN EXPRESS 190504, THE ECONOMIC TIMES 210504)

Andhra farmers get free power After taking oath as CM of AP, Mr Y S R Reddy approved free power to farmers. He also wrote off electricity bill arrears due from farmers. While the waiver of arrears will cause a one-time burden of Rs 11.92 B on the govt, the free power order will incur an additional annual revenue loss of Rs 4.36 B. (BUSINESS STANDARD 150504)

Rajasthan to Legislate for contract farming The Rajasthan Govt has decided to allow contract farming through agreement between farmers and firms to grow crop on the farmers' fields and its procurement by the latter. The existing laws, including the Rajasthan Agriculture Act, 1961, will be suitably amended to facilitate contract farming and setting up mandis in the private sector. The private contractors would have to get themselves registered with the state govt for contract farming and specify reasonable rates of returns in their written agreement with the farmers. As part of the decision to promote private sector's participation in the establishment of marketing yards or mandi, the State Agricultural Marketing Board will be reconstituted to provide for the inclusion of non-Govt members. (BUSINESS LINE 120504, THE HINDU 130604)

Monsanto suspends biotech wheat The global seed leader Monsanto said it was suspending plans to introduce what would be the world's first biotech wheat that has generated concerns around the world about scientific tinkering with a key food crop. The company

has been under fire from experts, farmer groups and export traders. Several groups have sought moratorium on biotech wheat introduction, and some have threatened to avoid purchasing US wheat if Monsanto's biotech wheat was introduced. (BUSINESS LINE 110504)

National Commission for Farmers Dr M S Swaminathan will head the National Commission on Farmers, which was set up by the previous govt to review the status of Indian Agriculture and assess the condition on farmers. Dr Swaminathan now heads a Committee appointed by the Agriculture Ministry to prepare a National Policy on Agri-Biotechnology. He said the report was ready and he would soon submit it to the Ministry. The Union Agriculture Minister said he wanted to expand the scope of the Commission and include in its terms of reference, recommendations on accelerating agriculture reforms, particularly in quality production and marketing. In its earlier terms of reference, the Commission was to identify the factors responsible for imbalance and disparities and suggest measures to achieve sustainable and equitable agriculture development. During the early part of the previous govt, a "Task Force on Agriculture" was set by the then Agriculture Minister but was later disbanded. We donot know what was accomplished by the Task Force in the three years in remained in force. (THE HINDU 310504, BUSINESS LINE 080604)

99% transgenic crops in only 6 countries According to USAID, the area of transgenic crops in the world increased 40 times in seven years. However only 6 countries are using 99% of its technology, which are USA, Argentina, Canada, Brazil, China and South Africa. India is 8th. The farmers of several third world countries including India are against this innovative technology. (HINDUSTAN 200604)

NBRA for agriculture mooted A Task Force on Application of Biotechnology in Agriculture, headed by Dr M S Swaminathan, has recommended the constitution of an autonomous National Biotechnology Regulatory Authority in the next three years for promoting and monitoring use of biotechnology in Agriculture. The Task Force suggested that the proposed regulatory authority would have two wings – one for agriculture and food and another for medical and pharmaceutical formulations. The testing of GM crops varieties should be handled at the national level by an all-India Coordinated Research Project under the aegis of the Indian Council for Agriculture Research. It recommended that until the proposed NBRA came in to existence, the Monitoring and Evaluation Committees should report to the Genetic Engineering Approval Committee. The GEAC is at present an apex body under the Environment Ministry for approving the biotechnology applications from bio-safety and environmental aspects. It suggested provision of additional Rs 12 B as funds in support of its various recommendations. (THE HINDU 030604)

“Virtual water trade” The amount of water consumed in the production process is called “virtual water” contained in the product. The “virtual water trade” is the virtual water content of the product times the trade volume of that product. For the importing country it means that it does not have to consume the amount of water in domestically producing the product. If the importing country is already facing water scarcity, this represents real water savings and less pressure on its water resources. If the water exporting country has abundant resources, the entire flow becomes an efficient instrument in improving global water use efficiency. This virtual water trade has been touted as a “very successful means by which water deficit economies can remedy their deficits”. The international Food Policy Research Institute in its report *Global Water Outlook to 2025: Averting an impending crisis*, points out that under a business as usual scenario, “developing countries will dramatically increase their reliance on food imports from 107 MT in 1995 to 245 MT in 2025. That increase is the equivalent of saving 147 BCM of water at 2025 water productivity levels, or 8% of total water consumption and 12% of irrigation water consumption in developing countries in 2025”. Virtual water content of some common products is as below:

Virtual water content for select products	
Product	Virtual water content (m ³ /ton)
Wheat	1160
Rice	1400
Soyabean	2750
Beef	13500
Pork	4600
Poultry	4100
Eggs	2700
Milk	790

Top 10 virtual exporting & importing countries (1995-99)	
Exporters	
Country	Net export volume (10 ⁹ m ³)
USA	758.3
Canada	272.5
Thailand	233.3
Argentina	226.3
India	161.1
Australia	145.6
Vietnam	90.2
France	88.4
Guatemala	71.7
Brazil	45
Importers	
Country	Net export volume (10 ⁹ m ³)
Sri Lanka	428.5
Japan	297.4
Netherlands	147.7
Korea republic	112.6
China	101.9
Indonesia	101.7
Spain	82.5
Egypt	80.2
Germany	67.9
Italy	64.3

(THE HINDU 060604)

FOODGRAINS MANAGEMENT

Rice Export Fraud The CBI has registered a criminal case against the Branch Manager and a Deputy Manager of the National Cooperative Consumers Federation of India and the proprietor of a private company for allegedly selling of subsidised rice obtained from the Food Corp of India godowns in the name of exporting. The consignment was never sent abroad and the private firm had produced false documents to show the same had been done. The private firm had lifted 12500 T of rice at the rate of Rs 5650 per T, which was Rs 3850 less than the open market price. (THE HINDU 260504)

PDS Foodgrains diverted The leader of opposition in the legislative assembly in Karnataka made the statement about the misuse of foodgrains after inspecting seven wheat-laden lorries that were seized by the Food and Civil Supplies Dept. The wheat released by the Food Corporation of India was meant for distribution under the PDS. Instead they found their way to a roller flourmill to be converted into sooji and maida. (THE HINDU 140604)

SUGAR

States can fix a higher price for sugarcane A five-judge constitution bench of the Supreme Court held that the state Govt could fix a higher purchase price for the sugarcane payable by the mills to the growers over the Statutory Minimum Price fixed by the Centre. The ruling was given by a majority of 3 to 2. They were allowing appeals filed by the UP Govt challenging the interim order of the Allahabad High Court. All major sugar mills had challenged the decision of the UP Govt and several others states to force SAP on them. (THE HINDU 060504)

TN loan to mills The Tamil Nadu govt is set to extend a soft loan to cooperative and private sugar mills for clearing their cane arrears. The Union Ministry of Food and public distribution in Jan '04 had announced one time help scheme for major sugar producing states. The finance dept of Tamil Nadu has recently tapped about Rs 2.29 B through a market-borrowing programme of RBI. The ministry had invited proposals from the states for additional market borrowings. They were asked to work out the extent of borrowings based on factory wise cane arrears for 2002-03 season. As per the central scheme, the states would make use of the funds for lending to sugar mills to clear off their cane arrears during the 2002-03. Industry sources said of the Rs 2.29 B raised by the Govt, Rs 1.1 B is expected to go towards funding cooperative sugar mills. The balance amount would be shared by major sugar producing companies. (THE ECONOMIC TIMES 120604)

Govt to pay for storage, Insurance and interest The Union Food Ministry has decided to resurrect the 2 MT buffer stock, which enables mills to receive around Rs

1300 per T cash for holding a part of their production on the govt's account. The buffer stock had been terminated by the ministry on May 18 '04. However, it has now been restored and extended till Dec 18 by food ministry. This would allow mills to receive around Rs 3 B for carryings stocks, which could otherwise have to be sold in the open market. The Centre had announced the creation of the buffer stock in Dec '02, which meant that it would pay for the storage insurance and interest on the carrying cost. (THE ECONOMIC TIMES 120604)

FORESTS

Plan to extend green cover The Govt has launched a massive project to increase the green cover to over 33% by 2012. The "Greening India" project aims to cover 0.17 M villages in the vicinity of forests inhabited by tribal and other poor sections. The Planning Commission sources said that project was launched after the potential of wastelands was recognised under the 10th five-year plan. It is estimated that India has over 107 M Ha of degraded land. Of this, about 64 M Ha is categorised as wastelands, which are to be greened through this project. A new Govt agency, the Forest Development Agency has been set up with its unit in each of the country's 580 major districts. The International Council for Research in Agro forestry will provide technical assistance, networking and training to the FDA. (BUSINESS STANDARD 200404)

POWER SECTOR

PSEB-PTC pact The Punjab SEB has signed a MoU with Power Trading Corp for purchase of power for 12 years. The PSEB would purchase power from 450 MW Baglihar HEP in J & K and 22.5 MW Bhilangana HEP in Uttaranchal, both likely to be commissioned by March '06. The power would cost Rs 2.8 per unit from Baglihar HEP and Rs 2.25 per unit from Bhilangana HEP including transmission charges. (THE TRIBUNE 220404)

CERC terms The Central Electricity Regulatory Commission has announced a five-year tariff order stipulating a return of 14% on equity for power projects, in the public and private sectors. Earlier the returns were capped at 16%. Consumers could expect a lower tariff structure. This policy appears to be focussing also on improving capacity utilisation at power plants – it has raised the incentive rate to Rs 0.25 per unit from the existing Rs 0.21. (BUSINESS STANDARD 030404)

Powergrid MoU A MoU has been signed between Powergrid and Union Ministry of Power detailing the targets to be achieved by Powergrid during 2004-5 including project implementation targets, 140% higher than the preceding year. Powergrid shall be allowed to raise domestic bonds/other loans of Rs 24 B in 2004-5. (BUSINESS STANDARD 060404)

KSEB tariffs The Kerala State Electricity Regulatory Commission has asked the Kerala State Electricity

Board to continue with the existing power tariff structure during 2004-5. The KSEB, in its petition to the SERC in Dec '03, had estimated that it would be requiring an additional Rs 8.54 B during 2004-5. While processing the petition, the SERC came to the opinion that the gap could be narrowed down the Rs 2.96 B. Out of this sum of Rs 2 B can be covered if the Govt exempts the KSEB from paying electricity duty under the provisions of Kerala Electricity Distribution Act. SERC also expected the Govt to bridge the remaining gap of Rs 960 M by providing subsidy to that extent to the KSEB. During 2003-4, the Govt had given a commitment to provide the KSEB a subsidy of Rs 3.75 B to avert a tariff revision. This amount, however, was not given to the KSEB due to financial difficulties. (THE HINDU 170404)

Haryana to set up power trading body The Haryana Govt will set up a wholly state-owned power trading corp for intra-state and inter-state trading in power to meet the requirements of its two power distribution companies, the Uttar Haryana Bijli Vitran Nigam and the Dakshin Haryana Bijli Vitran Nigam. The trading company will procure power from various sources of power generation and also through the power trading companies in the govt as well as the private sector. It will facilitate the pooling of available power to optimise the availability of electricity and the cost of energy to the distribution companies. The corp will also facilitate the sale of surplus power from within the state to the buyers outside and within the state and also provide consultancy. (BUSINESS STANDARD, BUSINESS LINE 200504)

MP power board to be split The Madhya Pradesh govt has decided to split the state power board into five companies: three distribution firms, one generation and the fifth a transmission company. The state govt has sought a Rs 11 B loan from the ADB for financial restructuring of the power board. The ADB has already sanctioned a \$350 M (Rs 17 B) loan to the MPSEB. (BUSINESS STANDARD 240504)

UP defers power-trading plan The Uttar Pradesh Govt has deferred the formation of a power trading company. As per section 172 of the Electricity Act, 2003, state govt were to constitute separate agencies for transmission, distribution, generation and trading. (BUSINESS STANDARD 040604)

TN Domestic power tariff reduced The Tamil Nadu CM announced a substantial reduction in electricity tariff for the domestic sector by providing an annual subsidy of Rs 9.1 B to the Tamil Nadu Electricity Board for the benefit of 11.67 M families. Now the revised tariff would be Rs 0.75 - 3.05 per unit down from Rs 1.10 - 4.75 per unit earlier. (THE HINDU 010604)

W Bengal power tariff The W Bengal Electricity Regulatory Commission has recommended across the board tariff reduction for the four power stations run by the the state-sector W Bengal Power Development

Corp, which now operates all the thermal power stations that were earlier under the WBSEB. Even as the revenue requirement of WBPDC, the only profitable state-sector power producer, was reduced by WBERC, the average tariff for 2003-4 and 2004-5 was pegged at levels not only lower than what was asked for by the utility, but also below the present levels. The average tariff for WBPDC works out to Rs 1.72 per unit for 2003-4 and Rs Rs 1.9 for the current year against Rs 2.05 and Rs 2.14 demanded. (BUSINESS LINE 040604)

Rajasthan tariffs up The Rajasthan Govt has increased the electricity duty on domestic, commercial and industrial power connections by Rs 0.25 - 0.40 per unit, but exempted the agricultural consumers from the hike. The increase will lead an additional annual burden of Rs 1.5 B on the consumers. (THE HINDU 300604)

Rajasthan: Open access in intra-state transmission

The Rajasthan Electricity Regulatory Commission has announced a methodology and procedure for seeking open access in intra-state transmission. The RERC issued an order and regulation allowing open access for use of intra-state transmission system and /or distribution system of the transmission and distribution companies in the state. Open access shall be allowed in four phases: from April 1 '05, to consumers with contract demand above 15 MVA; from April 1 '06, to consumers with contract demand above 5 MVA; from April 1 '07, to consumers with contract demand above 1.5 MVA; and from April 1 '08 to consumers with contract demand above 1 MVA. (POWER LINE 0604)

Delhi Tariff hike The DERC has decided to reduce the number of slabs for domestic customers by merging the 0 to 100 and 101 to 200 unit categories. There has been an increase of about 10% in the new tariffs for all consumers including industrial, commercial and agricultural. The fixed charges for the first 100 units of consumption have been doubled from Rs 10 to Rs 20 per KW and the energy charges has been increased from Rs 1.75 to Rs 2.2 per unit. According to DERC chairman, there is gap of Rs 17.62 B between revenue and expenditure for 2004-5, of which the Delhi Govt will provide Rs 6.9 B as support. The remaining gap would be met partly through the hike of tariff, which would bring in Rs 3.76 B as revenue, and partly by creating a regulatory asset for which Delhi Transco Ltd and the three distribution companies BSES Yamuna, BSES Rajdhani and NDPL would raise Rs 6.96 B as loans. (BUSINESS STANDARD, THE TIMES OF INDIA 110604)

POWER FINANCE

New strategy for delayed projects The ministry of programme implementation is devising a new strategy to tackle all projects above Rs 200 M, which have been languishing at various stages of implementation. The minister of state for programme implementation said that the strategy would be based on ideas like asking

for definite allocation of fund and abandoning certain jinxed projects rather than allowing them to hang on. The ministry at present is monitoring 45 power projects and also 10 projects of atomic energy worth Rs 300.97 B. For Rs 42.27 B Dulhasti HEP in J&K, the time over-run is 3.5 years. Rs 52.09 B Tehri dam project has already taken 5 years more. The cost over run for Rs 86.56 B Nathpa Jhakri project is as high as 416%. For Bogibil project in Assam, there is 77% cost over run on the original cost. (THE ECONOMIC TIMES 060604)

AP PPAs to be reviewed The CM has decided to review and renegotiate the PPA signed with four independent power producers during the previous govt. The PPAs of GVK, Spectrum, Lanco and BSES are to be reviewed. He said the excess payments to these companies totalled a minimum of Rs 2 B annually. There was a need to bring the rates down, as was pointed out by the CAG. (THE HINDU 110604)

World Bank to scrap loans of free power states?

The World Bank's Vice President for South Asia Mr Paful Patel and India Country Director, Mr Michael Carter indicated that the loans already sanctioned to states would be scrapped if all the conditions attached to these projects were not honoured. The officials made it clear that the WB did not approve of free power supply. The WB has already dropped a proposal for \$220 assistance to a power project in Tamil Nadu following the state's decision to provide free power to farmers. AP and TN have recently announced free electricity to farmers. (THE ECONOMIC TIMES 260604)

Karnataka to terminate WB loans The Karnataka govt has proposed to terminate its World Bank loan for economic restructuring. Instead, the state govt has sought an alternative borrowing of Rs 35 B. The state so far has drawn \$325 M in two tranches of the proposed amount of Rs 125 B. The third tranche of \$200 M was withheld since the state had failed to meet some of the reform milestones prescribed by the bank. The sources said the major factors that had prompted Karnataka to take this step were the high costs of borrowing. Besides the actual cost of borrowing from multilateral institutions was likely to escalate. In addition, there were also covert costs in the form of rigid conditionalities prescribing reduction in revenue expenditure – subsidies. Such conditions risked destabilising the economies. In Karnataka, the application of subsidy reductions had led to steep increase in power tariffs, by over 40% since the beginning of reforms. (BUSINESS LINE 110504)

WB, ADB money for Power Grid The Power Grid Corp said that it was raising bulk loan of \$2 B from the WB and ADB for its planned capital investment of Rs 700 B by 2012 to support generation capacity addition of 100 000 MW. PGCIL would add 60 000 circuit km of transmission network during 2004-12. (THE HINDUSTAN TIMES 280504, POWER LINE 0604)

Japan soft loan India has received Rs 52.7 B loan from Japan for eight infrastructure projects, including Purulia Pump Storage project in W Bengal (24 B Yen) Dhauliganga HEP in Uttaranchal (14 B Yen) and Meghalaya's Umiam HEP (1.96 B Yen). The other projects are Rengali Irrigation, Kurnool Cuddapah Canal, Bisalpur Jaipur Water Supply and Integrated Natural Resources Management and Poverty Reduction Project of Haryana. (THE HINDU 010404)

Tata Power plans The Tata Power is investing Rs 62 B in power generation, transmission and distribution. The company is investing Rs 4.5 B in Jharkhand's Jojobera power plant to be started in 2005 and Rs 16 B in ongoing Srinagar HEP in Uttaranchal. The company has signed a MoU with Power Grid Corp for 1200 km transmission line from Tala HEP in Bhutan to Delhi and Rs 16 B would be invested on it. The company is to invest Rs 10 B in next three years on distribution networks in Delhi. The company proposes to raise \$500 M in overseas market for the Srinagar HEP and the Jojobera and other power projects. (DESHBANDHU 260404, BUSINESS LINE 130504)

PFC ECB plans The Govt has permitted Power Finance Corp for an external commercial borrowing of \$100 M. So far, PFC has borrowed \$3.8 B from the overseas & Indian markets. (BUSINESS LINE 040504)

Extension of lb power station in Orissa The Orissa Govt and private utility AES Corp has agreed to set up the third and fourth units of lb Thermal Power Plant in Jharsugda district. The two units of 250 MW each are estimated to cost Rs 17 B. The lb plant, owned by the Orissa Power Generation Corp, currently has two units of 210 MW each. AES has a 49% stake in OPGC and the state govt holds the remaining 51%. (BUSINESS STANDARD 180604)

Tata power plans The Tata Power has chalked out an ambitious Rs 62 B investment plan spread over the next five years to invest this amount in ongoing and new projects. The company is planning to raise \$500 M in the international markets. These investments will also be channelised into acquisition and joint ventures. The bulk of the investment of Rs 16.28 B may go in to the 330 MW HEP at Shrinagar in Uttaranchal, which is being implemented by a 100% arm, the Alaknanda Hydro Power Company. (BUSINESS STANDARD 180604)

RE plan The Union Govt is working out a roadmap to involve central power utilities like the NTPC and Power Grid Corp to implement its Rs 170 B Rural Electrification programme. The Power Ministry has proposed a five-year RE programme through increased central assistance aimed at making electricity available in all villages. Special emphasis is planned in six states – W Bengal, Assam, Orissa, Jharkhand, Bihar and Uttar Pradesh – where 85 - 95% of the villages do not have power supply. (BUSINESS STANDARD 290604)

NHPC's Rs 250 B plan The NHPC has a massive investment plan of Rs 250 B for the next three years to achieve the target of adding 4357 MW in the 10th plan. Of the total Plan outlay of over Rs 320 B, the NHPC has already invested about Rs 70 B and has added 1400 MW. Three more projects totaling 1170 MW are to be commissioned in 2004-5. During the 10th Plan NHPC would be getting a Central Budgetary support of Rs 142 B of which about Rs 40 B has already been pumped in. The NHPC will tap the overseas markets to finance the 2000 MW Subansiri Lower HEP. (BUSINESS LINE 190604)

KPCL loan Karnataka Power Corp has tied up a Rs 16.8 B loan with a consortium of 22 banks and financial institutions for the upcoming 500 MW Bellary TPS. (POWER LINE 0504)

POWER OPTIONS

Renewable energy in India The total installed capacity of power in the country has gone from 1700 MW at the time of independence to around 115 000 MW till date. But still, nearly 80 M of the rural households are without electricity. Today a renewable power generation capacity of 4 800 MW, about 4.4% of the total installed capacity, is operational in the country. India has a wind power potential of about 45000 MW and a potential of over 15000 MW for small hydro projects. With a wind power installed capacity of 2 483 MW, India is ranked fifth in world. Nearly 500 SHPs with an installed capacity of 1603 MW have been set up. According to an estimate almost 550 MT of different type of crop residues is generated every year and of this about 150 MT is surplus. In the addition, huge quantities of biomass could be produced on a sustainable basis by growing fast growing tree species on waste and other unutilised lands. It is estimated that there is potential of about 19 500 MW of power generation from the biomass. India is implementing the world's largest bagasse based co-generation programme in sugar mills and over 600 MW aggregate biomass power capacity has been installed. There is an estimated potential of about 1700 MW power generation from urban wastes and over 1000 MW from industrial wastes. So far about 41 MW of projects have been installed. (THE INDIAN EXPRESS 0604)

Renewable energy cooperation with UK The Renewable Energy and Energy Efficiency Partnership, the UK Govt and the Associated Chamber of Commerce and Industry have decided to become facilitators to fulfil the ambitious plan of having 10% share for renewables in the total installed power capacity by 2012. The REEP is a global partnership of govts, business, finance and other organisation and are committed to working together to deliver policy, regulatory and financing frameworks. The UK had targeted for 10% of the UK's electricity supplied from renewable energy and at least double the existing capacity of renewable heat and power by 2010. The

Chairman of Assocham Expert Committee on renewable Energy said that the Electricity Act 2003 has failed in defining the exact role of renewable sources. He stressed the need for a separate Act for tapping the huge untapped potential in wind, solar and biomass. (THE HINDU 040404)

AP HC stays power tariff order The Andhra Pradesh High Court has granted a stay on the tariff order of the APERC for 2004-5. The tariff order had proposed lowering of tariff for non-conventional power generating units. The High Court intervened after the Non-Conventional Energy Developers Association filed a petition on March 31 seeking restoration of the tariff to the current levels of Rs 3.48 per unit instead of the proposed Rs 2.40. The Court's order implies that all non-conventional energy units could sell power at the previous rate of Rs 3.48 per unit to APTransco till further orders. The state has 85 non-conventional power generation units including wind, co-generation, biomass and hydel units with an installed capacity of 380 MW. (THE TIMES OF INDIA 020404)

PFC loan for wind project The PFC has ventured in to the non-conventional energy segment with a Rs 984 M loan for a 24 MW Rs 1.2 B windmill project. The project located at Jaisalmer, Rajasthan is promoted by Enercon Wind Farm Jaisalmer Pvt Ltd. (POWER LINE 0604)

First small wind generator The dept of physics at Sardar Patel University in Gujarat has developed India's first indigenous Small Wind Generator. The indigenous version costs around Rs 65 000, which is also cheaper than solar power generators. The device produces 1.8 kw electricity. It has three fiberglass blades of 5-ft length with a waterproof five-phase AC generator mounted on a 20 ft galvanised pipe. The structure includes a tail vane to ensure that the SWG remains in a certain direction when the wind is low. At high winds, it protects the SWG from being damaged by rotating it out of the wind. "Internationally, the lowest wind speed required for charging battery is 10 km/h, but for this generator the minimum wind speed to start charging is 7.2 km/h. The charging current is 15 ampere at a wind speed of 18 km, a speed normal in coastal areas, hilly regions and desert plains. It can generate 40 ampere at a wind speed of 36 km. (THE TIMES OF INDIA 010404)

Power from biodegradable waste Scientists at the Bhabha Atomic research Centre have developed a plant to generate electricity from biodegradable waste like dry leaves, which are at present burnt extensively in major cities causing environmental pollution and posing a health hazard. The plant can also use kitchen waste like vegetables, fruits, food leftovers, paper, grass and cow-dung. It costs Rs 0.6 M to install and Rs 0.3 M a year to operate but can yield revenue of up to 1.2 M a year. Three such plants capable of handling five TPD of biodegradable waste have already been put up in Mumbai. (THE TRIBUNE 090404)

Pilot project on micro-turbine generator The W Bengal Govt is planning to set up a demonstration project involving the use of micro-turbine technology for generating power from renewable sources. The project is slated to come up near a dairy farm in the North 24 Parganas dist where cattle dung from the dairy would be used to generate 70 KW. The Rs 6 M project would be implemented by the WBREDA. The power to be generated at this project from 20 000 cubic ft gas is sufficient to electrify two villages or run a small industry. (BUSINESS LINE 060404)

Chhatisgarh: Power from paddy husk The CM has inaugurated a Bio-energy power plant based on paddy husk at Akaltara in Janjgir-Chapa district. This type of paddy husk based power plant would be the fourth and the largest in Chhatisgarh. A private company, K V K Bio-energy, is developing the plant. The estimated cost of the 20 MW plant is Rs 670 M. It would start generation from March '05. Three such plants are working at Raipur (6 MW), Bilaspur (8 MW) and Rajnandgaon districts (1.5 MW). (DESHBANDHU 140604)

Chhatisgarh village solar project The residents of over 200 remote villages in Chhatisgarh have experienced solar light in their homes and villages. The villages situated in forest and sanctuaries are equipped with solar light through a Rs 230 M CREDA project. The villages at Achanakmar sanctuary, Baranwapara sanctuary, Sitanadi sanctuary and Udanti sanctuary were illuminated by solar light. The districts benefited by this scheme are Raipur, Rajnandgaon, Kawardha, Korba, Bilaspur, Bastar, Kanker, Raigarh, Mahasamuna, Damtari, and Durg. The CREDA completed this within 100 days and plans to illuminate over 1250 villages in a year. (DESHBANDHU 260404)

Haryana Solar proposal The Haryana will spend Rs 237.8 M to promote non-conventional energy sources during 2004-5. 500 photovoltaic pumps of two hp would be installed. The Union Ministry for Non-Conventional Energy Sources had approved electrification 45 un-electrified hamlets in the Morni area of Panchkula dist through solar technology at a cost of over Rs 18.3 M, which would be shared by the Union and the State Govt on a 90:10 basis. (BUSINESS LINE 180504)

Solar heat powers Magarpatta homes The Magarpatta township in Hadapsar has one of the largest residential solar water-heating systems, with a capacity to heat upto 0.12 MLD water. Spread over an area of 60 Ha, the solar panels are capable of heating water up to 60 C. Installed in 800 apartments, the first phase cost Rs 15 M. On completion, the total capacity will be 0.7 MLD and will save Rs 39 M a year. The 160 Ha township is partially occupied and, on completion, will comprise 12,000 apartments. The second-largest residential solar water-heating system is at the Ranwara township, in Pashan, with a water-heating capacity of 70 000 LPD. (THE TIMES OF INDIA -Pune 300504)

HP SHPs The Himachal cabinet approved allotment of 22 small HEPs to 18 private companies. It also cancelled the MoU for investigation and implementation of 100 MW Sainj HEP and the 9 MW Fozal HEP in Kullu district. The SHPs with capacity up to 5 MW would bring an investment of Rs 2.7 B in next five years and will go a long way in harnessing the 750 MW SHP potential in HP. (THE HINDUSTAN TIMES 010605)

Land for Assam SHP The Ministry of Environment and Forests has approved the diversion of 25.775 Ha of forestland for the Lungnit Small HEP in Karbi Anglong district by the Assam State Electricity Board. The ASEB had to transfer the cost of compensatory afforestation of over 53 Ha of non-forestland to the State Forest Dept. Other conditions include charging of the net present value of the forest area diverted from the user agency as per the orders of the Supreme Court and as per the guidelines of the govt and preparing a catchment area treatment plan along with financial outlay by the Forest Dept and its submission to the Ministry of Environment and Forest. (BUSINESS LINE 230604)

Electricity from Watermills A Pondicherry based IT Power India received award from UK based Ashden Trust for outstanding and innovative renewable energy projects. The water mills are being modernised by using micro hydro systems. Villagers grind grains, and also extract oil at the Gharat, which is powered by tumbling, mountain streams and swiftly flowing water channels. According to rough estimates, there are 0.5 M watermills in the entire Himalayan region, from the NE to J&K. Traditional watermills are of the vertical shaft type, evolved over thousand of years. The basic principle on which a Gharat runs is similar to that of HEP. Studies conducted reveal that the 0.5 M water mills can together produce 2500 MW power. IT Power has tied up with the Watermillers Association to upgrade the watermills. Each Gharat that is upgraded will save 790 liters of diesel.

➤ **Uttaranchal** The Uttaranchal Govt will review the watermills in the state, said the state Chief Secretary. At present there are 6000 registered watermills. The state govt, in association with the Union Ministry of Non-conventional Energy, will review the watermills and provide electricity to the villages having a population of less than 250. Each watermill has a capacity of producing 5 KW electricity on an average. A subsidy of Rs 109 000 will be given to the watermill owners for upgradation and the cabinet has approved complete tax exemption for spare parts and machinery to be used for this purpose. (BUSINESS LINE 290504, TEHELKA 260604)

Maharashtra plans The Maharashtra Govt is planning to provide electricity to around 25000 villages, identified by the Planning Commission, by tapping the unused sources of non-conventional energy. In Maharashtra alone, power production from the sugar factories could be increased to 1000 MW from the current 68 MW. (BUSINESS STANDARD 010604)

Village energy security plan The Ministry of Non-Conventional Energy Sources is conceptualising a village energy security plan, which would create avenues for employment generation, participation of local communities, including women, and environmental improvement leading to overall sustainable development. The Minister of State for Non-Conventional Energy Sources said that in the first phase, the plan was to take up projects in forest fringe and other remote villages. Some 500 villages would be covered during the year. (THE HINDU 110604)

POWER GENERATION

No State is power surplus? According to an analysis by Associated Chamber of Commerce and Industry of India, no single state in India is surplus in power. Claims made by some of the states like the Uttaranchal and the NE states that these have been producing surplus power and that there is no power shortage for industrial and domestic consumers are not true. The analysis based on the various govt records points out that in the NE region which is otherwise considered a power surplus, the power shortage rose to 155 MU in 2002-3 from 73.9 MU in 1999-2000. The major reason for this shortage include the poor generation region as also the huge T&D losses because of inadequate infrastructure and no efforts to improve upon the existing T&D lines. In Uttaranchal during 2002-3 there was a shortage of 66 MU. In W, the shortage in 1999-2000 was 117 51 MU, which went up to 24 058 MU in 2002-3. The power requirement during 1999-2000 was 163704 MU against availability of 151953 MU. The ratio of the same increased to 190745 MU to 166687 MU in 2002-3. In N the power shortage was 9080 MU during 1999-2000 when requirement and availability were 139823 MU and 130743 MU. The power shortage reported in govt record for the region in 2002-3 stood at 12392 M when requirement and availability were 156610 MU and 144218 MU. In S, the power required during 1999-2000 was 125759 MU and its availability was 116388 MU thus recording a shortage of 3076 MU. While in 2002-3 the power requirement rose to 140625 MU against its availability of 130530 MU and recorded a shortage of 10095 MU. (ASSOCHAM PR 080504)

POWER PRIVATISATION

Tata Power challenges MERC order Tata Power moved the Mumbai High Court challenging an order of the MERC for refund of standby charges of Rs 3.22 B to Reliance Energy. TP alleged that the CEA on whose advise the MERC had ordered the TPC to pay Rs 3.22 B as excess standby charges, was biased towards REL and had provided consultancy services to REL for Rs 5.5 M. (BUSINESS LINE 020604, THE HINDU 160604)

UP sops The Uttar Pradesh has amended its excise and energy policies to offer concessions in land acquisition and resettlement by the private investors in

power sector. The state govt would bear 10% of land acquisition/resettlement cost for private parties investing Rs 10 - 25 B in thermal power plants, 20% of such costs for gas and hydro plants. For investors in the Rs 25 - 50 B category, the state would bear 20% cost in case of thermal projects and 40% in case of gas and hydro plants. (THE INDIAN EXPRESS 090604)

CAG indicts Maharashtra Govt The CAG of India has indicted the Maharashtra Govt for extending undue benefit to Reliance Patalganga Power Ltd by including a clause in an agreement in violation of rules. The Maharashtra Industrial Development Corp allotted (June 2000) 0.506 M sq m of land at Patalganga to RPPL for a proposed power projects on the total premium of Rs 233.4 M. The corp received (Feb 2000) and advance amount of Rs 40 M before allotment. As per rule 12 of MIDC Disposal of Land Regulations, 1975, the allottee has to pay the balance land premium within 30 days from the date of receipt of allotment letter. In violation of the rule, the allotment letter issued by the corp wrongly stipulated that the balance premium was payable on the date of taking possession. The CAG observed that had the corp followed Rule 12, it could have earned interest of Rs 110 M on balance premium for July 2000 - Sept '03. (THE HINDU 100604)

CAG: Privatisation in Delhi caused Rs 60 B loss The CAG in its report for 2002-3 has indicated that the Delhi suffered a loss of over Rs 60 B due to decision made during the unbundling of the Delhi Vidyut Board. The report criticised the Govt for heavy financial liability of Rs 60 B, and not defining the "requirement and scope" of work prior to selection and appointment of consultant. As a result, all the offers received could not be evaluated on a "transparently comparable basis". The report points out that there has been significant dilution of the T&D loss targets. According to CAG, this alone caused a loss of Rs 39.287 B. The CAG report has reviewed the process of unbundling of DVB, the modalities of transfer of assets, reduction of T&D losses, the reasonableness of incentives provided and the impact of various assumptions on tariff. The report says, "The non-technical loss, primarily theft reduction and misuse, which was one of the primary objectives of privatisation, was only 5.8% in five years, that is, 1.16% per year as against 3% per year envisaged in the request for qualification". The loss levels were subsequently diluted from 20.75% for discom-I and 19.25% for discom-II and III to 17% over a period of five years. This according to the report has also led to an extra burden of Rs 8.5 B on Govt owned Transco. Commenting on the Govt's decision to increase the financial assistance to the Delhi Transco from Rs 26 B to Rs 34.5 B, the CAG is believed to have said that besides incurring and additional financial burden of Rs 8.5 B, the average consumer tariff would have to be increased in the range of 20 - 30% per annum to cope with the loss. (THE TIMES OF INDIA, THE HINDU 160604)

Rajasthan moots power sector reform law The Rajasthan Govt has circulated a draft of a new electricity Bill aimed at providing "universal access to reliable and affordable electricity" by eliminating "interconnected chain of monopolies". The draft of the proposed bill prepared by the National Council of Applied Economic Research, had been circulated for creating consensus by inviting comments and suggestions. Though Rajasthan was the first to initiate the power sector reform in 1999 by unbundling the State Electricity Board and setting up five different power utilities and a SERC, further reforms were bogged down. The proposed legislation, in accordance with the Electricity Act, aims at "restructuring, decentralising, opening up and making accountable the present monopolistic functioning of power sector. (BUSINESS STANDARD 260604)

Tata Power arm gets first trading license Tata Power Trading Company Ltd, a wholly owned subsidiary of the Tata Power Company, has been awarded the first ever power trading license by the CERC under Section 14 of the Electricity Act 2003. TPTCL will trade in surplus power of SEBs, captive power plants and generating companies as also the power output of merchant power plants, which are currently under execution by TPC and others. Power trading is still a elementary industry in India with Power Trading Corp being a first company to commence operations in the late nineties. (BUSINESS STANDARD 150604)

GE, Bechtel to revive DPC General Electric and Bechtel have made a fresh offer to the Govt of India for setting their equity and contractual claims of \$400 M "to resolve the dispute on a friendly, mutually-negotiated basis, with the hope that all litigation becomes unnecessary". Both have jointly acquired the 65.8% shareholding of Enron and its subsidiaries in the now fallen Dabhol Power Company. This claim comprise of \$260 M towards 100% of foreign equity held by Enron, GE and Bechtel and \$140 M towards contractual claims. After the US Bankruptcy Court's order allowing them to acquire shares of Enron and its subsidiaries, GE and Bechtel have expressed their willingness to Govt of India to actively participate in the revival of Dabhol phase-I (658 MW) and the completion of phase-II (1444 MW). (THE INDIAN EXPRESS 190404)

SOUTH ASIA

NEPAL U Karnali: NHPC-Nepal deal Nepal has agreed to set up a 300 (60 X 5) MW \$ 500 M Upper Karnali HEP in joint venture with India as an export oriented project. NHPC will set up the project in Birendranagar district in Nepal, 600 km west of Kathmandu and 100 km N of the Bareilly-Lucknow border of the India side, with debt-equity ratio of 70:30. Nepal will contribute 49% equity, NHPC will put in 51%. The capacity can be raised to 480 MW, in which case it will cost Rs 25 B. (THE TIMES OF INDIA 040504)

India, Nepal agree on Sapta Kosi India and Nepal have agreed to set up a joint project office in Kathmandu that will take up field investigations and prepare detailed project report of the Sapta Koshi High Dam multi purpose project and Sun-Kosi storage cum diversion scheme in 30 months. After the execution of the projects, Nepal will be able to generate 3300 MW at the Sapta-Kosi HEP and 1357 MW at the Sun-Kosi HEP, as per preliminary estimates. India will be the major buyer of this power from Nepal. In addition, the projects will also be enable Nepal to add irrigation facility for 0.546 M Ha and India to add about 1 M Ha irrigated area mostly in Bihar. According to Minister for State for Water resources the Centre has approved this Rs 293.4 M project. (THE TRIBUNE 250604)

PTC proposal to Nepal The Power Trading Corp of India has sent a letter to Nepal Electricity Authority expressing interest to buy electricity from Nepal. India has proposed to have different prices for peak power and off-peak power. According to NEA, up to the year 2007, NEA can sell 40 MW in the dry season and 80 MW in the rainy season. At present in the rainy season, NEA has 600 MU of excess electricity. Last year PTC had proposed to buy electricity from Nepal at Rs. 2.4. However, the negotiations did not proceed further after India said that it only wanted to purchase firm power. (Kantipur-Nepal 270504)

Indian aid for Bagmati embankments The Nepal-India Sub-Committee on Embankment Construction agreed to expedite construction work along the Bagmati and the Lalbakaiya rivers and prepare the Detailed Project Report on flood control measures along the Kamala banks. India has also agreed to release Rs 500 M shortly to facilitate the ongoing embankment construction works. (KATHMANDU POST-Nepal 180604)

Melamchi misses another deadline The Melamchi drinking water project in Nepal has missed another deadline (supposed to be 2009), affecting 2 M residents of the valley. Norway, one of the financiers of the US \$ 64 M project, which is supported by a consortium of donors, has expressed deep concern. The project was initially scheduled to be completed by 2007, was later postponed to 2009. When completed, Melamchi would supply 170 MLD to the Kathmandu Valley. The valley population is increasing by 7% annually and currently needs 180 MLD water. Nepal Water Supply Corp has been able to distribute 90 MLD at present and 130 MLD during the monsoon. (Kathmandu Post 290404)

2.88% Households get Renewable Energy A recently published Renewable Energy Data of Nepal 2003 shows that micro-hydro and solar photovoltaic home systems have electrified 2.88% households in Nepal. The national grid and the isolated small hydropower systems serve 30.8 % households. This data correspond to mid-July 2003. The final summary presented in the data book is:

Source of electricity	% households
NEA and other systems (domestic consumers)	29.83
Solar home system	1.02
Micro-hydro schemes	1.86
Non-domestic category of consumers of NEA and other systems	0.97
Not known	5.71
Total reported by the 2001 Census	39.39

The total household number is 4 174 374. The data book has also presented installation data on selected renewable energy systems. Accordingly, 42 550 solar home systems (1 584.5 kW), 1 371 micro-hydro electrification schemes (7 471.7 kW), 804 turbine mills (7 106.9 kW), 872 improved water mill (*ghatta*), and 111 395 biogas plants (766 146.9 cubic meter) were installed. In addition, six demonstration wind power plants (each of 200 W) had also been installed. (CADEC *Micro-Hydro E-news Vol. 2, No. 19*)

Solar and Wind energy in Nepal According to an expert from Nepal Mr Surya Man Shakya, Nepal has immense potential of tapping solar energy. Nepal has on average 6.9 sunshine hours per day totaling 2482 sunshine hours per year. The solar energy potential here is around 4.5 kwh/ sqm/ day. Although there has been no proper wind mapping as yet, places like Jumla, Khumbu, Mustang, Palpa, Ramechhap and Karnali-Chisapani have the potential. The Tenth Plan (2003-08) recognizes the importance of solar energy. It aims to generate 3.7 MW solar energy benefiting 52 districts with 52 000 Solar Energy distribution Systems. (Spotlight, 07-130504)

Affected people warn to stop irrigation project The locals living in and around the project site, where a large-scale Babai Irrigation Project is being constructed, have warned the Nepal govt that they will not allow the project to proceed further without them being provided assured compensation. The project, which has already spent over Rs 1.12 B, has not been able to fully extend the benefits. Only about 6 000 Ha have availed benefits. Another problem is that 6 Ha of forestland needs to be cleared. (Kathmandu Post 020404)

BHUTAN Tsatichhu lake is not a threat? In Sept '03 a massive landslide blocked the Tsatichhu, one of Kurichhu's tributaries, and created a large water body - presently 12 MCM about 35 kms upstream of the Kurichhu HEP. The Indian media had reported that the recent heavy rainfall had caused the Tsatichhu dam to give away and the landslide had formed another lake downstream with a water volume of 1.5 MCM. Given the heavy monsoon and the continued seepage of water, the two dams were in danger of bursting, it reported. According to Sonam Tshering, who recently led a team of officials of the dept of energy, dept of geology and mines, and the Kurichhu HEP corp to investigate the Tsatichhu dam slide reported that

the second dam was "inconsequential". A report prepared by the team said that heavy rain from May 15 - 21 had saturated the dam mass and, coupled with the continued seepage, had led to the slide. As a result about 8 MCM of mud and stone debris had been washed away on the downstream slope of the Tsatichhu dam on the confluence of Tsatichhu and Wabrangchhu. But it did not restrict the flow of Wabrangchhu. It is a mound of silt. However, the landslide had thinned the Tsatichhu dam top and cracks had also developed at numerous points on the dam. "There is so much debris, about 32.5 MCM, and the thickness of the base of the dam is 600 m, which is six times the length of Changlimithang," he said. The report also pointed out that an overflow channel was constructed at the left bank of the dam to divert the water in the monsoon and also to maintain the height of the water at about 1,641 m above sea level. If the forces of nature did burst the Tsatichhu dam (worst case scenario) it would lead to the formation of temporary dams because of the narrow valley. The multiple dams would also provide valuable time for early warning to the Kurichhu power corp. The report pointed out that, in case of a burst with no dams formed along the way, it would take two hours to reach the Kurichhu HEP corp from Tsatichhu dam. "As long as Kurichhu corp receives prior information, it will roughly take one hour to open its dam's five gates where all the water will flow through," Sonam said. He added that the Tsatichhu water discharge would have a force of 2500 - 3000 cumecs and the Kurichhu dam was designed to handle a "probable maximum flood" of 12 200 cumecs. (kuenselonline.com)

PAKISTAN Former GM of HEP sentenced Pakistan's Ghazi Barotha HEP's former general manager Muhammad Hayat Chaddu was sentenced to five years rigorous imprisonment and a Rs 2 M fine for corruption and amassing wealth beyond his known sources of income by Rawalpindi Accountability Court. He will undergo another year of rigorous imprisonment if he fails to pay his fine. The court also directed the National Accountability Bureau to confiscate the moveable and non-moveable property Mr Chaddu accumulated during his service. Mr Chaddu, who was a public servant from 1958-98, retired from the Water and Power Development Authority at grade 20. (DAILY TIMES 060404)

Water crisis According to a paper presented by experts from International Waterlogging and Salinity Institute, Pakistan has become a water deficient country with its annual per capita water availability declining from 5000 cubic meters to as low as 800 cubic meters during the past 55 years. The experts pointed out that water availability fell short of crop requirements by 40 MAF in the year 2000, and the shortfall would go up to 108 MAF in 2013 and 151 MAF in 2025. (THE TRIBUNE 080404)

Mancher Lake is dying Mancher Lake at Karachi, one of the largest lake of Asia, is polluted due to salinity and water logging, threatening the livelihood of about 10 000 people who depend on fishing. The catch is decreasing. The affected fishermen are forced to

migrate from the lake. The Right Bank Outfall Drainage is dropping the saline water in Manchar Lake and the fish are dying. The Main Nara Valley Drain constructed along with the Sukkar Barrage now brings a considerable supply of saline water in to the lake. Nine persons have died and 1600 have been sickened in the southern Pakistan after consuming contaminated water from the Mancher Lake, outside Hyderabad in Sindh province. (THE TRIBUNE 080404, 260504)

Rs 200 B plan for water projects The federal govt is preparing a Rs 200 B 'contingency plan' outside the normal budgetary funding to kick-start a couple of mega water projects over the next five years. According to an official the concept of preparing a contingency plan had emerged after recent debates and exercises on issues of large dams, like Kalabagh and Bhasha, and other irrigation projects. The objective is to increase funding to the water sector beyond the targeted 0.5% of the GDP to be outside of the Public Sector Development Programme, but not off-budget. Official estimates suggest that the water sector investment programmes, which are already part of a medium-term investment plan, a 10-year perspective plan and Wapda's 'Vision 2025', would require up to Rs 600 B. The World Bank estimates that 72% of the incremental expenditure over the period 2005-07 projected by the ministry of water and power is allocated to projects started in 2003 and 2004. (DAWN 280404)

Baglihar: Pakistan asks WB for neutral experts Pakistan has formally asked the World Bank (WB) to appoint neutral experts to resolve the issue of the Baglihar HEP being constructed by India on Chenab River in Jammu and Kashmir. On the govt's directions, the Pakistan Commission for Indus Waters has formally asked the WB, which brokered the Indus Basin Treaty between Pakistan and India in 1960, to appoint neutral experts." It said India and Pakistan would recommend two names each to the bank to form the neutral expert's body while the bank would appoint the chairman. The source said, "Since both countries have exhausted all options at the Permanent Commission of Indus Waters level, the Pakistan Commission for Indus Waters, Water and Power Ministry, Foreign Office and Prime Minister Zafarullah Jamali have approved to move the WB for arbitration over the issue." (DAILY TIMES 300404)

Pakistan inks power deal Pakistan signed an initial agreement for the private sector's biggest power project in seven years, a \$1.2 B HEP dam planned by an US company. Amzo Corp plans to build the 740 MW Munda Dam in NWFP. It would be the biggest electricity project since Hub Power Co Ltd completed a 1200 MW thermal power plant in 1997 at a cost of \$1.6 B. "It is our first project in Pakistan and we have plans to complete it by 2012 with a 20:80 equity-debt ratio," a partner in Amzo said. Billions of dollars poured into Pakistan during 1992-96 from foreign companies setting up independent power plants to generate 5,522 MW. Pakistan expects a

shortfall of 5,529 MW of electricity by 2010 and wants to fill the gap with HEPs and thermal generation. The new plant would be the first major HEP to be completely undertaken by the private sector. The company has to complete a feasibility study and other formalities in 18 months to receive a "letter of support" from the govt and avoid forfeiting a \$740 000 performance guarantee. (REUTERS 110504)

Wapda signs Rs13.7 B Mangla dam deal The Water and Power Development Authority has signed Rs13.79 B Mangla raising contract with CWE Joint Venture, led by a Chinese company, for main works of the project. The CWE Joint Venture includes Descon Engineer, Inter construct, Gammon Pakistan and Sachal Engineering Works and was the lowest bidder for the project. The major components of the project includes raising of the dam and main spillway head works besides constructing a control weir upstream of the emergency spillway. It is claimed that on the completion of the project in 2007, the average annual water availability for irrigation will have increased by 2.88 MAF. Power generation would also go up by 12 %. The project is facing stiff resistance from affected people. (Dawn 290604)

Experts find Bhasha dam best choice Chairman of the parliamentary committee on water resources in Pakistan has said that a panel of foreign experts has declared the \$6.7 B Bhasha dam as the 'best choice' on technical grounds and human displacement rate but the \$5.65 B Kalabagh dam could still be preferred for other reasons. He said there were three dams before the committee for a decision, Kalabagh, Bhasha and \$1.6 B Akhori. Kalabagh dam would have a storage capacity of 6.1 MAF and a power generation capacity of 3,600 MW. The Bhasha dam would have a storage capacity of 7.3 MAF and power generation capacity of 4,500 MW. Its feasibility study had been reviewed and declared as 'best choice' on technical grounds by a panel of experts from France, Germany and Norway, he claimed and added that the panel was appointed by the govt of Pakistan. Bhasha dam would be situated in Chilas and there were no signs of volcanic activity at its actual site, though volcanic activity had been identified within the 40 km radius of the project site. Akhori dam would have a storage capacity of 6 MAF and power generation capacity was 600 MW. Its feasibility study is not ready. The cost estimates of Katzara Skardu dam had not been finalized, its storage capacity was estimated at 35 MAF and power generation capacity at 35 000 MW and the pre-feasibility study not even ready. He said that Kalabagh dam had no logistic problem, while others would face some logistic difficulties. It is estimated that Kalabagh dam would displace 120 000 people, Bhasha 24 000 and Akhori 49 300. (DAWN 150604)

BANGLADESH 'ILR will make BD a desert' State Minister for Water Resources in Bangladesh has said, "Bangladesh will become a desert" if India implements

its river inter-linking project. He however said, "It is our belief that India would not proceed with the mega project violating international law". But Bangladesh will have to create world opinion against the Indian plan. He also urged all to realise the disastrous effect of such a plan. He said India's withdrawal of Ganges water at Farakkha has already caused disaster to Bangladesh's ecology and environment. (THE DAILY STAR 120404)

Fishing in Kaptai lake Kaptai Lake Development and Marketing Project of Fisheries Development Corp started catching fish on commercial basis from 1965. Last year, KLDMP earned Tk 160 M from sale proceeds after giving 30% share to the fishermen. About 5,000 fishermen are engaged in catching fish from this lake, which has an area of 58 300 Ha. Per ha fish production is roughly 77 kg. Besides the fishermen, an estimated 3000 people are associated with drying, transportation and marketing of the lake fish. There are 72 species of fish and two varieties of shrimp in the HEP reservoir on river Karnaphuli. (NEW AGE 210504)

WB loan to Bangladesh The World Bank has given a \$8.4 M loan to Bangladesh for the Power Sector Development Technical Assistance Project including an IDA amount of \$7.1 M to address increasing coverage and improving the quality of power. (POWER LINE 0604)

UN urged to review water-sharing convention The govt of Bangladesh has urged the United Nations to review the convention on water sharing as it does not guarantee the rights of lower riparian countries, Water Resources Minister of Bangladesh said. The minister said he had called for a review of the convention at the 12th session of the UN Commission on Sustainable Development, held at the UN headquarters in New York during April 28 - 30. The UN Convention on Non-Navigational Use of International Water Resources "puts ground and surface water in a single grouping, which means quantum of groundwater should also be included when discuss water sharing with India". He said the convention categorically pointed out that water basin would be determined on where rivers ended. "When we discuss water sharing with India, we consider the Ganges, the Brahmaputra and the Meghna as individual basins. So, the above clause goes against our interest." He said Bangladesh could not aggressively negotiate with India over the ILR because of the convention. Neither Dhaka nor Delhi is a signatory to the convention. (NEW AGE 110504)

Floods buffet NE Monsoon floods buffeted new areas in the NE Bangladesh, marooning over 0.2 M people and killing several in Habiganj and Moulvibazar in the last week of June. Dhaka's rail and road links to other districts run the risk of collapse as rain-fed rivers burst their banks in Sylhet, Moulvibazar and Habiganj. Local road links remained cut off. Brahmanbaria's road link with the capital remained snapped for two days after Akhaura Highway went under water because of heavy

rains and onrush of water from hills that also submerged 17 villages. The gushing water hit the northeast in a second spell of flooding this year: the floods washed away crops on 11000 Ha a couple of months ago. (THE DAILY STAR 260604)

Plan to Tackle Arsenic Menace The Bangladesh govt has finally given the green light to the much-awaited National Policy on Arsenic Mitigation. It was recently cleared by a cabinet committee headed by the country's Prime Minister. A nine-member group of secretaries and a panel of experts have framed the policy. The policy contains an implementation plan to be followed in arsenic-affected areas. Out of the 64 districts of Bangladesh, 59 are reeling under arsenic contamination, threatening the health of 30-40 M. As indiscriminate digging of tubewells is believed to have aggravated the problem of occurrence of arsenic in groundwater, such activities have been discouraged. The conditions under which tubewells can be dug have been specified. Groundwater is to be tapped in an area only when there is no alternative source of water such as ponds and dug wells. The policy mentions that though piped water is also an option, it is expensive. It sets a protocol for validation of water purifying devices, which are flooding the market at present. From now onwards, only those that have govt certification can be sold in the market. The disposal of toxic arsenic sludge generated from treated water would also have to be conducted in accordance with a set of rules developed by a panel of scientists. At present, the govt, along with the WB, is surveying all tubewells and handpumps in the country. (DOWN TO EARTH 310504)

AROUND THE WORLD

Renewables can meet all human needs A fast approaching global energy and climate crisis threatens to reverse human development, says a new report, *The Price of Power*, released by New Economics Foundation. But even a small shift of support away from fossil fuels toward clean renewable energy could save millions of lives and help avert global warming. The costs of natural disasters mostly linked to global warming hit \$60 B in 2003, of which \$15-20 B was insured. Currently renewables account for around 13% of global energy supplies but there is technical potential to increase that by around 120 times. At the moment, only 1-3 % out of the \$40 B spent annually on energy investment in developing countries goes towards renewables. Indoor pollution accounts for 2.2 M deaths and costs the world \$150 - 750 B per year - 0.5 - 2.5 % of the world's GNP mainly in lost production through sickness and death. But by spending just 5% of their total annual overseas aid budget on clean-technology stoves for poor households, OECD nations could help save over 25 M lives over the next decade. All of non-electrified Sub-Saharan Africa could be provided with energy from small-scale solar facilities for less than 70% of what the wealthy OECD countries spend on

subsidising dirty energy every year. One year's worth of World Bank spending on fossil fuel projects, if redirected to small-scale solar installations in Sub-Saharan Africa, could provide 10 M people on the continent with electricity. And, the annual amount tied to investments in coal, oil and gas projects in the developing world during 1992 - 2002 by US agencies could have provided over 30 M people in Sub Saharan Africa each year with solar electricity. The report shows that subsidies to coal, oil and gas, measured conservatively at around \$235 B per year directly distort the global economy and hold back the development of renewables. The report calls for the official adoption of key targets for the renewable energy including:

- > Implement the G8's target of serving at least 1 B people globally with renewable energy by 2010, phase out govt subsidies for fossil fuels and nuclear energy.
- > Reform the International Financial Institutions and Export Credit Agencies to dramatically increase funding for renewable energies in developing countries. Phase out World Bank Group subsidies to fossil fuel projects by 2008 in line with the recommendations of its Extractive Industries Review.
- > Increase the target of access to clean energy to 2 B of the world's poorest people over the next ten years. (neweconomics.org)

Large Hydro is Not Renewable International Rivers Network has released a declaration calling for large hydropower to be excluded from the efforts to promote clean and renewable energies. The declaration was released on the first day of the inter-ministerial "Renewables 2004" conference, hosted by the German govt in Bonn. The declaration, "12 Reasons to Exclude Large Hydro from Renewables Initiatives" is endorsed by 260 citizen's groups, networks and coalitions from 61 countries. The declaration states that funds to reduce the climatic and other environmental impacts of energy production and consumption, to advance sustainable development, and to increase energy security should be used for the promotion of "new renewables." The most important new renewables are modern biomass, geothermal, wind, solar, marine energy, and small hydro (10 MW or less) compliant with the recommendations of the World Commission on Dams.

The 12 Reasons to Exclude Large Hydro (LH) are:

1. LH does not have the poverty reduction benefits of decentralized renewables.
2. Including LH in renewables initiatives would crowd out funds for new renewables
3. Promoters of LH regularly underestimate costs and exaggerate benefits
4. LH will increase vulnerability to climate change
5. There is no technology transfer benefit from LH
6. LH projects have major social and ecological impacts
7. Efforts to mitigate the impacts of LH typically fail
8. LH promoters oppose measures to prevent the construction of less destructive projects

9. Large reservoirs can emit significant amounts of greenhouse gases
10. LH is slow, lumpy, inflexible and getting more expensive
11. Many countries are already over-dependent on hydropower
12. LH reservoirs are often rendered non-renewable by sedimentation (IRN PR 010604)

Bonn Renewable Energy resolution The European Parliament voted for the Bonn Renewable Energy Resolution that urges the European Commission and Council to start a political process of setting ambitious, time bound targets for increasing the share of renewable energy in final energy consumption, addressing the medium and long-term timeframe in advance of the International Conference in Bonn, June 2004. The resolution calls on the European Commission and the Council to make the necessary efforts to reach a target of 20% contribution by renewable energy to the total inland energy consumption in the EU by 2020. The resolution asks major financing institutions, such as the EIB, EBRD, World Bank and national Export Credit Agencies, to give priority to investments in renewables and energy efficiency. Resolution also Calls on the Commission to develop a regulatory framework for accelerating the growth of markets for renewable energy and at the same time creating a level playing field, tackling administrative and trade barriers through the strict enforcement of regulations at local, national and European level. The resolution calls on the Commission to undertake a urgent review of the subsidies in the energy sector. (www.greenpeace.org)

Linking directive by European Parliament The European Parliament approved a "Linking Directive" which regulates the admission of Kyoto Protocol carbon credits from projects outside the EU into the EU's new Emissions Trading System. The LD states, "*In the case of HEP activities with a generating capacity exceeding 20 MW, Member States shall ensure, when approving such project activities, that relevant international criteria and guidelines, including those contained in the World Commission on Dams year 2000 Final Report, will be respected during the development of such project activities*". (irn.org)

Bonn: Nations pledge towards renewables

Significantly, one of the biggest pledges came from China, which has set itself a goal of meeting 10% of its energy targets from renewables by 2010. Significant pledges backed by specific action programmes came also from the Philippines, Egypt, the Dominican Republic, Spain, Denmark and Germany. The final declaration at the International Conference for Renewable Energies that concluded in Bonn on June 4 said, "it is estimated that up to 1 B people can be given access to energy services from renewable sources, provided that market development and financing

arrangements can be enhanced as intended through the conference's international action programme." One was the WB commitment to increase support for renewable energy by 20% a year over the next five years. But the far bigger commitment came from the European Investment Bank. The EIB announced a target at the closing stages of the conference of increasing lending for renewable energies to 50% of its financing for electricity generation in the European Union by 2010. On current targets this means the EIB will lend up to \$850 M a year for renewable energies generation through 2010. That is substantially more than the World Bank commitment which proposes an annual 20% increase over its present lending of about \$200 M a year for renewables. The EIB has lent close to \$2 M for renewables over the last five years (1999-2003). The bank currently lends about \$47 B a year. Despite agreements under European aid programmes in 120 countries, about 84 % of its lending is within the EU. A total of 165 specific projects for a switch to renewables were presented at the Bonn conference. Beyond project-specific commitments, ministers and govt representatives from 154 countries made broader and long-term commitments "to substantially increase with a sense of urgency the global share of renewable energy." (oneworld.net, 040604)

Bonn Conference Weakened By Big Hydro Lobby

The Political Declaration of the International Conference on Renewable Energies has failed to exclude large hydropower from its definition of renewable energy. At the opening of the conference 260 citizens' groups from 61 countries had called for large hydro to be excluded from renewables initiatives and targets. Lobbying pressure from a number of energy ministers, in particular from Brazil and Uganda, succeeded in ensuring that the Political Declaration, approved by 154 countries, did not set explicit limits on the inclusion of hydropower within renewables programmes. Brazil and Uganda plan to build large hydro projects that are strongly opposed by civil society groups within their countries due to their social and environmental impacts, high economic costs, and inability to provide affordable energy to the poor. The big hydro lobby is hijacking concern over poverty and climate change to promote their destructive technology, says Patrick McCully, Campaigns Director of IRN. (irn.org 040604)

New Spanish PM to scrap water transfer plan

The new Spanish Prime Minister Jose Luis Rodriguez Zapatero has ordered a review of the entire working of the Spanish National Hydrological Plan and cancelled its most controversial project, the Ebro Transfer. He added that the environmental consequences of any decisions would be taken into account. The Spanish National Hydrological Plan has caused outrage among expert groups since it was first suggested. It proposed a massive transfer of water from the north of the country

to the south, which suffers severe water shortage difficulties due to intensive agriculture and tourism. The Ebro Transfer, which would have diverted water from the River Ebro in the north to river basins in Valencia and Murcia was particularly controversial. Protestors claimed it would have dire social, environmental and economic consequences for the region and ruin one of Europe's most ecologically important wetlands. The \$4.5 B scheme, approved three years ago, include plans for more than 100 dams and hundreds of miles of irrigation channels to transfer water from the Ebro river. The amount of water that would have been diverted from the Ebro River was equivalent to one third of Spain's domestic water consumption. The scheme would have destroyed habitat on which at least 55 bird species depend. The new Govt said the scheme was being stopped for environmental and financial reasons. (edie.net , World Rivers Review 0804)

China halts mega dam project China's premier has halted plans for a huge dam in the country's most spectacular canyon. Nu River is one of only two major waterways left undammed in China. From its sources in the Himalayas of Tibet, the Nu flows 2800 km through Yunnan province and on in to Burma and Northern Thailand, where it is known as Salween. The river is at the heart of a remote area, a UN world heritage site that has been called the "Grand Canyon of the Orient". It's home to more than 80 endangered species, including snow leopards and Yunnan snub-nosed antelopes as well as wild elephants and oxen. Last year China announced plans to exploit the Nu to meet the thirst for energy. In China's biggest hydropower scheme to date, construction firms in Liuku, Yunnan Province were to start work this year on the first of 13 dams that would together generate 21.3 MU of electricity. It as been estimated that rising water level would force the relocation of 50000 people, mostly from ethnic minorities. Nu plan has met domestic resistance. Downstream communities – particularly in Thailand – have also condemned the plan. In a written instruction handed down to a key govt ministry, PM ordered officials to conduct a major review of the plan. Experts cautioned that the dam project could still eventually go forward in some form. The project has been advocated by officials in Yunnan Province, where the river flows on a path just inside China's border with Myanmar. Yunnan officials predicted that it would help provide jobs and raise incomes in one of China's poorest regions. Advocates have also argued that the dams were critical at a time when China is suffering energy shortages and sporadic electricity blackouts in certain areas. Opposition from Chinese scientists and environmentalists began coalescing last year. In a surprisingly public rift within the govt, the State Environmental Protection Agency, the country's leading environmental agency, announced its opposition to the project. The Chinese Academy of Sciences also warned that the plan could cause enormous damage. In recent

weeks, a consortium of international groups came out against the plan and wrote a formal letter of opposition to President Hu Jintao of China. (New York Times 090404, THE HINDU 110404)

China Dam mistakes leaves \$4.4 B bill When the Sanmenxia dam in China was completed in 1960, after three years in construction under Soviet supervision, it was hailed as a symbol of the new revolutionary China and its image printed on the country's banknotes. The first dam on the Yellow River, it signaled man's impending triumph over a nature that regularly brought floods to millions of villagers. According to Prof Zhang Guangdou, the 92-year-old doyen of China's hydraulic engineers, the dam should be pulled down before it caused more flooding upstream. One eminent hydrologist who attacked the project, Professor Huang Wanli, was denounced as a "rightist" and sent off for years of hard labour. The problem is the massive silt load of the Yellow River, 60 times greater than that of the Mississippi, from the soft earth found in the region upstream. Within four years of opening, the dam had lost 40% of its water storage capacity because of silt, and its turbines were clogged. Now the dam has less than 10% of its original storage capacity, and its spare capacity to hold water in the late summer flood season is relatively insignificant. The 400,000 villagers who were evicted and transferred to bleak Ningxia and Inner Mongolia are wondering about the sacrifice they have made, as are upstream farmers whose land has been spoiled by salt flushed up by a rising water table. The hillsides around the reservoir remain a picture of hardship, of tiny wheat fields on the ridges and terraces of an eroded landscape, of houses that are mostly caves in cliff-faces fronted with a brick facade. The dam's powerhouse generates only about 25 MW, compared to the 1160 MW planned. Perhaps because of this, China's hugely powerful hydroelectric establishment is refusing to accept that Sanmenxia was a mistake. It managed to water down a Shaanxi resolution calling for the dam to be demolished. The Ministry of Water Resources has just announced a "comprehensive" scheme to flush away sediments and shore up the Wei River embankments, at a cost of \$4.4 B. (smh.com.au 210504)

Yangtze most endangered China's longest river, the Yangtze, was today branded the world's most endangered because of heavy damming, with several native species said to be headed for extinction. According to World Wide Fund for Nature, wildlife of the Yangtze River, which rises in the Tibetan highlands and flows 5550 km across the country into the East China Sea, was under serious threat. The Yangtze basin is the site of the Three Gorges Dam, the world's largest, which has forced nearly 1 M people from their homes. "The Chinese alligator, the most threatened crocodile species in the world, the finless porpoise, the only freshwater-adapted porpoise in the world, and the Yangtze River dolphin, the most threatened cetacean in

the world with only a few tens of individuals remaining." According to WWF, 60% of the planet's 227 largest rivers are disrupted by dams, which it blamed for wiping out local animal species and displacing tens of millions of people. Much of the water provided by dams is lost, mainly due to inefficient irrigation systems, which globally waste up to 1500 BCM of water annually." It said the Tigris and Euphrates rivers, which originate in Turkey and wind over 2000 km across the Middle East to join in Iraq, were also targeted by 26 dam. (AFP 220604, *NAI DUNIA* 230604)

China Dam collapse On May 27, a 46-m high cofferdam built to allow construction of the Dalongtan HEP in Hubei province collapsed. The sudden flood killed at least 14 people, including 12 kindergarten children. The dam was built by the same company that is responsible for building the Three Gorges dam. China has the worst safety record of any major dam building country. In the period 1954 - 2003, 3484 of the country's 85 300 dams collapsed. In 1975, China experienced the world's worst dam disaster ever. The Banqiao Dam in Henan province collapsed in a typhoon in early August, along with over 60 smaller dams. According to a report from Human Right Watch 85 000 people were killed by the flood wave from the reservoirs, and a further 145 000 people perished in the epidemics and famine that struck in the aftermath of the dam failure. (*World Rivers Review* 0804)

China wind power plans China will build a 1000 MW wind power plant, the largest in Asia to provide energy for the 2008 Beijing Olympics. The plant will be built in Erenhot City, in the Inner Mongolia Autonomous Region. Avalon Power Corp of Canada will invest \$1.2 B in the project. (*POWER LINE* 0504)

WB Confirms Problems at Yacyretá Dam Following an 18-month investigation of the troubled Yacyretá dam on the Paraguay-Argentina border, the World Bank's Inspection Panel has concluded that the project violates four separate World Bank policies on 14 different counts. The policies cover environmental assessment, involuntary resettlement, and project supervision, monitoring and evaluation. This is the Inspection Panel's second critical review of the WB's failure to comply with its own policies on Yacyretá, which received WB loans totaling \$878 M between 1979 & 2002. The Panel's investigation is the result of a complaint by an organization representing 4,000 Paraguayan families affected by the project. The presidents of Argentina and Paraguay have declared their intention to complete the filling of the Yacyretá reservoir in the coming months, a decision that puts 50,000 more people at risk of flooding. The Panel's report also coincides with an investigation by the U.S. Senate Foreign Relations Committee into corruption in WB projects, including Yacyretá. Yacyretá was intended to operate with a reservoir level of 83 m above sea level, and with an eventual installed capacity of 3 200

MW. In 1994, with civil works completed but environmental and social protection measures still in the planning stages, the WB and Inter-American Development Bank, which together loaned nearly \$ 2 B for the project, agreed to permit the project authorities to fill the reservoir to an initial level of 76 m, so the plant could begin operation. A decade later with mitigation measures still largely unimplemented, the reservoir remains at 76 m, and Yacyretá generates only 60% of its potential. If completed, the project would displace a total of over 80,000 people. The Inspection Panel also confirmed that the reservoir has been routinely operating at one meter above its "official" level, adversely affecting still-unsettled riverbank communities, and possibly generating additional energy than officially accounted for. The persistent allegations of massive corruption at the \$11 B project are now under investigation by official commissions in both Paraguay and Argentina. In an April 20 letter to World Bank President, Senator Lugar noted Yacyretá's \$8 B cost overrun and asked if the WB has "considered ordering an internationally-accepted financial audit of the Yacyretá Dam project"? (IRN PR 100504)

World Bank dam projects detrimental According to report by Peter Bosshard of IRN, the World Bank is accelerating its funding for large dam projects to the detriment of the environment and locals in the countries where the projects are built. "So often it's the poorest that pay the price for projects that are supposed to bring development." "WB-funded dams have displaced more than 10 M people, flooded millions of ha and pushed many countries deeper into debt. According to WB, the world spends about \$60 B on the water sector, including sanitation, irrigation, HEPs and water supply in developing countries. The WB accounts for 50% of external financing or \$3 B a year. The report said that large dam projects often do more harm than good to the environment and the displaced people. The report, which focuses on India as a case study, calls on the WB to look more into alternative projects like rainwater harvesting systems. The report also suggests the WB apply the recommendations of the 2000 WCD review. The review was the first global assessment of dams and was co-sponsored by the WB. (Reuters 220404)

Lesotho judge ups fine for dam bribery The Lesotho appeal court has not only upheld the bribery and corruption conviction of a third multinational contracting firm involved in the Lesotho Highlands Water Project, but has increased its fine. Lahmeyer International, the biggest engineering consulting group in Germany, was convicted of bribing Masupha Sole, the chief executive of the Lesotho Highlands Development Authority, the agency that was responsible for the construction of the Katse and Mohale dams. Lahmeyer was earlier found guilty by the high court of paying Sole a sum of R2.3 M in bribes and was fined R10.5 M. The company appealed against the judgment. The appeal court not

only confirmed the conviction but increased the fine to R12 M. Sole was sentenced to 15 years in prison for accepting bribes, reduced to 12 years on appeal. Acres International, a Canadian engineering and construction company, still owes the impoverished kingdom of Lesotho R13 M in fines for bribing Sole. The company wants to pay the fine in instalments but the Lesotho govt has refused. Schneider Electric, a French electrical company that merged with Spie Batignolles in 1995, pleaded guilty to giving R16 M to Sole as a bribe and was fined R10 M. Italy's Impregilo, which led the consortium that built the Katse dam, is next to be prosecuted. (Business Report 110404)

Theun-Hinboun HEP - IRN agreement terminated An unusual cooperation agreement between US-based river protection organization International Rivers Network and Lao dam developer THPC was ended on March 23, 2004 by THPC. In May 2003, IRN and THPC signed a cooperation agreement to jointly develop a 3rd party review to examine the effectiveness of the company's mitigation and compensation program and to issue recommendations for improvement. They developed terms of reference for the review, selected members of the review team and were to jointly provide comments on the team's draft report. Theun-Hinboun Power Company is a joint venture between the Govt of Laos and two private companies: Norwegian state-owned company Statkraft and GMS Power of Thailand. The Theun-Hinboun HEP was funded by the ADB and completed in 1998. About 25,000 people have experienced reduced fish catches, flooding of vegetable gardens, loss of freshwater drinking sources and transportation difficulties since the project began operation. (IRN PR 060404)

Nam Theun 1 Malaysian civil engineering group Gamuda Bhd has proposed to develop a 400 MW Nam Theun-1HEP in Laos. It signed an agreement with the govt of Laos to develop the RM1.5 B cost project on a build-operate-transfer basis. Most of the power produced will be sold to Thailand. (POWER LINE 0604)

Bechtel Fails to Provide Water Services in Iraq Bechtel Group Inc., one of the lead contractors in the reconstruction of Iraq, has failed its contractual mandate to develop essential water delivery and sewage disposal for Iraqi citizens. Public Citizen sent a letter to Inspector General Joseph E. Schmitz of the U.S. Dept of Defense, calling for an investigation into why Bechtel has not fulfilled the duties spelled out for the first year of its contract. The letter contains information gathered at Public Citizen's request by an Iraq-based investigative journalist Dahr Jamail, who traveled widely and interviewed public officials, engineers, and families struggling to deal with the lack of clean water. (citizen.org)

The Nile Cooperation Spanning an area of about 3 349 000 sq km, the Nile basin supports 160 M people

out of the 300 M population of the 10 countries. The countries are Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda. The Nile is the single most important asset shared by the countries. The newfound bonhomie was in evidence on March 18-19 as the Council of Ministers of the 10 African nations congregated in Nairobi for their 12th ordinary annual meeting under the Nile Basin Initiative. The underlying objective of the NBI process is "to develop the water resources of the Nile basin in sustainable and equitable way, to ensure prosperity, security and peace for all its peoples". To achieve these targets, the countries have agreed to address them through a strategic Action Programme comprising two basic sub-programmes – a basin wide Shared Vision Programme and Subsidiary Action Programmes. The former is a mechanism for continuing dialogue, paving the way for development projects at the sub basin level. The latter are being implemented at the sub basin level and include two groups of SAPs: the Eastern Nile Subsidiary Action Programme, which include Burundi, DRC, Kenya, Rwanda, Tanzania, Uganda, Egypt and Sudan. (DOWN TO EARTH 300404)

Haiti, Dominican flood The death toll from devastating floods and landslides in Haiti and the Dominican Republic rose to 1950 on May 26 '04. The border region between the two Caribbean countries has been devastated by water and mudflows, which have swept the area after 10 days of heavy rain. Entire villages have been swept away and their place is a swath of mud several hundred meters wide. The heavy rains caused the Silie river to burst its banks, sending thousands of tonnes of rocks and sediment rushing into villages along the countries' border before dawn, sweeping residents from their beds. (THE INDIAN EXPRESS, THE HINDU 280504)

Saving water to feed more population According to a report "Water: More Nutrition Per Drop" presented at the meeting of the UN Commission on Sustainable Development in New York, if present food production trends continue, the Millennium Development Goal of halving the number of undernourished people by 2015 will remain a dream. 840 M people across the world are currently undernourished and some 2 B will join them in the next two decades. Increased irrigation efficiency may indeed be paramount, given that 70% of the water used is diverted for irrigation. But if 40% of the world cereal output is likely to end up as animal feed in 2025, the poor human population will continue to remain underfed. Current yields in India are on an average 2.7 T per Ha. If the grain requirement of 2025 is to be met by sustaining the present yields India will need to double the current level of irrigation diversion. The report presents an alternative scenario that if yield increases by 70%, more water for irrigation won't be required. India will need to match China's current yields of 4.6 T per Ha. (BUSINESS LINE 080504)

Thailand dam displaces over thousand families The Ministry of Agriculture and Cooperatives of Thailand asked the military to conduct "psychological operations" in Phrae's Song district to pave way for construction of the Kaeng Sua Ten dam. Villagers have opposed the 8.2-B baht dam for over 10 years. The dam would go in Mae Yom national park, home of teak forest and wild peafowl. The project has been put on hold since the Chuan Leekpai govt called an indefinite halt in 1997, as demanded by the Assembly of the Poor. Experts said the project would destroy 60,000 rai of pristine forest and over 1000 families would have to move. Moreover, the dam was unlikely to tackle drought and flood problems as claimed. (Bangkokpost 070504)

UNEP study on pollution of seas According to a UNEP study, death and disease caused by the polluted coastal waters costs the global economy \$12.8 B a year. Over the past decade an average of 600 000 barrels of oil have been accidentally spilled from ships. Every year 1 M sea birds, 100 000 mammals and countless fish are killed by plastic waste. With three-quarters of the world's mega cities being located by the sea, 80% of pollution in seas and oceans come from the land based activities. Shrimp farming too can be highly destructive causing chemical pollution. (BUSINESSLINE 030604)

Rich damage more There is a fundamental imbalance in the global environmental damage. Accounting for only 15% of the world's population, the rich countries cause 50% of global carbon dioxide emissions. But the poorer countries pay much of the "costs" and losing up 8% of their GDP per year due to the environmental degradation, as well as suffering devastating effects on health and human welfare. As business-as-usual approach would mean that by 2030 carbon-dioxide emissions would be 70% higher than today, and renewable energy would be for just 4% of total energy usage, up from 2% now. (THE ECONOMIC TIMES 050604)

Nigeria Fund for Lake Chad Nigerian President pledged \$2.5 M to help fund a feasibility study on how to replenish the fast-depleting Lake Chad with water from the River Congo at the opening of the Lake Chad Basin Commission. A combination of severe drought in the 1970s, the steady southward advance of the Sahara Desert and intense dependence on its waters for agriculture has seen Lake Chad, once one of Africa's largest bodies of fresh water, decline from 25 000 sq km in 1963 to about 1 500 sq km today. The LCBC, which includes Nigeria, Niger, Chad, Cameroon and Central Africa Republic, has proposed building a 2 400-km canal to transport 100 BCM water annually from the River Congo to the lake. The LCBC says the survival of over 20 M people in the Lake Chad region, who depend on it for fishing and agriculture, is threatened. (UN Integrated Regional Information Networks 220604)

Chalillo dam faces opposition Belize, a former British colony of 256 000 people, is one of the premier destinations for nature tourism in the Western Hemisphere. Each year, 180 000 travelers visit the country. Their spending accounts for about a fifth of Belize's \$1.3 B economy and directly employs a quarter of its workforce. Now a new dam is proposed in Macal River in Belize in Central America. A Canadian company Fortis Inc. is building the \$30 M Chalillo dam. Experts and local residents say the dam will harm the surrounding environment. Dozens of dams are proposed or are under construction in the region, from the uplands of Panama and Costa Rica to the Usumacinta River valley on the Mexico-Guatemala border, where a proposed series of dams threaten to inundate major Mayan ruins. "This a bad project all the way around," says Grainne Ryder, policy director of Toronto's Probe International, a watchdog group opposed to the Chalillo dam. "Fortis may make a quick profit out of it, but Belizeans will be left with the real costs for generations." Residents of San Ignacio and the surrounding Cayo district say most people here are against the dam and the San Ignacio town council opposes the project, and the vice mayor testified against it during an unsuccessful attempt to block construction. The Belize Zoo and others oppose the project, in part because it will flood the only known breeding area in Belize of the endangered scarlet macaw. The area is also home to jaguars, spider monkeys, and a number of uninvestigated Mayan sites. The area where the dam sits is near an active fault and still experiences tremors. Critics say other solutions to meet peak power demand – generators driven by wind, natural gas, or stalk refuse from the sugar industry - have never been adequately explored. The root problem, says Ms. Ryder, is a lack of transparency in the decision to build Chalillo. (csmonitor.com 240504)

Brazil Dam breach The 55 m high Camara Dam, an irrigation dam in Brazil's semi arid NE state of Paraiba, burst on June 17, sending a wall of water down the Mamanguape River. The 19 MCM of water it unleashed killed 5 and left 3200 homeless. The state's Water Resource Dept blamed a construction flaw for causing a 100 sq ft hole in the dam. Despite heavy rain, Camara dam was only at 65% of its capacity at the time of the accident. The dam had been budgeted to cost about \$5 M, but final cost were in excess of \$10 M, when its reservoir began to fill in Dec '02. (World Rivers Review 0804)

GOVERNANCE & RELEVANT ECONOMY ISSUES

End to WB funding sought A delegation consists of several people's group and NGOs have demanded a moratorium on World Bank funding in India. The group criticized the "enormous and severe" dispossession and displacement brought by the "destructive" projects funded by it. People said that the WB must take care of the people affected by the projects funded by it. Holding the WB responsible for financing and pushing the SSP,

an activist from NBA, MP, said not a single displaced person in the State's 193 villages had been given land till date. Since the affected people had not been resettled, they continued to live on the edges of the reservoir now swollen with silt. As a result, there had been a large number of deaths in the Narmada valley. An activist from Maheshwar Dam in MP pointed out that the WB had not taken any lessons from the human rights disaster that they funded in the Narmada Valley and continued to have a presence there – either directly or indirectly. The delegation comprised representatives from Mines Minerals and People (MM&P); National Forum of forest People & Forest People and Forest Workers and Land Rights; NBA; Jan Sangharsh Morcha; Delhi Forum; CCDD; SANDRP; and Nimad Malwa Kisan Mazdoor Sangathan. (THE HINDU 300404)

WB for hiking aid to India The World Bank has pitched for more than doubling its exposure to India to almost \$3 B a year over the next four years beginning July 2004, with a renewed focus on infrastructure lending. In its draft country assistance strategy for 2005-8, the bank has said IBRD lending to India can go up to \$2.15 B a year. The IBRD lending is in addition to the \$750 M IDA a year that India receives on soft terms. Accordingly, the WB has proposed to harden the finance terms for structural lending to states by blending IDA resources with IBRD loans on a 1:2 basis during the next four years compared with the current 1:1 ratio. (BUSINESS STANDARD 240604)

Punjab in debt trap According to report by CAG of India for 2002-3, Punjab has been pushed into a debt trap. There has been an ever-increasing ratio of fiscal liabilities to gross state domestic product, together with a large revenue deficit. 15% or Rs 44.284 B of the gross budget provision had remained unspent at the close of 2002-3. Also, while the interest payments had increased by 48%, the salaries alone shot up by 63% in 2002-3. The revenue deficit had increased by 43% and the fiscal deficit by 17% between 1998 and 2003. In different depts like as Social security, Health, etc, funds had remained unutilised and state exchequer had to bear extra burden. For example, the state exchequer had to bear an extra burden of Rs 139.1 M from May '01 to Aug '03, due to its failure to discontinue the payment of "project allowance" to the staff of the Ranjit Sagar Dam Project at Shahpur Kandi even after its completion in March '01. (THE TRIBUNE 290604)

Punjab's growth rate cause of worry According to the Medium Term Fiscal reform Programme report presented in Punjab Assembly, when compared to the all India average annual growth of Gross Domestic Product, Punjab emerges as poor performer. The growth of Punjab's overall economy was 4.25% in 2001-2 compared to the national average of 5.57%. It was 1.80% compared to the national figure 4.37% in 2002-3. Except in 1998-99 and 1999-2000, when the growth rate was 5.59% and 5.63%, the Punjab's

performance has remained below 4% since 1997-98. And all these years, it has been less than the national growth. Even the average compound growth rate of GSDP, at 1993-4 prices, for 1997-98 to 2001-02 was 3.96% in Punjab whereas the national average was 5.46%. The debt liability of the state has increased rapidly in recent years. The state's total debt stock, which was Rs 152.50 B at the end of 1996-7 has gone up Rs 368.54 B at the end of 2002-3 and at present it is Rs 403.27 B. (THE TRIBUNE 230604)

STOP PRESS Here is some quick latest news about the violations of norms in public hearings and EIAs of HEPs.

Chamera III Public hearing for this project was held on Aug 17, 2004 at two places in Chamba district in Himachal Pradesh. The local people had no information about the projects, their impacts or about the public hearings. A letter from affected people to HP Pollution Control Board, to HP State Council for Science, Technology and Environment and also to the Union Ministry of Env and Forests was dispatched well before the public hearing, with a request to postpone the public hearing in view of these violations. Still public hearing was kept. Finally at the public hearing people strongly protested and pointed out the violations. Response from the authorities is awaited.

Allain Duhangan HEP The Environment and Social Impact Assessment of the project is yet to be completed, a public hearing based on an acceptable and complete ESIA is yet to happen and yet IFC seems to be ready to fund the project, if the statements of the project developers in Business Standard of 240804 is anything to go by. When contacted, IFC officials did not say anything either way. In the meantime, in June Jagatsukh Gram Sabha met and unanimously rejected the application for No Objection Certificate from the project developer and resolved to oppose the project. That resolution has been sent to all the relevant authorities and IFC.

Teesta Low Dam IV The public hearing here is slated for Sept 8, but the local people do not have access to the project documents in their language. Till two weeks before the public hearing, some of the designated places did not have the EIA documents. Letters have been written to the WB Pollution Control Board and Ministry of Environment and Forests by NESPOL and also SANDRP, pointing out the violations and postponement of the public hearing, but there has been no response so far.

Similarly there have been violations in public hearings of Middle Siang, Loharinag Pala and Tapovan Vishungad HEPs.

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18. *Nadi Jod Yozana Ke Mayne, Vastvikta Ke Aaine Mein* (HINDI), SANDRP, 2004, pp 58, Rs 20/-.
19. *Ken-Betwa Nadi Jod : Pyasi Ken Ka Paani Betwa Mein Kyon?* (HINDI), SANDRP, 2004, pp 46, Rs 20/-.
20. THE TROUBLED WATERS: A Report on the 1998 Floods in Eastern UP, By Anand Kumar, Bhanu, C C Maji, D Banerjee, D K Mishra, Himanshu Thakkar, Published by Poorvanchal Gramin Vikas Sansthan, 1999, pp 79, Rs 50/-.
21. *Log Banam Faisla: A Reflection on Narmada Judgement* (HINDI), NBA, 2000, pp 72, Rs 10/-
22. *Know Your Power: A Citizens' Primer on the Electricity Sector*, By N. Shreekumar, Girish Sant, Published by PRAYAS, Pune, 2004, pp 138, Rs 150/-.
23. *Ken Betwa link: Why it won't click*: SANDRP, Dec 2003, pp 16, Rs 10/-

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NEWS ABOUT BOOKS, REPORTS, MEETINGS ETC

RIGHT TO WATER The Centre on Housing Rights and Evictions' Right to Water Programme has released: *Legal Resources for the Right to Water: International & National Standards*. The publication surveys international & national provisions and case law giving effect to the right to water. It draws on standards from the human rights, humanitarian, environment & development systems. See: www.cohre.org/water. For a hard copy, contact cohre@cohre.org. The guide demonstrates the basis for the right to water in international law and the manner in which this right has been implemented in several national legal systems. It provides a user-friendly commentary on the implications of legal standards on the right to water and on the means to implement these standards. M Langford, A Khalfan, C Fairstein and H Jones developed the guide. In '04, the COHRE will release a *Manual on the Right to Water* which will provide practical information on how to integrate the right to water into water governance. The Manual is being produced with the WHO and American Association for the Advancement of Science. Those wishing to make suggestions em: water@cohre.org The Programme has previously produced a booklet *The Right to Water*, which is available at www.cohre.org.

Meerut Rain Centre Meerut based Janhit Foundation has set up the country's 2nd rain centre at Meerut on July 25 '04 in collaboration with the Centre for Science & Environment. According to director of Foundation, the Rain Centre will be the centre of knowledge on various water related issues. It is house of water literacy with a permanent exhibition depicting local, regional and national issues through colour panels. It also has a library with books, reports, dissertations, films, and CDS. The Rain Centre was inaugurated by the Cabinet Minister for Minor Irrigation in UP while Shri Anupam Mishra of GPF and Ms Sunita Narayan of CSE were also present. (Janhit foundation PR 250704)

Nitaya workshop A two-day workshop on the proposed "Evaluation of Tawa Command" organised by Gram Sewa Samiti was concluded at Nitaya in Hosangabad district (MP) on July 11 '04. NGO (including SANDRP) representatives and experts attended the workshop. The researchers of Gram Sewa Samiti were very hopeful about outcome of study, which may be used as a tool for reform in agriculture and irrigation in the area.

Thank you for sending DRP issue. It is informative and valuable. Importance may be given to 3-4 articles in each issue. The crisis of water in Punjab is interesting. I request to include Kerala, HP, Uttarnachal, the water rich states in this series. The ill effects of sand mining in rivers is not properly studied and reported. This also may be included.

K Narayana Swamy, Kolar, Karnataka

I do believe a dynamic system of nature education is vital for the progress of our society. It is matter of serious concern about gradual decline of students' interest in environment and nature education. I am trying to create scientific awareness about "Dams, Rivers & People" among the teachers and students. I shall be grateful if you kindly give some thoughts and enlist your support to get some material relating to the above subjects for class room presentation.

Sasti Brata Kabiraj, Teacher, Durgapur, W Bengal

Your network has done noteworthy work and publication of Hindi booklet on Ken Betwa river link is a noteworthy effort. Pl send it to our library which is a depository library for many organisations.

Prabhas Prasad Sinha, AN Sinha Sociel Studies Organisation, Patna

We would like to receive DRP as it has been very useful for our work. We have been using the information for informing the community that we live and work with.

Swati, Mozda, Gujarat

I had the opportunity of seeing DRP Vol 2 2,3,4 at SoilConservation Institute and find itquite thought provoking. I have been involved in the area of Drainage, Ground water, Microirrigation and have published about 106 research papers in International journals and seminars and similar number in national journals and seminars. I am presently retired but keeping communication from time to time with institutions dealing with such area. Iwill be grateful to receive your back numbers as complimentary copies and continue to get DRP issues.

Dr HSChauhan, Lucknow, UP

NEW PUBLICATIONS FROM SANDRP:

South Asia Network on Dams, Rivers & People has just published two Hindi booklets on river linking.

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(Nadijod Yojana ke mayne: Vastavikata ke Aine main)

A booklet on river linking scheme: 56 + 4 pages, Half A4 size, Suggested contribution: Rs 20/-.

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(Ken Betwa Nadijod:Khet ka paani Khen main, Gaon ka paani gaon main,to pyasi Ken ka paani Betwa main kyon?)

Analysis of the Ken Betwa river link proposal: 44 + 4 pages, Half A4 size, Suggested Contribution: Rs 20/ Pl add Rs 10/- towards packing and posting charges for each booklet.

If you are interested in getting copies of the same, pl send a DD in the name of YUVA, payable at Mumbai and send to: SANDRP, c/o 86-D, AD block, Shalimar Bagh, Delhi 110 088. You can also send money order at the SANDRP address.

Dams, Rivers & People

The DRP is available both in electronic (text and word versions) and printed versions. The DRP issues are available at www.narmada.org/sandrp and www.janmanch.org/newsletters.

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We look forward to your letters about how you find DRP and also any ideas you may have about DRP.

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